

Document details

[< Back to results](#) | 1 of 1[↗ Export](#) [↓ Download](#) [🖨 Print](#) [✉ E-mail](#) [Save to PDF](#) [☆ Add to List](#) [More... >](#)[Full Text](#) [View at Publisher](#)

2015 IEEE 12th Malaysia International Conference on Communications, MICC 2015
 27 October 2016, Article number 7725438, Pages 225-229
 12th IEEE Malaysia International Conference on Communications, MICC 2015; Kuching, Sarawak; Malaysia; 23
 November 2015 through 25 November 2015; Category numberCFP1527C-ART; Code 124534

QoS downlink schedulers in LTE towards 5G network (Conference Paper)

Al-Sakkaf, A.G. ✉, Khan, S. ✉, Abdullah, K. ✉

Department of Electrical and Computer Engineering, Faculty of Engineering, International Islamic University Malaysia,
 Kuala Lumpur, Malaysia

Abstract

[View references \(8\)](#)

LTE is expected to be the dominant system used by operators in these years due to its promising solutions for achieving high capacity and data rate. However, LTE packet scheduling and distributing resources among users is still the main challenge due to unfairness and low performance which occur when allocating resources to users. In this paper, the above mentioned challenges are studied and analysed, focusing on three schedulers; they are Proportional Fair (PF), Maximum Throughput (MT) and Blind equal throughput (BET). These methods do not provide QoS to users that use different types of traffic flows. The proposed algorithm in this paper is to modify the PF scheduler in order to fulfil the QoS criteria maximizing throughput and minimizing the delay for real time service. VoIP and video have been selected as real time traffic and best effort as non-real time. LTE-Sim simulator is used to compare between the mentioned schedulers in terms of throughput, delay, packet loss ratio and spectrum efficiency. © 2015 IEEE.

Author keywords

BET MT PF QoS

Indexed keywords

Engineering controlled terms: Information services Packet networks Quality of service Queueing networks Scheduling Throughput

Compendex keywords: Maximum through-put Non real time Packet loss ratio Packet scheduling Proportional fair Real time service Real time traffics Spectrum efficiency

Engineering main heading: Wireless telecommunication systems

ISBN: 978-150900019-7
Source Type: Conference Proceeding
Original language: English

DOI: 10.1109/MICC.2015.7725438
Document Type: Conference Paper
Sponsors: Genetron,SKMM,Tenaga Nasional
Publisher: Institute of Electrical and Electronics Engineers Inc.

References (8)

[View in search results format >](#) All [Export](#) [🖨 Print](#) [✉ E-mail](#) [Save to PDF](#) [Create bibliography](#)Metrics 

0 Citations in Scopus

0 Field-Weighted Citation Impact

PlumX Metrics 

Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

Cited by 0 documents

Inform me when this document is cited in Scopus:

[Set citation alert >](#)[Set citation feed >](#)

Related documents

Scheduling optimization for M2M communications in LTE-M
 Dawaliby, S. , Bradai, A. , Pousset, Y.
(2017) 2017 IEEE International Conference on Consumer Electronics, ICCE 2017

Interference aware downlink scheduling algorithm in Mobile networks

Ramkumar, K. , Newton, P.C.
(2017) Proceedings of 2017 11th International Conference on Intelligent Systems and Control, ISCO 2017

A performance analysis on packet scheduling schemes based on an exponential rule for real-time traffic in LTE

Ang, E.M. , Wee, K.K. , Pang, Y.H.
(2015) Eurasip Journal on Wireless Communications and Networking

View all related documents based on references

1 Tshiteya, D.
(2011) *Downlink Scheduling in 3GPP Long Term Evolution (LTE)*
TUDelft

Find more related documents in
Scopus based on:

Authors > Keywords >

2 Capozzi, F., Piro, G., Grieco, L.A., Boggia, G., Camarda, P.
Downlink packet scheduling in LTE cellular networks: Key design issues and a survey

(2013) *IEEE Communications Surveys and Tutorials*, 15 (2), art. no. 6226795, pp. 678-700. Cited 296 times.
doi: 10.1109/SURV.2012.060912.00100

[View at Publisher](#)

3 Singh, D., Singh, P.
Radio resource scheduling in 3gpp LTE a review
(2013) *International Journal of Engineering Trends and Technology (IJETT)*, 4 (6). Cited 11 times.
June

4 Carlos, F.C.
(2012) *Resource Allocation and Time-Frequency Scheduling in LTE*
June

5 Chang, C.H.
(2014) *Implementation and Evaluation of A QoS-aware Downlink Scheduling Algorithm for LTE Networks*
April 30. Master Thesis, Simon Fraser University

6 Biernacki, A., Tutschku, K.
Comparative performance study of LTE downlink schedulers
(2014) *Wireless Personal Communications*, 74 (2), pp. 585-599. Cited 12 times.
doi: 10.1007/s11277-013-1308-4

[View at Publisher](#)

7 ITU-T, R., & Recommend, I. (2000). G. 114. One-way transmission time 18

8 Tikhvinskiy, V.O., Bochechka, G.
Prospects and QoS requirements in 5G networks
(2015) *Journal of Telecommunications and Information Technology*, 2015 (1), pp. 23-26. Cited 12 times.
<http://www.itl.waw.pl/czasopisma/IJIT/2015/1/23.pdf>

© Copyright 2017 Elsevier B.V., All rights reserved.

[< Back to results](#) | 1 of 1

[^ Top of page](#)

About Scopus

[What is Scopus](#)

[Content coverage](#)

[Scopus blog](#)

[Scopus API](#)

Language

[日本語に切り替える](#)

[切换到简体中文](#)

[切换到繁體中文](#)

[Русский язык](#)

Customer Service

[Help](#)

[Contact us](#)