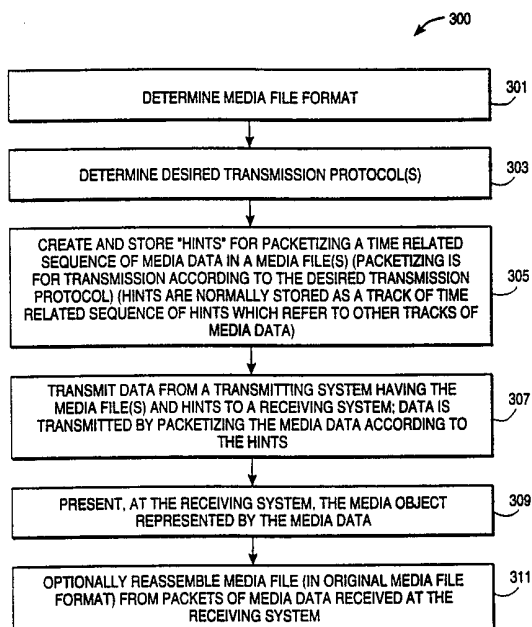




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification ⁶ : H04L 29/06, H04N 7/24</p>	<p>A3</p>	<p>(11) International Publication Number: WO 99/37056 (43) International Publication Date: 22 July 1999 (22.07.99)</p>
<p>(21) International Application Number: PCT/US99/00953 (22) International Filing Date: 13 January 1999 (13.01.99) (30) Priority Data: 60/071,566 15 January 1998 (15.01.98) US 09/139,196 25 August 1998 (25.08.98) US (71) Applicant: APPLE COMPUTER, INC. [US/US]; 1 Infinite Loop, M/S 38-PAT, Cupertino, CA 95014 (US). (72) Inventors: JONES, Anne; 3817 Hamilton Way, Redwood City, CA 94062 (US). GEAGAN, Jay; 5475 Prospect Road #212, San Jose, CA 95129 (US). GONG, Kevin, L.; 955 Escalon Avenue #515, Sunnyvale, CA 94086 (US). PERIYANNAN, Alagu; 34113 Finnigan Terrace, Fremont, CA 94555 (US). SINGER, David, W.; 268 Wawona Street, San Francisco, CA 94127 (US). (74) Agents: SCHELLER, James, C. et al.; Blakely, Sokoloff, Taylor & Zafman LLP, 7th floor, 12400 Wilshire Boulevard, Los Angeles, CA 90025 (US).</p>		<p>(81) Designated States: AL, AM, AT, AT (Utility model), AU (Petty patent), AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), EE, EE (Utility model), ES, FI, FI (Utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, 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 <i>With international search report.</i> (88) Date of publication of the international search report: 30 September 1999 (30.09.99)</p>

(54) Title: METHOD AND APPARATUS FOR MEDIA DATA TRANSMISSION



(57) Abstract

The present invention relates to information which allows transmission of time related data over a data communication medium. In one embodiment, a set of data includes at least one instruction to cause a digital processing system to generate a set of packets representing a time related sequence of media data. The set of packets is associated with a transmission protocol. The set of data includes a time related sequence of data which is associated with the time related sequence of media data.

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
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	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 Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece			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 Republic of Korea	NZ	New Zealand		
CM	Cameroon			PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakistan	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/US 99/00953

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 6 H04L29/06 H04N7/24

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)

IPC 6 H04L H04N

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 497 449 A (PIONEER ELECTRONIC CORP) 5 August 1992 (1992-08-05)	17, 18
A	page 2, line 26-44 page 3, line 16-46 page 4, line 27-44 page 5, line 2-39 page 6, line 12-38 page 7, line 16-29 page 8, line 1-8; claims 1,5-7 ----- -/--	1, 8, 26

Further documents are listed in the continuation of box C.

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

14 July 1999

Date of mailing of the international search report

26/07/1999

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

Dupuis, H

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 99/00953

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>ENGLAND P ET AL: "RAVE: real-time services for the Web" FIFTH INTERNATIONAL WORLD WIDE WEB CONFERENCE, PARIS, FRANCE, 6-10 MAY 1996, vol. 28, no. 7-11, pages 1547-1558, XP004018250 Computer Networks and ISDN Systems, May 1996, Elsevier, Netherlands ISSN: 0169-7552 page 1550, left-hand column, line 12-32 page 1551, right-hand column, line 18-22 page 1552, right-hand column, line 5-26 ---</p>	<p>1,8,17, 19,22,26 -</p>
A	<p>WALSH A E: "PROGRAMMING QUICKTIME. MULTIMEDIA TO THE MACS" DR. DOBBS JOURNAL, vol. 17, no. 7, 1 July 1992 (1992-07-01), pages 76, 78-80, 102,, XP000600303 page 76, middle column, line 1 - page 78, right-hand column, line 20 ---</p>	<p>19</p>
A	<p>EP 0 702 309 A (AARHUUS STIFTSBOGTRYKKERIE S M) 20 March 1996 (1996-03-20) page 2, line 45 - page 4, line 2 page 7, line 7-29 -----</p>	<p>23</p>

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 99/00953

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0497449 A	05-08-1992	JP 4245818 A US 5345594 A	02-09-1992 06-09-1994
EP 0702309 A	20-03-1996	NONE	