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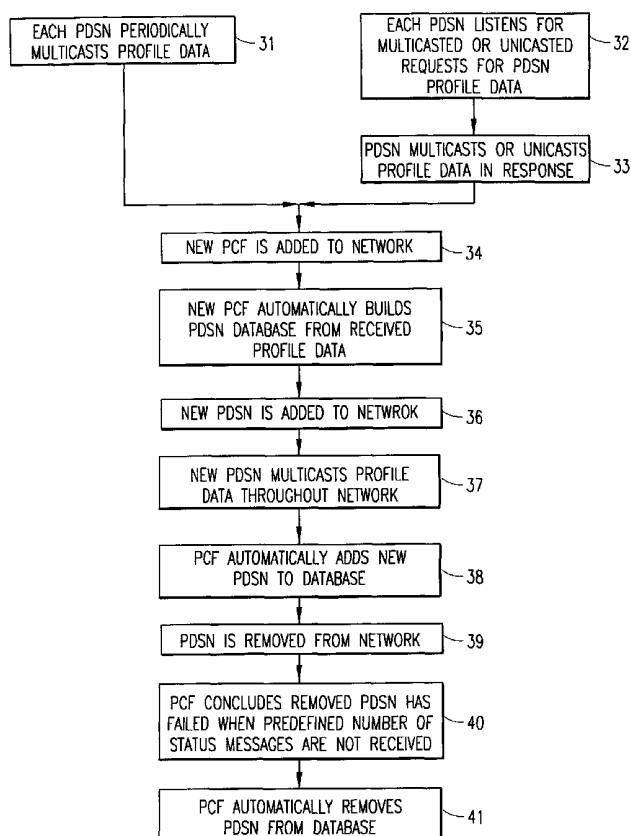
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(54) Title: PACKET CORE FUNCTION AND METHOD OF AUTOMATIC PDSN DISCOVERY, MONITORING, AND FAILURE HANDOVER



(57) Abstract: A Packet Core Function (PCF) (55) and a method of automatic Packet Data Service Node (PDSN) Discovery, Monitoring, and Failure Handover in a packet-switched network that includes a plurality of PDSNs (57). The PDSNs multicast PDSN profile information that includes their ID, status, congestion level, and routing table information. The PCF automatically builds and updates a PDSN database (61) from the profile information it receives. If the PCF fails to receive a predefined number of multicast messages, or fails to receive responses to polling messages from a particular PDSN, the PCF concludes that the PDSN has failed. If a failure is detected, the PCF selects one or more new PDSNs to handle the packet data sessions that were being handled by the failed PDSN. The PCF then hands over the active sessions to the selected PDSN(s).



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INTERNATIONAL SEARCH REPORT

International Application No  
PCT/CA 01/01017

<p><b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 7 H04Q7/22 H04Q7/38</p>		
<p>According to International Patent Classification (IPC) or to both national classification and IPC</p>		
<p><b>B. FIELDS SEARCHED</b></p>		
<p>Minimum documentation searched (classification system followed by classification symbols) IPC 7 H04Q H04L</p>		
<p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p>		
<p>Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data</p>		
<p><b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b></p>		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 859 959 A (ALBRECHT ALAN ET AL) 12 January 1999 (1999-01-12) the whole document ---	1-35
X	WO 00 39961 A (KONINKL PHILIPS ELECTRONICS NV) 6 July 2000 (2000-07-06) the whole document ---	1-35
A	US 5 654 958 A (NATARAJAN KADATHUR S) 5 August 1997 (1997-08-05) the whole document ---	1-35
A	EP 0 852 419 A (POWERCOM CONTROL SYSTEMS LTD) 8 July 1998 (1998-07-08) the whole document --- -/--	1-35
<p><input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.      <input checked="" type="checkbox"/> Patent family members are listed in annex.</p>		
<p>° Special categories of cited documents :</p> <p>*A* document defining the general state of the art which is not considered to be of particular relevance</p> <p>*E* earlier document but published on or after the international filing date</p> <p>*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)</p> <p>*O* document referring to an oral disclosure, use, exhibition or other means</p> <p>*P* document published prior to the international filing date but later than the priority date claimed</p> <p>*T* 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</p> <p>*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>*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.</p> <p>* &amp; * document member of the same patent family</p>		
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<p>Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016</p>		<p>Authorized officer  Quaranta, L</p>

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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