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A Project Report on

"ALERT IN MANET's: ANONYMOUS LOCATION BASED EFFICIENT ROUTING PROTOCOL IN MANETs"

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ABSTRACT

Mobile Ad Hoc Networks (MANETs) use anonymous routing protocols that hide node identities and/or routes from outside observers in order to provide anonymity protection. However, existing anonymous routing protocols relying on either hop-by-hop encryption or redundant traffic, either generate high cost or cannot provide full anonymity protection to data sources, destinations, and routes. The high cost exacerbates the inherent resource constraint problem in MANETs especially in multimedia wireless applications. To offer high anonymity protection at a low cost, we propose an Anonymous Location-based Efficient Routing proTocol (ALERT). ALERT dynamically partitions the network field into zones and randomly chooses nodes in zones as intermediate relay nodes, which form a nontraceable anonymous route. In addition, it hides the data initiator/receiver among many initiators/receivers to strengthen source and destination anonymity protection. Thus, ALERT offers anonymity protection to sources, destinations, and routes. It also has strategies to effectively counter intersection and timing attacks. We theoretically analyze ALERT in terms of anonymity and efficiency.

Experimental results exhibit consistency with the theoretical analysis, and show that ALERT achieves better route anonymity protection and lower cost compared to other anonymous routing protocols. Also, ALERT achieves comparable routing efficiency to the GPSR geographical routing protocol.