(57) Abstract: Methods and systems for per-session NAT learning and firewall filtering are disclosed. Media packets associated with a call/session are received and processed at a media gateway. For the first few received media packets associated with a session, the media gateway uses various unique methods to learn the actual source IP address and UDP port assigned to the remote communication terminal by its customer-premises Network Address Translators (NATs) to the media flows of the current session. After the remote IP and UDP are learned, the media gateway reconfigures its firewall filtering function to check both the dynamically learned remote IP and UDP and the locally assigned IP and UDP of the current session. The per-session NAT learning function removes reachability issues in VoIP deployment, and the per-session firewall filtering function enhances security protection in VoIP deployment.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC: G06F 15/16(2006.01); G06F 15/173(2006.01); H04J 3/22(2006.01)

USPC: 709/217,223;370/401,469
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.: 709/217,223;370/401,469

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)

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>
</table>

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

Date of the actual completion of the international search
23 September 2006 (23.09.2006)

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