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(31) Priority Document No	:NA	(72) <b>Name of Inventor :</b>
(32) Priority Date	:NA	<b>1)KARAN SINGH</b>
(33) Name of priority country	:NA	<b>2)Dr. NIRAJ AGRAWAL</b>
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(57) Abstract :

The invention discloses a method for secure data packet routing in mobile networks, comprising a source node (101), an encryption module (102), a trust evaluation unit (103), a routing algorithm module (104), authenticated intermediate nodes (105), and a destination node (106). Adaptive encryption ensures computational efficiency, while dynamic trust-based authentication prevents malicious node interference. Packets are routed through trusted paths, verified at each hop, and securely delivered to the destination with integrity checks. The method enhances security, bandwidth utilization, and reliability in mobile communication systems.

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