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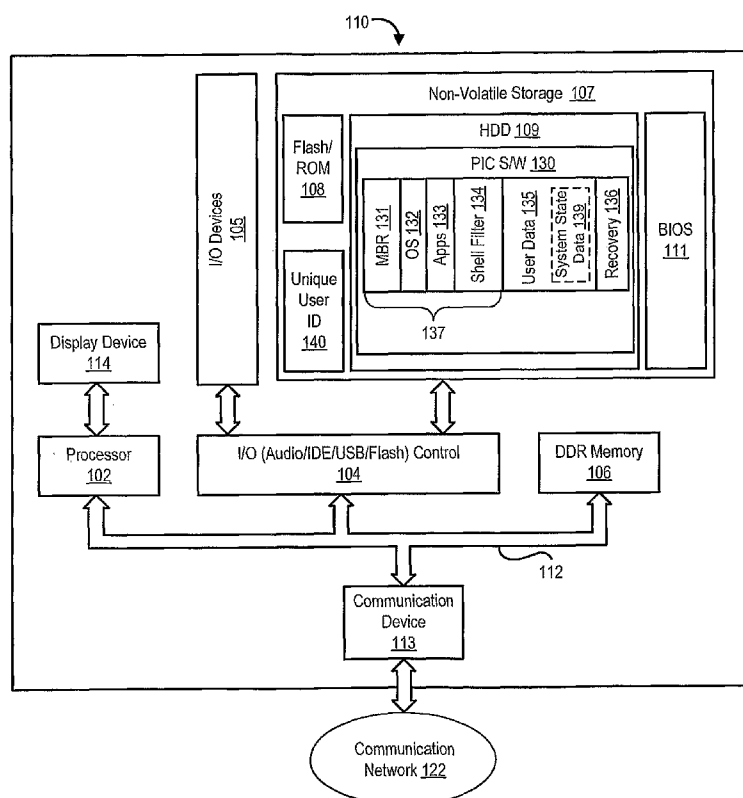
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[Continued on next page]

(54) Title: RESILIENT SYSTEM PARTITION FOR PERSONAL INTERNET COMMUNICATOR



(57) Abstract: The present invention provides a method and apparatus to restore the operating system of a personal internet communicator (PIC) to a "known good" operational state in the event of a catastrophic failure. In an embodiment of the invention, the hard drive of the personal internet communicator is organized in three partitions: 1) a partition for the operating system and related files; 2) a user data partition; and 3) a "restore" partition. The restore partition is hidden by modifying the type of partition that can be detected by the user or any operating system. Upon a catastrophic failure, the system can be returned to an operational state by performing a sector-by-sector restoration to copy an image of the operating system and related system files back to the operating system partition. In various embodiments of the invention, the PIC system state is continuously monitored by a "registry sniffing" routine that maintains a file containing data corresponding to the system state of the PIC. Subsequent to copying the operating system to the OS partition, as discussed above, the

system state parameter file is used to modify the operating system to place the PIC in the configuration that existed prior to the catastrophic failure.



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Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2004/090722 A (STAR SOFTCOMM PTE LTD [SG]; ZHANG XINGMING [CN]) 21 October 2004 (2004-10-21)	1-7, 10
Y	abstract; page 3, lines 1-30; page 4, lines 29-32; page 8, lines 12-17; page 9, line 33-page 10, line 20; page 18, line 32-page 20, line 27; page 21, line 29-page 22, line 36; claims 1-31	8, 9
X	US 6 901 493 B1 (MAFFEZZONI GUIDO [US]) 31 May 2005 (2005-05-31)	1
A	abstract	2-10
Y	US 6 073 172 A (FRAILONG JEAN-MARC [US] ET AL) 6 June 2000 (2000-06-06) abstract; col. 2, lines 27-47	8, 9
-/--		
<div style="display: flex; justify-content: space-between;"> <input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex. </div>		
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <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> </div> <div style="width: 45%;"> <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>"&" document member of the same patent family</p> </div> </div>		
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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		Authorized officer <div style="text-align: center; font-weight: bold;">Schneider, Michael</div>

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International application No

PCT/US2006/028198

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>DSLHOME-TECHNICAL WORKING GROUP: "CPE WAN Management Protocol" INTERNET CITATION, [Online] May 2004 (2004-05), XP002316355 Retrieved from the Internet: URL: http://www.dslforum.org/aboutdsl/Technical_Reports/TR-069.pdf [retrieved on 2005-02-04] sections 1.2, 1.6, A.3.2.8, A.3.2.9</p>	8,9
Y	<p>WO 03/009123 A (IBM [US]; IBM DEUTSCHLAND [DE]) 30 January 2003 (2003-01-30) abstract; page 1, first paragraph; page 2, third paragraph; page 3, first paragraph; page 4, second paragraph; page 5, last paragraph-page 6, first paragraph; page 9, last paragraph-page 10, first paragraph; page 11, lines 7-9; page 12, first paragraph; page 12, last paragraph-page 13, first paragraph; page 17, third paragraph; page 18, second paragraph-page 19, first paragraph; page 20, second paragraph; page 21, first paragraph</p>	8,9
X	US 2003/221095 A1 (GAUNT JARED R [US] ET AL) 27 November 2003 (2003-11-27)	1
A	abstract	2-10
X	EP 1 434 135 A1 (LEGEND BEIJING LTD [CN]) 30 June 2004 (2004-06-30)	1
A	abstract	2-10
X	EP 1 469 393 A (LEGEND BEIJING LTD [CN]; QUANTUM DESIGNS H K LTD [CN]) 20 October 2004 (2004-10-20)	1
A	abstract	2-10
A	US 2004/078680 A1 (HU JIANFENG [CN] ET AL) 22 April 2004 (2004-04-22)	1-10
	abstract	
A	US 2002/184484 A1 (ABBOUD AKRAM [US] ET AL) 5 December 2002 (2002-12-05)	1-10
	abstract	
A	GB 2 404 748 A (SYMBIAN LTD [GB] LTD SYMBIAN [GB]) 9 February 2005 (2005-02-09)	1-10
	abstract; page 15, second paragraph-page 17, first paragraph	
A	EP 1 195 679 A (HEWLETT PACKARD CO [US]) 10 April 2002 (2002-04-10)	1-10
	abstract	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/028198

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 2004090722	A	21-10-2004	CN 1536458 A CN 1536485 A US 2006253724 A1	13-10-2004 13-10-2004 09-11-2006
US 6901493	B1	31-05-2005	NONE	
US 6073172	A	06-06-2000	US 6496858 B1	17-12-2002
WO 03009123	A	30-01-2003	AT 335232 T CN 1526090 A DE 60213606 T2 EP 1410164 A1 JP 2005523485 T US 2003018870 A1	15-08-2006 01-09-2004 09-08-2007 21-04-2004 04-08-2005 23-01-2003
US 2003221095	A1	27-11-2003	NONE	
EP 1434135	A1	30-06-2004	AU 2002213779 A1 WO 03050683 A1 CN 1545657 A US 2005015652 A1	23-06-2003 19-06-2003 10-11-2004 20-01-2005
EP 1469393	A	20-10-2004	WO 03042840 A1 CN 1419196 A US 2005081004 A1	22-05-2003 21-05-2003 14-04-2005
US 2004078680	A1	22-04-2004	CN 1445667 A JP 2004038931 A	01-10-2003 05-02-2004
US 2002184484	A1	05-12-2002	NONE	
GB 2404748	A	09-02-2005	EP 1658562 A1 WO 2005013125 A1 JP 2007501450 T US 2007043938 A1	24-05-2006 10-02-2005 25-01-2007 22-02-2007
EP 1195679	A	10-04-2002	US 2002042892 A1	11-04-2002