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5th International Conference on Computer and Communication Engineering, ICCCE 2014; Sunway Putra HotelKuala Lumpur; Malaysia; 23 September 2014 through 24 September 2014; Category numberE5413; Code 110844

Novel packet scheduling algorithm based on cross component carrier in LTE-advanced network with carrier aggregation (Conference Paper)

Al-Shibly, M.A.M. ✉, Habaebi, M.H., Islam, M.R.

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Abstract

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LTE-Advanced offers significantly higher data rates than the legacy system. The carrier aggregation (CA) technology allows scalable expansion of effective bandwidth provided to user equipment (UE) through simultaneous utilization of radio resources across multi-component carriers. In this paper we propose a new packet scheduling (PS) criterion algorithm that satisfies the fairness among the different kinds of UEs by designing a weighting factor to proportional fair (PF) packet scheduling (PS) algorithms, while enhancing their throughput performance. The proposed PS algorithm is implemented and validated in a PS module for LTE/LTE-Advanced via system level simulations. Results show that PS-enhanced algorithm achieve higher throughput for both LTE and LTE-Advanced UEs. © 2014 IEEE.

Author keywords

carrier carrier aggregation LTE-Advanced Radio Resource

Indexed keywords

Engineering controlled terms: 4G mobile communication systems Algorithms Legacy systems Mobile telecommunication systems Packet networks Scheduling algorithms Standards Wireless telecommunication systems

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ISBN: 978-147997635-5
Source Type: Conference Proceeding
Original language: English

DOI: 10.1109/ICCCE.2014.68
Document Type: Conference Paper
Volume Editors: Gunawan T.S.
Sponsors: Felda Wellness Corporation, Malaysia Convention and Exhibition Bureau (MyCEB), Malaysian Industry-Government Group for High Technology, University Putra Malaysia, Yayasan Kesejahteraan Bandar
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