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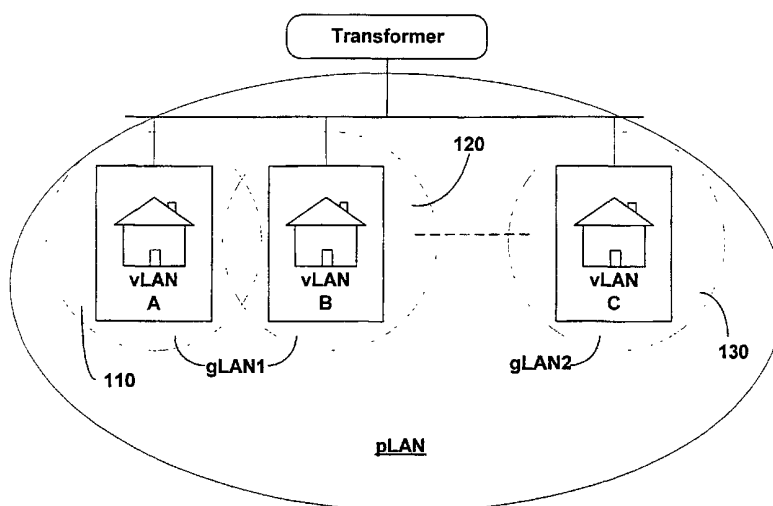
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(54) Title: POWER LINE COMMUNICATION NETWORK



(57) Abstract: A media access control (MAC) controller is disclosed for a network providing communication for network stations (110,120,130) located at a plurality of customer premises and sharing a communication medium, each of the premises having a plurality of network stations. The MAC controller includes a virtual local area network (vLAN) controller, providing access to the communication medium for and communication among the stations located at a single customer's premises, to define a vLAN (fig.1) between them. A group local area network (gLAN) controller provides access to the communication medium for and communication among interfering vLANs, two vLANs being considered to be interfering when one can sense communications over the medium from a station in the other. A MAC controller is provided in at least one station in a vLAN. The MAC controller is preferably connected to use as the communication medium the portion of a power line at the output of the last step down transformer (fig.1) and utilizes a token passing protocol (204) to control access to the medium.



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

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04L 7/00

US CL : 340/310.01; 375/107,366; 395/500,200; 370/254

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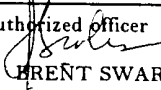
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|--------------|---|-------------------------------------|
| X -- Y | US 5,914,938 A (BRADY et al.) 22 June 1999, col.1, lines 9-15 and 50-65. | 1,2 ----- 3,4,20,21, 22,23 |
| Y | US 5,301,303 A (ABRAHAM et al.) 05 April 1994, col.1, lines 40-45; col. 2, lines 1-10; col. 7, lines 34-53. | 3,4,20,21, 22,23 |
| X | US 5,769,032 A (YARNALL, Sr, et al.) 23 June 1998, col.3, lines 40-47; col 8, lines 35-40. | 27-29 |
| X,P | US 6,118,833 A (BERGMANS et al.) 12 September 2000, col.3, lines 35-38, 59-62; col.6, lines 33-38; fig.3; abstract. | 24 |

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

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