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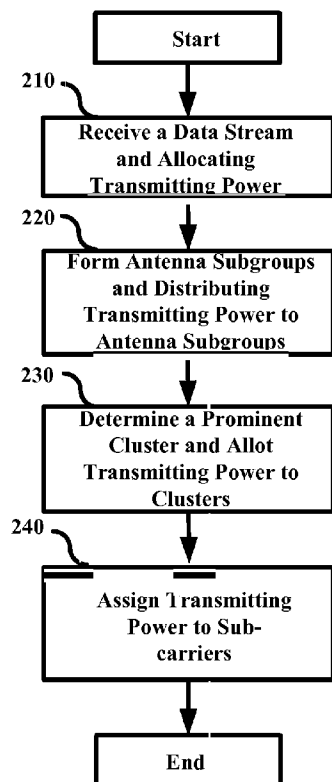
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(54) Title: METHOD AND SYSTEM FOR ACHIEVING SPATIAL DIVERSITY OF A WIRELESS COMMUNICATIONS NETWORK

Figure 2



(57) **Abstract:** A method and system are provided for achieving spatial diversity of a wireless communications network. The method comprises arranging antennas on a transmitting wireless station into a plurality of antenna subgroups, wherein each of the antenna subgroups forms a virtual antenna, creating a plurality of beamformed MIMO channels using the plurality of virtual antennas, wherein each of the beamformed MIMO channel comprises a plurality of sub-carriers and corresponds to a virtual antenna, dividing sub-carriers in each of the plurality of beamformed MIMO channels into at least a first and second cluster, distributing a first amount of transmitting power to the first cluster and a second amount of transmitting power to the second cluster, wherein the first amount of transmitting power is larger than the second amount of transmitting power.

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**A. CLASSIFICATION OF SUBJECT MATTER**  
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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) •  
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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

EPO-Internal , WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A -	US 6 795 424 B1 (KAFOOR SAMIR [US] ET AL) 21 September 2004 (2004-09-21) claims 1-10,15 column 4, lines 62-67 column 5, line 1 column 6, lines 59-61 column 19, lines 42-67 column 20, lines 1-4 figures 1a, 1b, 1c, 5, 7, 8	1-16
A	US 2006/109923 A1 (CAI SEAN [US] ET AL) 25 May 2006 (2006-05-25) claims 1-3 paragraphs [0019] - [0023], [0025], [0028], [0035] figures 1, 2A, 2B, 2C, 5, 6	1-16

Further documents are listed in the continuation of Box C.

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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

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