



# International Journal on Recent Researches In Science, Engineering & Technology

A Journal Established in early 2000 as National journal and upgraded to International journal in 2013 and is in existence for the last 10 years. It is run by Retired Professors from NIT, Trichy.

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**Research Paper**

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ISSN (Print) : 2347-6729

ISSN (Online) : 2348-3105

**Volume 2, Issue 7,**

**July 2014**

**DIIF IF :1.46**

**SJIF IF: 1.329**

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## Adaptive Cross- Layer Priority Scheduling

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Abstract - It has been observed from literature that the rapid growth in demand for high speed and high quality multimedia communication is creating opportunities and challenges for next generation wired- wireless network designs . Multimedia communications need diverse quality of service (QoS) requirement for different applications including voice data and real time or streaming video / audio . To facilitate such requirement, the scheduling algorithm play an important role . A large number of algorithms have been proposed for scheduling data services . The efficiency of them has the greater impact on enhancing system capacity and user satisfaction in terms of maximizing throughput and minimizing packet delay . But majority of the Algorithms focus on either one of them . In this paper, an additive cross -layer Priority Scheduling algorithm is proposed for multiclass data services that can outperform with respect to user throughput by minimizing a prescribed cross function given the correct channel qualities and the delay states of the packets in the queue such an attempt has not been made so far in the literature for IEEE 802.11 standard wireless networks. The Simulations using network simulator ns-2 show that it outperforms popular scheduler weighted fair queuing ( WFQ ) both in terms of packet delay and user throughput .