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(54) Title: INTERCELL INTERFERENCE MITIGATION

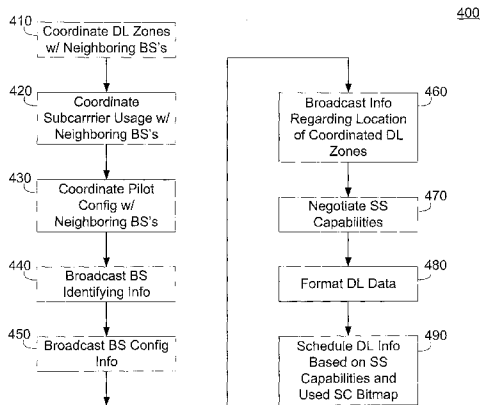


Figure 4

(57) Abstract: Methods and apparatus are described for mitigating intercell interference in wireless communication systems utilizing substantially the same operating frequency band across multiple neighboring coverage areas. The operating frequency band may be shared across multiple neighboring or otherwise adjacent cells, such as in a frequency reuse one configuration. The wireless communication system can synchronize one or more resource allocation regions or zones across the multiple base stations, and can coordinate a permutation type within each resource allocation zone. The base stations can coordinate a pilot configuration in each of a plurality of coordinated resource allocation regions. Subscriber stations can be assigned resources in a coordinated resource allocation region based on interference levels. A subscriber station can determine a channel estimate for each of multiple base stations in the coordinated resource allocation region to mitigate interference.

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PCT/US2008/085436**A. CLASSIFICATION OF SUBJECT MATTER****H04L 27/26(2006.01)i, H04B 7/26(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC H04L 27/26

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models since 1975
Japanese Utility models and application for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKIPASS(KIPO internal) "ICI, intercell, interference, mitigate, reduce"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Y. Xiang et al. 'Inter-cell Interference Mitigation through Flexible Resource Reuse in OFDMA based Communication Networks' In: Proc. European wireless 2007, 2007-ew2007.org See the abstract; page 1, right-hand column - page 2, left-hand column.	1-44
A	Seok Ho Won et al. 'Inter-cell Interference Coordination/Avoidance for Frequency Reuse by Resource Scheduling in an OFDM-based Cellular System' In: Vehicular Technology Conference, 2007. VTC-2007 Fall. 2007 IEEE 66th. Sept. 30 2007-Oct. 3 2007, pp 1722-1725. See the abstract; page 1722, right-hand column.	1-44
A	US 2005/0232195 A1 (Alan Edward Jones) 20 October 2005 See the abstract; paragraphs 91-99; figures 1-4.	1-44

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2005-232195 A1	20.10.2005	None	