

Title (en)  
INTERFERENCE MEASUREMENT MECHANISM FOR FREQUENCY REUSE IN CELLULAR OFDMA SYSTEMS

Title (de)  
INTERFERENZMESSUNGSMECHANISMUS FÜR FREQUENZWIEDERVERWENDUNGEN IN ZELLULÄREN OFDMA-SYSTEMEN

Title (fr)  
MÉCANISME DE MESURE D'INTERFÉRENCES POUR UNE RÉUTILISATION DE LA FRÉQUENCE DANS DES SYSTÈMES OFDMA CELLULAIRES

Publication  
**EP 2204058 A4 20131113 (EN)**

Application  
**EP 08841793 A 20081016**

Priority  

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- US 28792508 A 20081015

Abstract (en)  
[origin: WO2009052754A1] Under adaptive frequency reuse technique, mobile stations in a cellular orthogonal frequency division multiple access (OFDMA) system are served by different radio resource regions with appropriate frequency reuse patterns to mitigate inter-cell interference and improve system capacity. In a first novel aspect, the mobile stations measure interference statistics and obtain interference measurement results. The mobile stations report the obtained interference measurement results to serving base stations. The serving base stations determine adaptive frequency reuse patterns based on the received interference measurement result. In a second novel aspect, a radio resource control element receives the interference measurement results, determines frequency reuse patterns and configures radio resource allocation based on the received interference measurement results. In a third novel aspect, the base stations obtain the interference measurement results and schedule the mobile stations to be served with appropriate radio resource regions.

IPC 8 full level  
**H04L 5/00** (2006.01); **H04L 27/26** (2006.01); **H04W 16/02** (2009.01); **H04W 16/10** (2009.01); **H04W 24/10** (2009.01); **H04W 72/08** (2009.01)

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**H04L 5/0053** (2013.01); **H04L 5/0062** (2013.01); **H04W 16/10** (2013.01); **H04L 5/0007** (2013.01); **H04L 5/0037** (2013.01); **H04L 5/0094** (2013.01); **H04L 27/2647** (2013.01); **H04W 72/54** (2023.01)

Citation (search report)  

- [XY] WO 2007108769 A1 20070927 - ERICSSON TELEFON AB L M [SE], et al
- [XY] NORTEL: "Further Discussion on Adaptive Fractional Frequency Reuse", 3GPP DRAFT; R1-071449(ADAPTIVE-FFR), 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, vol. RAN WG1, no. St. Julian; 20070403, 3 April 2007 (2007-04-03), XP050105386
- [XP] "Interference Measurement Mechanisms for IEEE 802.16m ; C80216m-08\_559", IEEE DRAFT; C80216M-08\_559, IEEE-SA, PISCATAWAY, NJ USA, vol. 802.16m, 7 July 2008 (2008-07-07), pages 1 - 4, XP017610683
- [XP] "Fractional Frequency Reuse in IEEE 802.16m ; C80216m-08\_558", IEEE DRAFT; C80216M-08\_558, IEEE-SA, PISCATAWAY, NJ USA, vol. 802.16m, 7 July 2008 (2008-07-07), pages 1 - 9, XP017610682
- See references of WO 2009052754A1

Citation (examination)  
WO 2004104530 A2 20041202 - QUALCOMM INC [US], et al

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DOCDB simple family (publication)  
**WO 2009052754 A1 20090430**; CN 102783165 A 20121114; CN 102783165 B 20160224; EP 2204058 A1 20100707; EP 2204058 A4 20131113; JP 2011502380 A 20110120; TW 200934262 A 20090801; TW 201424414 A 20140616; TW I433559 B 20140401; TW I535306 B 20160521

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