

RADIO RESOURCE ALLOCATION: EVALUATION OF TPSS, SPSS AND SBSS SCHEMES

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ABSTRACT

It is a clear fact that the ingress of the current wireless multimedia networks requires optimization based on the QoS degradation it is experiencing. The classic single buffer sharing scheme (SBSS) recommended for wireless networks is limited by its delay and it is characterized by a high packet congestion. Practical wireless networks such as the GSM, GPRS and UMTS require effective radio resource sharing schemes, which meet users demand. This paper proposed two parallel buffer resource sharing mechanisms; the Static Parallel Sharing Scheme (SPSS) and the Poisson_Static Parallel Sharing Scheme (PPSS). This work developed, modeled, and simulated analytical expressions for the PPSS and SPSS, and these models were compared with the existing SBSS scheme. The simulation results demonstrated that PPSS and SPSS strategies are absolutely better than SBSS in terms of blocking probability, delay and delay variation.

KEYWORDS: Buffer resources, PPSS, SPSS

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