AAaS: Area Approaching and Spray-and-Wait Routing Scheme for DTN in Android

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***Abstract*—Most of the existing DTN routing algorithms have been studied in the simulation environment. They are not sufficiently used to the historical location and historical neighbor's information. So AAaS(Area Approaching and Spray-and-Wait) routing algorithm is proposed, which considers the practicability of the algorithm and the rules of the node's movement and the law of the meeting. AAaS divides the map into areas by the administrative area, public places and areas the DTN nodes clustered with historical GPS position. Each area maintenance the frequency vectors of different time scales and the frequency vectors of the historical encountered neighbor. AAaS forwards the bundles by these frequency vectors in the bundle lifetime, select the appropriate next hop, more efficient use of the limited bandwidth of encountered nodes in DTN network. Finally, the prototype of AAaS routing algorithm is implemented in Android based on Bytewalla. The experimental results prove that, even in the case of the buffer is not limited, the AAaS is more efficient than Epidemic in the use of the limited bandwidth between encountered nodes.**

***Keyword*—Delay tolerant networks, Routing, GPS Position**

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