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- (74) Agent: MCLOUGHLIN, Daniel, P.; Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210 (US).
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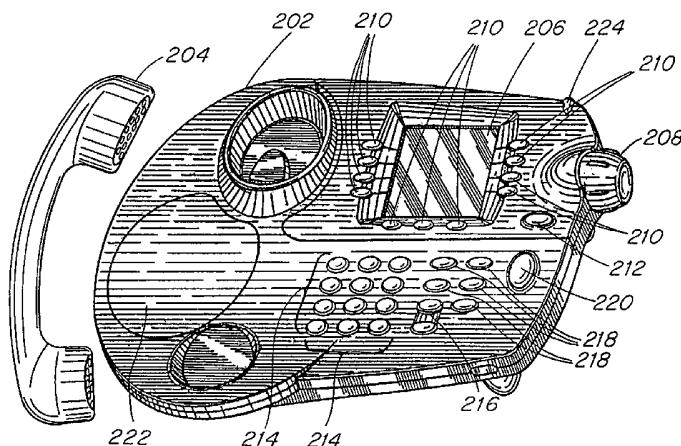
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(54) Title: DISTRIBUTED COMMUNICATIONS NETWORK INCLUDING ONE OR MORE TELEPHONY COMMUNICATION DEVICES HAVING PROGRAMMABLE FUNCTIONALITY



(57) Abstract: A computer program product having an open telephony system architecture such that one or more telephony applications defined on the computer program product may be modified, after initial deployment in the field (e.g. on a customer premise), independently of a vendor that controlled development of the one or more telephony applications. Further, a computer program product having an extensible telephony system architecture such that the telephony functionality defined thereon can be expanded by adding telephony applications to the computer program product. Also, a computer program product capable of controlling a connection during a telephone call using any of a plurality of call control protocols, including SIP, H.323, MGCP, Megaco/H.248, and the Skinny Station protocol. For a telephone call involving multiple connections, for example, a conference call, the computer program product can control communications on each connection concurrently and can use a different call control protocol for each connection. A communications network including one or more computer program products having one or more of the following properties: an open telephony system architecture, an extensible telephony system architecture; the capability to control a telephony call using any of a plurality of call control protocols.



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*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

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 PCT/US 00/29576

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
IPC 7	H04M1/725 H04M1/57	H04Q3/00 H04M3/56
	H04M1/66 H04M7/00	H04M1/65 H04M3/493
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) IPC 7 H04M H04Q		
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 practical, search terms used) EPO-Internal, WPI Data, PAJ, IBM-TDB, COMPENDEX, INSPEC		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 99 62239 A (CRESWELL DANIEL CHRISTOPHER ;ELLIS MARTIN JOHN (GB); JAMES BELL DU) 2 December 1999 (1999-12-02)  abstract page 1, line 7 - line 12 page 4, line 3 - line 6 page 5, line 9 - line 13 page 7, line 18 -page 8, line 15 page 9, line 3 - line 23; figure 3 page 10, line 8 -page 11, line 17 page 12, line 1 - line 23 page 19, line 1 - line 10 page 28, line 24 -page 29, line 18  --- -/--	1-14, 16-36, 38-45, 53, 56-59, 105,109
<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.		
° Special categories of cited documents :		
*A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *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) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed *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 *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 *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. *&* document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
5 September 2001		- 5 SEP 2001
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  Willem, B

## INTERNATIONAL SEARCH REPORT

 Int'l Application No  
 PCI/US 00/29576

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 896 500 A (LANTZ KEITH A ET AL) 20 April 1999 (1999-04-20) abstract; figures 2A,3,7,8A,8B,8C,20,21,22,26 column 12, line 15 - line 48 column 21, line 55 - line 65 column 24, line 16 -column 25, line 43 column 26, line 28 - line 67 ---	59,64, 66-71
X	"VOCALIZED APPOINTMENT CANCELLATION INFORMER" IBM TECHNICAL DISCLOSURE BULLETIN, IBM CORP. NEW YORK, US, vol. 36, no. 8, 1 August 1993 (1993-08-01), pages 513-515, XP000390314 ISSN: 0018-8689 The whole document ---	59,95
X	WO 99 21171 A (BELL CANADA) 29 April 1999 (1999-04-29) abstract; figures 2,3 page 2, line 27 -page 6, line 16 ---	59,72, 80,82
A	US 5 825 854 A (VEERAMONEY MURALI ET AL) 20 October 1998 (1998-10-20) abstract ---	95
A	US 5 870 549 A (BOBO II CHARLES R) 9 February 1999 (1999-02-09) abstract; figure 11 ---	99
X	US 5 907 604 A (HSU P ROBERT) 25 May 1999 (1999-05-25) abstract; figure 6 column 1, line 65 -column 2, line 42 column 5, line 13 - line 49 ---	59, 99-101
X	US 5 619 555 A (MCFADDEN JOSEPH A ET AL) 8 April 1997 (1997-04-08) abstract column 2, line 39 -column 3, line 19 ---	59,73-75
X	CA 2 251 154 A (NORTEL NETWORKS) 20 April 1999 (1999-04-20) & US 6 148 068 A (NORTEL NETWORKS) 14 November 2000 (2000-11-14) abstract; figures 3,5-7 column 3, line 30 -column 4, line 15 ---	59,73-76
X	EP 0 702 296 A (COMPAQ COMPUTER CORP) 20 March 1996 (1996-03-20) abstract; figure 11A ---	59,87,88
	-/--	

## INTERNATIONAL SEARCH REPORT

 International Application No  
 PCT/US 00/29576

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 198 13 463 A (ACTIVE VOICE CORP) 5 November 1998 (1998-11-05) & US 6 041 114 A (ACTIVE VOICE CORP) 21 March 2000 (2000-03-21) abstract column 1, line 45 -column 2, line 31 column 3, line 3 - line 50 ----	59,83-86
X	US 5 642 410 A (GASPARRO PAUL M ET AL) 24 June 1997 (1997-06-24) abstract; figures 12,14-16 column 1, line 14 - line 44 column 2, line 10 -column 4, line 29 ----	59,89-94
X	US 5 758 079 A (LANTZ KEITH A ET AL) 26 May 1998 (1998-05-26) abstract; figures 2B,31D column 9, line 28 -column 10, line 4 column 33, line 30 -column 34, line 27 ----	59, 96-98, 102-104
P,X	US 5 999 609 A (NISHIMURA MASAHIKO) 7 December 1999 (1999-12-07) abstract column 6, line 59 -column 7, line 40 -----	59,106, 107

INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 00/29576

**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

- 1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
- 2.  Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
- 3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

- 1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
- 2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
- 3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
- 4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-63,105,108,109

Telephone terminals with programmable functionality having the possibility to extend/create the services in a telecommunicationsnetwork

2. Claims: 64-71

Conference call systems

3. Claims: 72,80-82,95,99-101

Messaging system

4. Claims: 73-79

Call setup procedure

5. Claims: 83-88

Checking the status of a telephone line

6. Claims: 89-94

Call screening method

7. Claims: 96-98

Recording voice communications

8. Claims: 102-104

Putting a caller on hold

9. Claims: 106-107

Solving software conflicts and interactions

## INTERNATIONAL SEARCH REPORT

 International Application No  
 PCT/US 00/29576

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9962239	A	02-12-1999	AU 4153799 A EP 1080570 A GB 2351823 A	13-12-1999 07-03-2001 10-01-2001
US 5896500	A	20-04-1999	US 5689641 A AT 198249 T AU 7198894 A AU 7963894 A CA 2173204 A CA 2173209 A CA 2204442 A,C CH 690154 A DE 69426456 D DE 69426456 T EP 0721725 A EP 0721726 A EP 0899952 A EP 0899953 A EP 0899954 A EP 0898424 A EP 0912055 A EP 0912056 A EP 0955765 A GB 2282506 A,B GB 2319135 A,B GB 2319136 A,B GB 2319137 A,B GB 2319138 A,B US 6212547 B WO 9510157 A WO 9510158 A US 5867654 A US 5978835 A US 5884039 A US 5617539 A US 5802294 A US 5758079 A US 5854893 A US 5915091 A US 6237025 B	18-11-1997 15-01-2001 01-05-1995 01-05-1995 13-04-1995 13-04-1995 13-04-1995 15-05-2000 25-01-2001 26-07-2001 17-07-1996 17-07-1996 03-03-1999 03-03-1999 03-03-1999 24-02-1999 28-04-1999 28-04-1999 10-11-1999 05-04-1995 13-05-1998 13-05-1998 13-05-1998 13-05-1998 03-04-2001 13-04-1995 13-04-1995 02-02-1999 02-11-1999 16-03-1999 01-04-1997 01-09-1998 26-05-1998 29-12-1998 22-06-1999 22-05-2001
WO 9921171	A	29-04-1999	CA 2219008 A AU 9526798 A	21-04-1999 10-05-1999
US 5825854	A	20-10-1998	DE 4436175 A	13-04-1995
US 5870549	A	09-02-1999	US 5675507 A AU 9679398 A EP 1034651 A WO 9918716 A US 2001014910 A CA 2232397 A EP 0870238 A WO 9634341 A	07-10-1997 27-04-1999 13-09-2000 15-04-1999 16-08-2001 31-10-1996 14-10-1998 31-10-1996
US 5907604	A	25-05-1999	NONE	
US 5619555	A	08-04-1997	NONE	

## INTERNATIONAL SEARCH REPORT

 Inter- | Application No  
 PCT/US 00/29576

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
CA 2251154 A	20-04-1999	US 6148068 A	14-11-2000
EP 0702296 A	20-03-1996	US 5987528 A CA 2157555 A US 5922071 A US 5974468 A US 6034687 A	16-11-1999 09-03-1996 13-07-1999 26-10-1999 07-03-2000
DE 19813463 A	05-11-1998	US 6041114 A JP 10327250 A	21-03-2000 08-12-1998
US 5642410 A	24-06-1997	NONE	
US 5758079 A	26-05-1998	US 5689641 A US 6212547 B AT 198249 T AU 7198894 A AU 7963894 A CA 2173204 A CA 2173209 A CA 2204442 A, C CH 690154 A DE 69426456 D DE 69426456 T EP 0721725 A EP 0721726 A EP 0899952 A EP 0899953 A EP 0899954 A EP 0898424 A EP 0912055 A EP 0912056 A EP 0955765 A GB 2282506 A, B GB 2319135 A, B GB 2319136 A, B GB 2319137 A, B GB 2319138 A, B WO 9510157 A WO 9510158 A US 5867654 A US 5978835 A US 5896500 A US 5884039 A US 5617539 A US 5802294 A US 5854893 A US 5915091 A US 6237025 B	18-11-1997 03-04-2001 15-01-2001 01-05-1995 01-05-1995 13-04-1995 13-04-1995 13-04-1995 15-05-2000 25-01-2001 26-07-2001 17-07-1996 17-07-1996 03-03-1999 03-03-1999 03-03-1999 24-02-1999 28-04-1999 28-04-1999 10-11-1999 05-04-1995 13-05-1998 13-05-1998 13-05-1998 13-05-1998 13-04-1995 13-04-1995 02-02-1999 02-11-1999 20-04-1999 16-03-1999 01-04-1997 01-09-1998 29-12-1998 22-06-1999 22-05-2001
US 5999609 A	07-12-1999	NONE	