

Title: A model for heterogeneous networks management and Performance evaluation

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Source: 2008 IEEE Network Operations and Management Symposium, Vols 1 and 2 **Book Series:** IEEE IFIP Network Operations and Management Symposium **Pages:** 690-693 **Published:** 2008

Conference: IEEE Network Operations and Management Symposium

Location: Salvador, Brazil

Date: Apr 07-11, 2008 **Sponsor(s):** cgibr; CNPq; Chesf; BRSIL; CAPES; IBM; Google; Padtec; CISCO; EMANICS; IEEE Commun Soc; IFIP

Document Type: Proceedings Paper

Language: English

Abstract: In general, modern networks are analysed by taking several Key Performance Indicators (KPIs) into account, their proper balance being required in order to guarantee a desired Quality of Service (QoS), particularly, cellular wireless heterogeneous networks. A model to integrate a set of KPIs into a single one is presented, by using a Cost Function that includes these KPIs, providing for each network node a single evaluation parameter as output, and reflecting network conditions and common radio resource management strategies performance. The proposed model enables the implementation of different network management policies, by manipulating KPIs according to users' or operators' perspectives, allowing for a better QoS. Results show that different policies can in fact be established, with a different impact on the network, e.g., with median values ranging by a factor higher than two.

Author Keywords: CRRM; RRM; Cost Function; Heterogeneous networks

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Publisher: IEEE

Publisher Address: 345 E 47TH ST, New York, NY 10017 USA

ISSN: 1542-1201

ISBN: 978-1-4244-2065-0

Citation: SERRADOR, Antonio; CORREIA, Luis M. - A model for heterogeneous networks management and Performance evaluation. 2008 IEEE Network Operations and Management Symposium. ISSN 1542-1201. ISBN 978-1-4244-2065-0. Vol. 1-2 (2008), p. 690-693.