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NETWORK LAYER SECRECY PERFORMANCE OF THE FORWARDING FUNCTIONALITY USING DSA GENERATION

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ABSTRACT

A full duplex system with sources, relay and destination nodes for secrecy communication in the presence of an eavesdropper is investigated. Using geometrical perspective the secrecy region of secrecy performance will be evaluated. Degradation of the detection performance for legitimate receiver is carried out. We consider the generation of a secret key

(SK) by the inputs and the channel. Encryption is attained using the RC4 algorithm which generates the hash code. Source can decide the duplex. If the specified network is half duplex then the process will be one way communication otherwise it will be two way communication. Physical layer is the full duplex and half duplex relay network of the system performance. Full duplex process is accomplished by CSMA/CD.

KEYWORDS: CSMA/CD, eavesdropper, relay.

INTRODUCTION

The source utilization in opportunistic mobile networks is reduced by the forwarding redundancy in existing system. Due to some relays may have only little contribution on forwarding the message. Message replicas carried by these relays ineffectively. Consume the limited network resource including channel bandwidth and local storage buffer and Impair the further performance of forwarding other information. On the other hand in application scenarios. such as disaster recovery or emergency notification, intentionally maintaining and exploiting such redundancy with specific forwarding strategies helps create a sufficient number of message replicas and satisfy the required performance for forwarding the data. We investigate the characteristic of forwarding redundancy from both theoretical and experimental perspectives.

The major challenge of eliminating forwarding redundancy is the lack of global network information. This makes it hard to estimate the cumulative contact capabilities of existing relays and determine the forwarding redundancy. To address this challenge we first propose a scheme to eliminate the forwarding redundancy with global network information. We attained accuracy in formal analysis of distributed redundancy elimination. The exploitation of forwarding redundancy is based on the relays utilities after redundancy elimination, which reflect the actual contribution of relays for forwarding the messages.

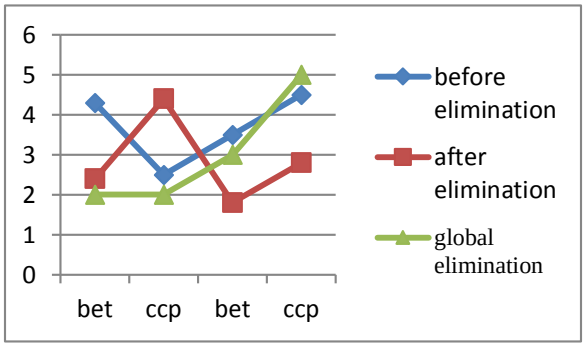
MATERIALS AND METHODS

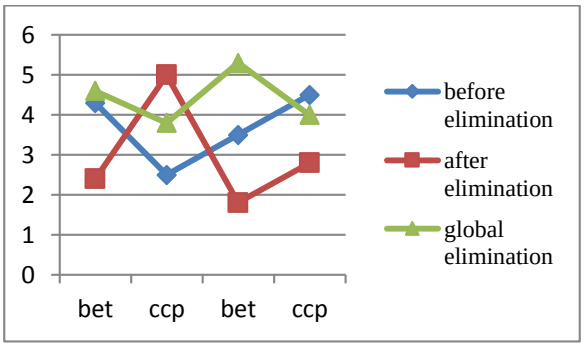
1.NETWORK MODEL:

We focus effectively in forwarding data to destinations with minimum cost , evaluated by the average number of replicas created per message. We assume a well defines communication mechanism at and below the link layer, the consideration of link equality. Relay network of the system performance. Data can be sent from source to destination. Source can specify the duplex. If the specified duplex is half duplex, then the process is one way communication. That is the data will be sent from the source to the destination where the receiver cannot reply to the source. But full duplex is two way communication.

2. TRACES:

Four set of opportunistic mobile network traces are used. Bluetooth-enabled devices periodically detect their peers nearby, and WiFi-enabled devices search for nearby WiFi access points and associate themselves and the contact was recorded when two devices are associated with sameA.P.





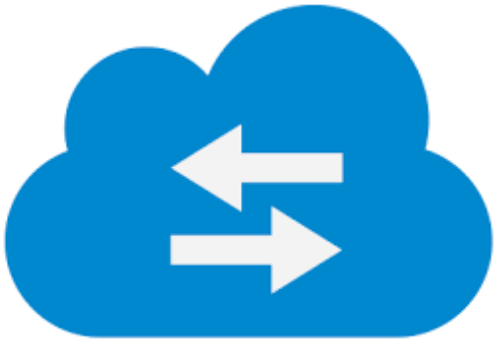
RESULT AND DISCUSSION

1.INVESTIGATE:

We first provide theoretical insights on the variations of delivery ratio and redundancy percentage when the message is being replicated, and then investigate these variations on real world traces listed below Effectiveness if not being appropriately eliminated. Message delivery ratio and redundancy percentage are closely correlated .hence ,forwarding redundancy can be intentionally controlled for satisfying the required ratio. The practical variations of delivery ratio and redundancy percentage accurately match our theoretical expectations .

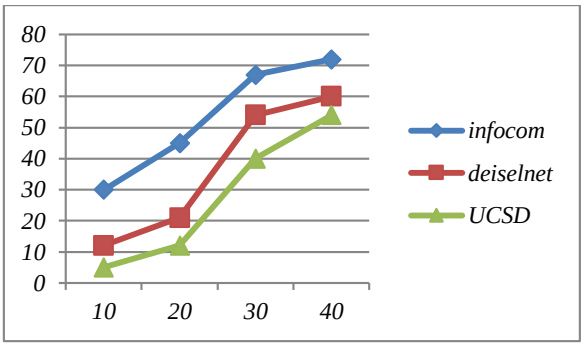
Trace	Dieselnet	Infocom	MIT realtity	UCSD
Network type	WiFi	Bluetooth	Bluetooth	WiFi
Contact type	Direct	Direct	Direct	AP-based
No. devices	40	78	97	275
Duration(days)	20	4	246	77
No. contacts	3268	182951	114046	123225
No. contacts per pair per day	0.102	7.52	0.049	0.021
Trace	Dieselnet	Infocom	MIT realtity	UCSD

2 FORWARDING REDUNDANCY:



We first vary the number of message replicas using the spray-and-focus strategy and the utility function of CCP .Message lifetime T is adaptively determined in different trace to ensure that the designated number of message replicas is created. Both delivery ratio and redundancy percentage increases when more messages replicas are created. The improvements is if mobile nodes, determined by the contact patterns and frequency which are trace dependent. In the MIT reality trace, when the number of relays is smaller the 3, redundancy percentage is lower than 40 percentage and each message replica noticeably improves delivery ratio by 10 percent. However, the other 6 message replicas being created, later only improve delivery ratio by another 10 percentage, but improve redundancy percentage to 70 percent.

3.ELIMINATION:



We will eliminate forwarding redundancy from the utilities evaluating relays contact capability, so as to prevent this redundancy from the affecting forwarding decision and ensure efficient network resource utilization. we first focus on eliminating forwarding redundancy with complete CRI at the global scope , and then extend this scheme to be distributed with incomplete CRI maintained at individual relays .Impact of this incompleteness to redundancy elimination is analyzed and addressed from various perspectives.

4.EXPLOITATION:

Elimination of forwarding redundancy improves the effectiveness of network resource utilization and enhances the cumulative forwarding performance, but the specific performance requirements for forwarding individual may not be satisfied due to the reduced number of messages replicas being created. The examples of such applications include emergency notifications, which require reliable and timely message delivery and have strict requirements on delivery ratio

In this section, based on the capability of eliminating forwarding redundancy , we develop *adaptive* forwarding strategy to exploit such redundancy and satisfy the delivery ratio required by each message with minimum number of message replicas. We replicate message based on relays' utilities after redundancy elimination, and adaptively controls the amount of forwarding redundancy according to the required delivery ration up-to-date network condition.

5.ACCURACY IMPROVEMENT:

The accuracy of redundancy elimination may be impaired due to CRI incompleteness at individual relays. The required ratio for each message is uniformly distributed. Our schemes can effectively detect both types of errors and limit the cumulative error percentage lower than 10 percent. Our strategies ensures that best efforts forwarding performance is provided.When the most conservative approach always keeps a single data copy and- spray-and-wait hold a fixed number of copies of the data, most of the schemes leave that numbers as dynamic and make data forwarding decision by comparing the nodes utility functions. The pre-regulation of forwarding process further more reduces forwarding redundancy over 10 percent but it also prevent some relays from receiving message replica and reduces delivery ratio by 3 percent.

CONCLUSION

We analyzed the secrecy performance of a two way communication relay network and proposed the full duplex scheme to further improve the secrecy performance. The secure probability of the half duplex ,full duplex and full duplex schemes have been analyzed. The proposed full duplex scheme has better secrecy performance than the full duplex scheme for less target security rate, and the increase may disappear when the target rate becomes high. The secrecy improvement of the full duplex scheme is at the price of data rate reduced. Numerical examples have been given to verify the analysis. Half duplex process is one way communication process by using MAC algorithm. Full duplex network is a two way communication by using CSMA/CD. One data can send from source to destination. Data was encrypted by using RC4 algorithm. Rc4 data has been received to the destination. Source generating the DSA hash code. Source can specified the half duplex or full duplex. Measuring the half and full duplex secrecy.

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we are doing engineering in GKM college of engineering and technology.

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