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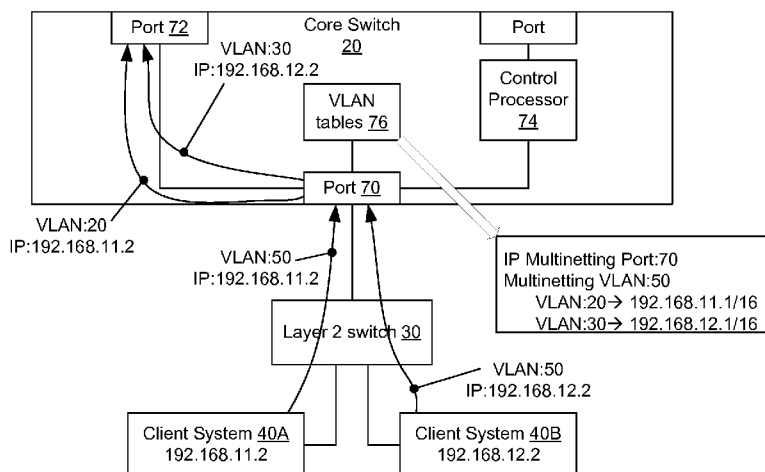
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(54) **Title:** METHOD AND APPARATUS FOR SIMULATING IP MULTINETTING

Figure 4



(57) **Abstract:** IP Multinetting on a local area network is simulated by performing VLAN translation at a port connecting to the local area network. This allows IP addresses from multiple subnets to be associated with a single VLAN on the Local Area Network (LAN), while allowing the core switch to process the packets with a one-to-one correspondence between IP Subnet and VLAN. When a packet is received from the local area network at an IP multinetting port, the VLAN ID will be read to determine if the packet contains the IP Multinetting VLAN ID. The IP Subnet address will also be checked to see if the packet is associated with an IP Subnet that is part of the Multinetting. If so, the multinetting VLAN ID will be changed to an IP Subnet specific VLAN ID before the packet is processed by the core switch.



A. CLASSIFICATION OF SUBJECT MATTER**H04L 12/56(2006.01)i, H04L 29/06(2006.01)i, H04L 12/28(2006.01)i**

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)

H04L 12/56; H04L 12/46; H04L 12/66; H04L 12/26

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: VLAN, IP subnet, IP address, Ethernet switch

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| A | US 6914905 B1 (MICHAEL YIP et al.) 05 July 2005 See the abstract; claims 1-13 | 1-13 |
| A | US 6765914 B1 (JAIN; VIPIN KUMAR et al.) 20 July 2004 See the abstract; figures 5 and 6; column 4, line 44 - column 5, line 4; claims 1-12 | 1-13 |
| A | JP 2000-049870 A (TOSHIBA CORP) 18 February 2000 See the abstract; claims 1-2 | 1-13 |
| A | US 2007-0127376 A1 (YUN-FEI CHAO et al.) 07 June 2007 See the abstract; figure 3; claims 1-20 | 1-13 |

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

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| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
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| US 6765914 B1 | 20.07.2004 | None | |
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| | | CN 100461769 C0 | 11.02.2009 |
| | | CN 1929449 A | 14.03.2007 |
| | | US 7660291 B2 | 09.02.2010 |