

(21) Application No: 1508594.7
(22) Date of Filing: 20.10.2013
Date Lodged: 19.05.2015

(30) Priority Data:
(31) 222597 (32) 21.10.2012 (33) IL
(31) 61882792 (32) 26.09.2013 (33) US

(86) International Application Data:
PCT/IB2013/059481 En 20.10.2013

(87) International Publication Data:
WO2014/061001 En 24.04.2014

(71) Applicant(s):
Mariana Goldhamer
Haim Landau Street, Ramat Gan, 52282, Israel
(72) Inventor(s):
Mariana Goldhamer
(74) Agent and/or Address for Service:
D Young & Co LLP
120 Holborn, LONDON, EC1N 2DY, United Kingdom

(51) INT CL:
H04W 72/04 (2009.01) H04W 88/00 (2009.01)

(56) Documents Cited:
US 8280385 B2 US 20120063373 A1
BHARUCHA, Z. ET AL.: 'Application of the TDD underlay concept to home nodeB scenario.' VEHICULAR TECHNOLOGY CONFERENCE 15 December 2008,
KIM, D.H. ET AL.: 'Capacity analysis of TDD cell sharing underutilized FDD uplink.' VEHICULAR TECHNOLOGY CONFERENCE vol. 4, 31 December 2001,
LINDSTROM, M.: 'Demand Responsive Resource Management for Cellular Networks. Link Asymmetry' PRICING AND MULTIHOPPING, [Online] 29 April 2005, Retrieved from the Internet: <URL:http://www.diva-portal.org/smash/get/diva2:7804/FULLTEXT01.pdf>

(58) Field of Search:
INT CL H04W

(54) Title of the Invention: Improved utilization of the uplink FDD channel
Abstract Title: Improved utilization of the uplink FDD channel

(57) A method for communication, includes communicating over the air with user equipment (UE) (304, 305) in a frequency domain duplexing (FDD) mode, which defines a downlink channel comprising a first set of time-frequency resources in a first frequency range and an uplink channel comprising a second set of time-frequency resources in a second frequency range, which is disjoint from the first frequency range. An excess capacity is identified in the uplink channel, and at least a portion of the excess capacity is allocated for downlink communication by assigning a subset of the time-frequency resources in the second frequency range to the downlink communication. The method includes communicating over the air with at least one UE by transmitting downlink information using the assigned subset of the time-frequency resources in the second frequency range.

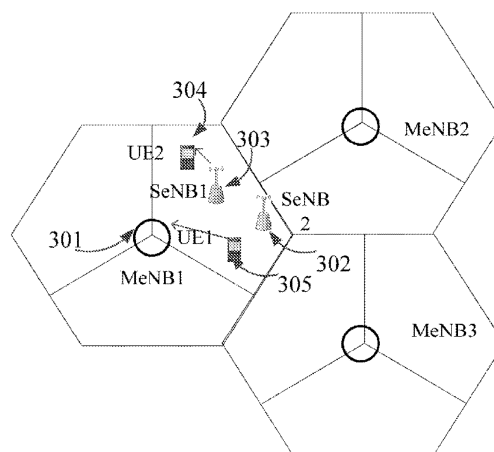


Figure 3