UNIVERSITI TEKNOLOGI MARA

SCHEDULING ALGORITHM FOR MULTIUSER DIVERSITY IN URBAN AREA

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ABSTRACT

Generally it is known that population density in the city is coupled with an increase in ownership of smart phones equipped with a wireless system which allows everyone to have access to the internet at any time anywhere. However, most of the wireless cellular network depending on the network to reliably and efficiently distribute data to a large number of users. The problem of radio resource sharing by users with different requirements are demystify by presenting four types of scheduling algorithm which is adopted for allocating system resource. Hence, analysis of the wireless connection attribute such as fairness, throughput and delay occur during users demanding for different services are presented. Max Rate and Round Robin algorithm were used as a reference for analysing throughput and fairness respectively. Meanwhile, Proportionally Fair Scheduling and Rate Craving Greedy attain in the concept of multiuser diversity by improving the throughput without deal fairness. Overall scope is based on the urban area and pedestrian user because only one fading channel that were used - Filtered Gaussian Noise. Common technique that is used to transmit signals in wireless is OFDM. The performance of these algorithms is analysed and compared through MATLAB computer simulations.

Keywords—algorithms, fairness, throughput, delay, multiuser diversity.

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