

Wireless Transmission of Big Data Using Novel Secure Algorithm

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Abstract : This paper presents a novel algorithm for secure, reliable and flexible transmission of big data in two hop wireless networks using cooperative jamming scheme. Two hop wireless networks consist of source, relay and destination nodes. Big data has to transmit from source to relay and from relay to destination by deploying security in physical layer. Cooperative jamming scheme determines transmission of big data in more secure manner by protecting it from eavesdroppers and malicious nodes of unknown location. The novel algorithm that ensures secure and energy balance transmission of big data, includes selection of data transmitting region, segmenting the selected region, determining probability ratio for each node (capture node, non-capture and eavesdropper node) in every segment, evaluating the probability using binary based evaluation. If it is secure transmission resume with the two- hop transmission of big data, otherwise prevent the attackers by cooperative jamming scheme and transmit the data in two-hop transmission.

Keywords : big data, two-hop transmission, physical layer wireless security, cooperative jamming, energy balance

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