# WORLD INTELLECTUAL PROPERTY ORGANIZATION



#### INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>7</sup>: G06F 3/00, 9/06, 13/00, 13/22, 15/02, H04M 11/00, H04N 7/167, 7/173, H04Q 5/04

**A3** 

(11) International Publication Number:

WO 00/31912

(43) International Publication Date:

2 June 2000 (02.06.00)

(21) International Application Number:

PCT/US99/25876

(22) International Filing Date:

3 November 1999 (03.11.99)

(30) Priority Data:

09/199,973

25 November 1998 (25.11.98) US

(71) Applicant: SONY ELECTRONICS, INC. [US/US]; 1 Sony Drive, Park Ridge, NJ 07656 (US).

(72) Inventor: ZOU, Feng; 1775 Milmont Drive, Milpitas, CA 95035 (US).

(74) Agents: GALLENSON, Mavis, S. et al.; Ladas & Parry, Suite 2100, 5670 Wilshire Boulevard, Los Angeles, CA 90036-5679 (US). (81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

#### **Published**

With international search report.

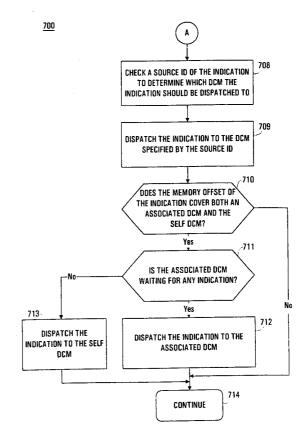
(88) Date of publication of the international search report:

26 October 2000 (26.10.00)

#### (54) Title: A METHOD AND SYSTEM FOR MESSAGE DISPATCHING

### (57) Abstract

A method of routing a received message to a proper software controller in a home audio/video network of connected network devices. A message is received from a network bus by an intelligent device coupled to the network bus, wherein the intelligent device includes a memory having stored therein a plurality of software controllers for communicating with a plurality of network devices. The intelligent device examines the received message to determine a memory space indication (710) and a source device identification (708) stored therein. The intelligent device then determines whether any software controllers associated with the device match the memory space indication (710). Provided that only one software controller matches the memory space indication (710), the received message is dispatched to the one software controller. Provided that more than one software controller matches the memory space indication (710), the received message is dispatched to that software controller that is also associated with the source device identification (708) of the received message.



# FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
ΑT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
ΑZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav	TM	Turkmenistan
BF	Burkina Faso	GR	Greece		Republic of Macedonia	TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's	NZ	New Zealand		
CM	Cameroon		Republic of Korea	PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

# INTERNATIONAL SEARCH REPORT

International application No. PCT/US99/25876

Pour   Please See Extra Sheet.										
A.E. US 6,032,202 A (LEA ET AL.) 29 February 2000, col. 4-28  A.E. US 6,032,202 A (LEA ET AL.) 29 February 2000, col. 4-28  A.B. US 5,805,925 A (HOFFMAN ET AL.) 29 September 1998, col. 1-18  A.B. US 5,805,925 A (LICHTMAN ET AL.) 25 September 1998, col. 1-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 25 September 1998, col. 1-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-18  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-24  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-24  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-24  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-24  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-24  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-24  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-24  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-24  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-24  A.B. US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col		•								
Minimum documentation searched (classification system followed by classification symbols)  U.S.: 340/825.25; 348/7, 14; 380/200; 769/220, 253; 710/8, 11, 29, 72, 129  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  Electronic data has consulted during the international search (name of data base and, where practicable, search terms used)  E. DOCUMENTS CONSIDERED TO BE RELEVANT  Category*  Citation of document, with indication, where appropriate, of the relevant passages  Relevant to claim No.  A,E  US 6,052,750 A (LEA) 18 April 2000, col. 4-28  1-18  US 5,805,925 A (HOFFMAN ET AL.) 29 February 2000, col. 4-28  1-18  US 5,805,925 A (BLACKWELL ET AL.) 08 September 1998, col. 2-16  1-18  US 5,809,329 A (LICHTMAN ET AL.) 15 September 1998, col.  1-18  US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  I 1-18  Purther documents are listed in the continuation of Box C.  See patent family annex.  The document which approximate and matches which is not considered to specifying the invention of the provision of cored documents are after the surremanoal (ling date experience) and the surface of the settle of	·									
Minimum documentation searched (classification system followed by classification symbols)  U.S.: 340/825.25, 348/7, 14; 380/200; 709/220, 253; 710/8, 11, 29, 72, 129  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)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted in the fields search terms used)  Electronic data base consulted during the international search (name of data base and, where a practicable, search terms used)  Electronic data base consulted during the international file, data base and, where a part of the search	According t	According to International Patent Classification (IPC) or to both national classification and IPC								
U.S.: 340/825.25; 348/7, 14; 380/200; 709/220, 253; 710/8, 11, 29, 72, 129  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)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the search with indication, where appropriate, of the relevant passages  Relevant to claim No.  1-18	B. FIELDS SEARCHED									
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)  E. DOCUMENTS CONSIDERED TO BE RELEVANT  Category*  Citation of document, with indication, where appropriate, of the relevant passages  Relevant to claim No.  A,E  US 6,052,750 A (LEA) 18 April 2000, col.4-28  L-18  A,E  US 6,032,202 A (LEA ET AL.) 29 February 2000, col. 4-28  L-18  US 5,815,678 A (HOFFMAN ET AL.) 29 September 1998, col. 2-16  L-18  US 5,805,925 A (BLACKWELL ET AL.) 08 September 1998, col. 1-18  L-18  US 5,809,329 A (LICHTMAN ET AL.) 15 September 1998, col. 1-18  L-18  US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  Los 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  Los 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  Los 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  Los 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  Los 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  Los 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  Los 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  Los 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  Los 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  Los 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  Los 6,000,000,000,000,000,000,000,000,000,0	Minimum d	Minimum documentation searched (classification system followed by classification symbols)								
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  C. DOCUMENTS CONSIDERED TO BE RELEVANT  Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No.  A,E US 6,052,750 A (LEA) 18 April 2000, col.4-28  1-18  US 5,805,202 A (LEA ET AL.) 29 February 2000, col. 4-28  1-18  US 5,805,925 A (BLACKWELL ET AL.) 08 September 1998, col. 2-16  1-18  US 5,805,925 A (BLACKWELL ET AL.) 08 September 1998, col. 1-18  US 5,809,329 A (LICHTMAN ET AL.) 15 September 1998, col. 1-18  US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44. 1-18	<b>U.S.</b> :	U.S. : 340/825.25; 348/7, 14; 380/200; 709/220, 253; 710/8, 11, 29, 72, 129								
C. DOCUMENTS CONSIDERED TO BE RELEVANT  Category*  Citation of document, with indication, where appropriate, of the relevant passages  Relevant to claim No.  A,E  US 6,052,750 A (LEA) 18 April 2000, col.4-28  1-18  A,E  US 6,032,202 A (LEA ET AL.) 29 February 2000, col. 4-28  1-18  A  US 5,815,678 A (HOFFMAN ET AL.) 29 September 1998, col. 2-16  1-18  A  US 5,805,925 A (BLACKWELL ET AL.) 08 September 1998, col.  1-18  US 5,809,329 A (LICHTMAN ET AL.) 15 September 1998, col.  1-18  US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-14  US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  1-18	Documentat	Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched								
Category* Citation of document, with indication, where appropriate, of the relevant passages  A,E US 6,052,750 A (LEA) 18 April 2000, col.4-28  1-18  A,E US 6,032,202 A (LEA ET AL.) 29 February 2000, col. 4-28  1-18  A US 5,815,678 A (HOFFMAN ET AL) 29 September 1998, col. 2-16  1-18  A US 5,805,925 A (BLACKWELL ET AL.) 08 September 1998, col. 1-18  US 5,809,329 A (LICHTMAN ET AL.) 15 September 1998, col. 1-18  1-18  US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  I S 5,809,329 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  I S 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  I S 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  I S Special categories of cred documents are listed in the continuation of Box C.  See patent family annex.  I Substitute of the second particular relevance, the claimed unventor cannot be considered from the second control of the second particular relevance, the claimed unventor step of the second particular relevance, and combination or other special coston as specified?  I document deferming to an oral disclosure, use, exhibition or other special coston as specified?  P document deferming to an oral disclosure, use, exhibition or other means.  P document deferming to an oral disclosure, use, exhibition or other means.  Date of the actual completion of the international search  I MAY 2060  Name and mailing address of the ISA/US Commissions of Patents and Inademarks  Box PCT  Washington DC 20231	Electronic d	Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)								
A,E US 6,052,750 A (LEA) 18 April 2000, col.4-28  A,E US 6,032,202 A (LEA ET AL.) 29 February 2000, col. 4-28  L1-18  LUS 5,815,678 A (HOFFMAN ET AL) 29 September 1998, col. 2-16  LUS 5,805,925 A (BLACKWELL ET AL.) 08 September 1998, col. 1-18  LUS 5,809,329 A (LICHTMAN ET AL.) 15 September 1998, col. 1-18  LUS 5,809,329 A (LICHTMAN ET AL.) 15 September 1998, col. 1-18  LUS 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  LUS 5,787,246 A (LICHTMAN ET AL.) 15 September 1998, col. 11-48  LUS 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  LUS 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  LUS 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  LUS 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  LUS 5,780,780,100,100,	C. DOC	UMENTS CONSIDERED TO BE RELEVANT								
A,E US 6,032,202 A (LEA ET AL.) 29 February 2000, col. 4-28  US 5,815,678 A (HOFFMAN ET AL) 29 September 1998, col. 2-16  A US 5,805,925 A (BLACKWELL ET AL.) 08 September 1998, col. 1-18  US 5,809,329 A (LICHTMAN ET AL.) 15 September 1998, col. 1-18  US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  **Special autographs of cited documents:  "A" document defining the general state of the art which is not considered to be a functional relevance  "B" eather document which may thow doubts on priority claim(s) or which is cited in schowned published on or after the international filing date or cited in schowned published on or after the international filing date or cited in schowned published on or after the international filing date or other special resources as specified?  "C" eather document which may thow doubts on priority claim(s) or which is cited in schowned published on or other special resources as specified?  "C" document which may thow doubts on priority claim(s) or which is cited in calculation or other special resources as specified?  "O" document returning to an oral discloure, use, exhibition or other special resources as specified?  "O" document returning to an oral discloure, use, exhibition or other special resources as specified?  "O" document proteins to a moral discloure, use, exhibition or other means.  "P" document published after the international filing date but later than the principle of or cannot be considered to involve an inventive step when the document in the document in the document in the principle of cannot be considered to involve an inventive step when the document in the principle of cannot be considered to involve an inventive step when the document in the principle of cannot be considered to involve an inventive step when the document in the principle of cannot be considered to involve an inventive step when the document in the principle of cannot be considered to involve an inventive step when the document	Category*	Citation of document, with indication, where app	propriate, of the relevant passages	Relevant to claim No.						
US 5,815,678 A (HOFFMAN ET AL.) 29 September 1998, col. 2-16  US 5,805,925 A (BLACKWELL ET AL.) 08 September 1998, col. 1-18  1-18  US 5,809,329 A (LICHTMAN ET AL.) 15 September 1998, col. 1-18  US 5,809,329 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44. 1-18  W Further documents are listed in the continuation of Box C. See patent family annex.  Special categories of cited documents:  "A" document defaining the general state of the art which is not considered to be so particular relevance.  "E" earlier - Learnert published on or after the memational filing date to the considered to the comparison of the cited of categories of cited documents.  "A" document which many throw doubts on priority claimist) or which is cited of categories of cited documents are learner to published on or after the memational filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the investigation document of particular reteriories, the claimed invention cannot be considered now of or cannot be considered now of or cannot be considered to involve an inventive step when the document is taken also mandered to involve an inventive step when the document is a person skilled in decument is particular reterrance. The claimed invention cannot be considered to involve an inventive step when the document is a person skilled in decument is particular reterrance. The claimed invention cannot be considered to involve an inventive step when the document is a person skilled in decument is particular reterrance. The claimed invention cannot be considered to involve an inventive step when the document is a person skilled in the document in the priority late claimed.  Date of mailing of the international search report  13 JUN 2000  Name and mailing ackiress of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington. D C 20231	A,E	US 6,052,750 A (LEA) 18 April 2000,	col.4-28	1-18						
US 5,805,925 A (BLACKWELL ET AL.) 08 September 1998, col. 1-18  US 5,809,329 A (LICHTMAN ET AL.) 15 September 1998, col. 1-18  II-43.  A US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44. 1-18	A,E	US 6,032,202 A (LEA ET AL.) 29 Fel	bruary 2000, col. 4-28	1-18						
A US 5,809,329 A (LICHTMAN ET AL.) 15 September 1998, col. 1-18    US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44. 1-18    We special cutegories of cited documents:	A	US 5,815,678 A (HOFFMAN ET AL) 2	9 September 1998, col. 2-16	1-18						
A US 5,787,246 A (LICHTMAN ET AL.) 28 July 1998, col. 11-44.  **  Special categories of cited documents:  *A*  document defining the general state of the art which is not considered to be of particular relevance earlier becament published on or after the international filing date earlier becament which may throw doubts on priority claim(s) or which is cited to earlier becament which may throw doubts on priority claim(s) or which is cited to earlier becament which may throw doubts on priority claim(s) or which is cited to earlier becament which may throw doubts on priority claim(s) or which is cited to earlier becament which may throw doubts on priority claim(s) or which is cited to earlier becament which may throw doubts on priority claim(s) or which is cited to earlier becament published on or after the international or which is cited to earlier becament of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is seem alone.  *Y*  document published prior to the international filing date but later than the principle 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 16 MAY 2000  Name and mailing address of the ISA/US Commissioner of Patients and Trademarks Box PCT Washington. DC 20231  Authorized officer GLEN BURGESS Authorized officer GLEN	A		L.) 08 September 1998, col.	1-18						
See patent family annex.	A	I	) 15 September 1998, col.	1-18						
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 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  Date of the actual completion of the international search  16 MAY 2000  Name and mailing address of the ISA/US  Commissioner of Patents and Trademarks  Box PCT  Washington, D.C. 20231  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 cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  "X"  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 mailing of the international search report  13 JUN 2000  Authorized officer  GLEN BURGESS  GLEN BURGESS	A	US 5,787,246 A (LICHTMAN ET AL	.) 28 July 1998, col. 11-44.	1-18						
document defining the general state of the art which is not considered to be of particular relevance  "E" earlier document 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  Date of the actual completion of the international search  16 MAY 2000  Name and mailing address of the ISA/US Commissioner of Patents and Trademarks  Box PCT Washington, D.C. 20231  document defining the general state of the art which is not considered to mode and the principle or theory underlying the invention  "X" 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 mailing of the international search report  13 JUN 2000  Authorized officer  GLEN BURGESS  GLEN BURGESS	X Furt	her documents are listed in the continuation of Box C.	See patent family annex.							
earlier document published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited 6 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  Date of the actual completion of the international search  16 MAY 2000  Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231  *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 novel or cannot be considered novel or cannot be considered to involve an inventive step when the document is combined with one or more other such document is a combined with one or more other such document is a combined with one or more other such document is a combined with one or more other such document is a combined with one or more other such document is a combined with one or more other such docum	"A" de	ocument defining the general state of the art which is not considered	date and not in conflict with the app	lication but cited to understand						
content 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  Date of the actual completion of the international search  16 MAY 2000  Name and mailing address of the ISA/US  Commissioner of Patents and Trademarks  Box PCT  Washington, D.C. 20231  *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 mailing of the international search report  13 JUN 2000  Authorized officer  GLEN BURGESS  **Commissioner of Patents and Trademarks  GLEN BURGESS	"E" ea	arher document published on or after the international filing date	"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step							
*P* document published prior to the international filing date but later than the priority date claimed  Date of the actual completion of the international search  16 MAY 2000  Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231  Date of mailing of the international search report  13 JUN 2000  Authorized officer GLEN BURGESS  GLEN BURGESS	cited (c establish the publication date of another citation or other special reason (as specified)  *O* document referring to an oral disclosure, use, exhibition or other		'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							
16 MAY 2000  Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231  Authorized officer GLEN BURGESS  GLEN BURGESS	"P" d	ocument published prior to the international filing date but later than	•							
Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231  GLEN BURGESS  GLEN BURGESS				arch report						
Washington, D.C. 20231	Commissioner of Patents and Trademarks Box PCT		FOR Manin Joan							
	1		Telephone No. (703) 305-4792							

# INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/25876

C (Continua	tion). DOCUMENTS CONSIDERED TO BE RELEVANT	·
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	US 5,894,320 A (VANCELETTE) 13 April 1999, col.5-11.	1-18
A	US 5,787,259 A (HAROUN ET AL.) 28 July 1998, col. 2-9.	1-18
A	US 5,818,935 A (MAA) 06 OCTOBER 1998, col. 5-20.	1-18
A	US 5,436,618 A (VAN STEENBRUGGE) 25 July 1995, col.5-8.	1-18

# INTERNATIONAL SEARCH REPORT

International application No. PCT/US99/25876

A. CLASSIFICATION OF SUBJECT MATTER: IPC (7):
G06F 3/00, 9/06, 13/00, 13/22, 15/02; H04M 11/00; H04N 7/167, 7/173; H04Q 5/04
A. CLASSIFICATION OF SUBJECT MATTER: US CL :
340/825.25; 348/7, 14; 380/200; 709/220, 253; 710/8, 11, 29, 72, 129