

Quantum Shortest Path Netsukuku

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September 1, 2007

Abstract

This document describes the QSPN, the routing discovery algorithm used by Netsukuku. Through a deductive analysis the main proprieties of the QSPN are shown. Moreover, a second version of the algorithm, is presented.

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1 The general idea

The aim of Netsukuku is to be a (physical) scalable mesh network, completely distributed and decentralised, anonymous and autonomous.

The software, which must be executed by every node of the net, has to be unobtrusive. It has to use very few CPU and memory resources, in this way it will be possible to run it inside low-performance computers, like Access Points, embedded devices and old computers.

2 Network topology

The QSPN alone wouldn't be capable of handling the whole network, because

The same also applies for all the other nodes which received the TP, f.e., B knows that its route to reach S is $A \rightarrow S$.

2. The *bouquet of S*

3.5 Interesting Information rule

The nodes of \mathcal{C}

previous rote. If $m = 2$, then the rote is exactly the copy of a previous rote. If $m = 2$, then the rote is approximately a copy of a previous rote. If $m = 1$, the rote is definitely original.
Example: see figure 3.
If

- [7] Complete graph: <http://mathworld.wolfram.com/>
- [8] Network simulator: <http://www-mash.cs.berkeley.edu/ns/>
- [9] NTK_RFC 002: [Bandwidth measurement](#)
- [10] A Survey of Two Signature Aggregation Techniques:
<http://crypto.stanford.edu/dabo/abstracts/aggsurvey.html>
- [11] Aggregate and Verifiably Encrypted Signatures from Bilinear Maps:
<http://crypto.stanford.edu/dabo/abstracts/aggreg.html>

