Start

Form multiple groups of subbands with M usable subbands

Assign each of T antennas with one or possibly more groups of subbands

Process data and/or pilot for transmission

Determine transmit power to use for each assigned subband for each of the T antennas

Transmit data and/or pilot from the T antennas simultaneously using the multiple groups of subbands and at the determined transmit power

End

**Declarations under Rule 4.17:**


— as to the applicant’s entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

**Published:**

— with international search report

**(88) Date of publication of the international search report:** 23 June 2005

For two-letter codes and other abbreviations, refer to the “Guidance Notes on Codes and Abbreviations” appearing at the beginning of each regular issue of the PCT Gazette.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7) : H04L 27/04; H04B 1/69
US CL : 375/146, 299; 370/209
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)
U.S. : 375/135, 146, 267, 299; 370/208, 209, 210, 320, 335, 342; 455/101, 500

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 practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 6,473,467 B1 (WALLACE et al) 29 October 2002 (29.10.2002), column 8, line 53 to column 9, line 3; column 15, lines 8-36; column 16, line 50 to column 17, line 7; and column 19, line 22 to column 22, line 38.</td>
<td>1-4, 6-20, 22-26 and 28-31</td>
</tr>
<tr>
<td>X</td>
<td>US 2002/0041625 A1 (MA et al) 11 April 2002 (11.04.2002), paragraphs [0012], [0013], [0023], [0028], [0036] and [0039].</td>
<td>1-4, 6-19, 22-26 and 28-29</td>
</tr>
<tr>
<td>X</td>
<td>US 2002/0123383 A1 (WU et al.) 05 September 2002 (05.09.2002), paragraphs [0005], [0014]-[0018], [0021], [0037], [0038], [0044], [0045], [0050]-[0052], [0065] and [0066].</td>
<td>1-4, 6-19, 22-26 and 28-29</td>
</tr>
<tr>
<td>A, P</td>
<td>US 6,529,496 B1 (YEOM et al) 04 March 2003 (04.03.2003), column 2, lines 44-63; column 3, lines 4-9; and column 4, line 58 to column 5, line 11.</td>
<td>5, 21 and 27</td>
</tr>
</tbody>
</table>

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

* Special categories of cited documents:
  "A" document defining the general state of the art which is not considered to be of particular relevance
  "E" earlier application or patent published on or after the international filing date
  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
  "O" document referring to an oral disclosure, use, exhibition or other means
  "P" document published prior to the international filing date but later than the priority date claimed

  "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
  "&" document member of the same patent family

Date of the actual completion of the international search
28 January 2005 (28.01.2005)

Date of mailing of the international search report
01 MAR 2005

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Form PCT/ISA/210 (second sheet) (January 2004)
Continuation of B. FIELDS SEARCHED Item 3:
EAST Text Search (multi-antennas, multiple antennas, diversity antennas, sub-bands, sub-carriers, sub-channels, Walsh code, pilots, and OFDM)