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On the Outage Probability in DF Relay Selection Cooperative Wireless Networks over Nakagami-m Fading Channels

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Abstract: This paper proposes a method for transmitting data through a best relay selection technique in a cooperative network over Nakagami-m fading channels. The selection of the best relay among multiple decode and forward relays is based on the minimum outage probability criterion. Therefore, only the relay with the lowest outage probability will transfer the data to the destination. A closed-form expression is derived for the outage probability of the best relay selection with the decode and forward technique. Numerical examples are presented here for demonstration.