

ABSTRAK

Delay Tolerant Network (DTN) adalah arsitektur jaringan untuk mengatasi konektivitas terputus, delay panjang. DTN menggunakan model komunikasi store-carry-forward, cocok untuk lingkungan dinamis atau tidak terduga. Tantangan utama dalam DTN adalah keterlambatan pengiriman data dan ketidakpastian koneksi antar node. Protokol routing Spray and Wait yang mengirim pesan secara acak dapat menurunkan kinerja jaringan. Penelitian ini mengusulkan solusi dengan memanfaatkan probabilitas, khususnya delivery predictability, untuk meningkatkan efisiensi pengiriman pesan dalam DTN. Diperkenalkan Binary Spray and Wait (BSW) routing berbasis Probabilitas Rata-rata Pengiriman pesan. Algoritma BSW diharapkan dapat meningkatkan kecepatan dan efisiensi pengiriman pesan. Penelitian ini bertujuan mengurangi keterlambatan pengiriman pesan dalam DTN dan diharapkan BSW routing memberikan tingkat pengiriman yang lebih baik dan keterlambatan lebih singkat dibandingkan Spray and Wait.

Kata Kunci : Delay tolerant Network, Spray And Wait, Prophet, Binary Spray And Wait Protocol Based On Average Delivery Probability

ABSTRACT

Delay Tolerant Network (DTN) is a network architecture to overcome disconnected connectivity, long delay. DTN uses a store-carry-forward communication model, suitable for dynamic or unpredictable environments. The main challenges in DTN are data delivery delay and connection uncertainty between nodes. Spray and Wait routing protocol that sends messages randomly can degrade network performance. This research proposes a solution by utilizing probability, specifically delivery predictability, to improve message delivery efficiency in DTN. Binary Spray and Wait (BSW) routing based on Average Probability of Message Delivery is introduced. The BSW algorithm is expected to improve the speed and efficiency of message delivery. This research aims to reduce message delivery delay in DTN and it is expected that BSW routing provides better delivery rate and shorter delay than Spray and Wait.

Keyword : Delay tolerant Network, Spray And Wait, Prophet, Binary Spray And Wait Protocol Based On Average Delivery Probability