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(54) Title: DIGITAL NETWORK

(57) Abstract: The method of networking comprises connecting a first coupler to a first and second transmission line to couple the first and second transmission lines, connecting a second coupler to the second and a third transmission line to couple the second and third transmission lines, connecting a third coupler to the first and third transmission line to couple the first and third transmission lines, connecting a first end of the first transmission line to a first digital device, connecting a first end of the second transmission line to a second digital device, and connecting a first end of the third transmission line to a third digital device. A signal is transmitted through the first, second, or third transmission line, by one of the digital devices, and is received by at least one digital device different from the transmitting digital device.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H05K1/02

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 7 H05K H04B

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, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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<td>X</td>
<td>US 5 350 324 A (GUILBERT PAUL-ANDRE) 27 September 1994 (1994-09-27) column 5, line 42 -column 6, line 35</td>
<td>1-17</td>
</tr>
<tr>
<td>A</td>
<td>EP 0 854 664 A (LUCENT TECHNOLOGIES INC) 22 July 1998 (1998-07-22) column 2, line 46 -column 3, line 42</td>
<td>1-17</td>
</tr>
<tr>
<td>A</td>
<td>EP 0 923 277 A (FUJITSU LTD) 16 June 1999 (1999-06-16) paragraphs '0004!-'0008!; figure 8</td>
<td>1-17</td>
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</tbody>
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Date of the actual completion of the international search
15 August 2003

Date of mailing of the international search report
22/08/2003

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<th>Patent family member(s)</th>
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<tr>
<td></td>
<td></td>
<td>AU 724167 B2</td>
<td>14-09-2000</td>
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<tr>
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<td></td>
<td>AU 5181798 A</td>
<td>23-07-1998</td>
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<tr>
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<td>CA 2225129 A1</td>
<td>16-07-1998</td>
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<td>DE 69800599 D1</td>
<td>26-04-2001</td>
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<td>DE 69800599 T2</td>
<td>31-10-2001</td>
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<td>JP 3393052 B2</td>
<td>07-04-2003</td>
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<td></td>
<td>JP 10209589 A</td>
<td>07-08-1998</td>
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<tr>
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<td></td>
<td>EP 0923277 A2</td>
<td>16-06-1999</td>
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<td>US 6046653 A</td>
<td>04-04-2000</td>
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