Abstract

The main theme of this paper is to find the performance of using the wired and the wireless devices such as Hub, Switch, Bluetooth, Wi-Fi and Wimax. Queueing Petri net model and Markov algorithm with the security of Huffman algorithm were used in performance analysis. This paper mainly focuses on comparison of the different Wired and Wireless technologies in terms of inter-arrival time and Inter-service time by using Markov algorithm (M/M(a,b)/1). The inter –arrival and Inter-service time were obtained using the Poisson distribution. By comparing the service rates of the Wired and Wireless technologies it has been found that the service rate offered by the Wireless technologies were very efficient for implementation and the values obtained from the Wimax technology is very much efficient that other wireless technologies. The performance of all the Wireless technologies can be obtained by using the value of the Bluetooth technology as the other wireless devices are not in prevalence. The performance is
calculated in terms of Expected Waiting time and Expected Busy period. Queueing Petri Nets were used to facilitate the integration of both hardware and software aspects of the system behavior in the Hybrid model. The purpose of Huffman algorithm in Steganography is to send the hidden information from one system to another system through Wired or Wireless devices. Queueing Petri Net are very powerful as a performance analysis and prediction tool. Thus Queueing Petri Net and Markov algorithm can be used in the fore coming networking technologies to obtain better performance results.

Reference

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Index Terms

Computer Science Wireless Networks

Key words

Queueing Petri-nets
Markov algorithm
Bulk service

Distribution value
Inter-Arrival time
Inter-Service time
Steganography