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Jones et al.

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(54) **METHOD AND APPARATUS FOR PREPARING MEDIA DATA FOR TRANSMISSION**

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(73) Assignee: **Apple Computer, Inc.**, Cupertino, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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Related U.S. Application Data

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(60) Provisional application No. 60/071,566, filed on Jan. 15, 1998.

(51) **Int. Cl.**[7] **G06F 15/16**
(52) **U.S. Cl.** **709/230**; 709/231; 370/327; 345/259
(58) **Field of Search** 370/465, 235, 370/265, 270; 709/230, 231; 345/259, 327

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,873,777	A	3/1975	Uehara et al.	179/15 A
3,932,698	A	1/1976	Yanagimachi et al.	178/5.6
4,688,214	A	8/1987	DeWitt et al.	
5,319,707	A	6/1994	Wasilewski et al.	380/14
5,448,568	A	9/1995	Delpuch et al.	372/94.2
5,497,373	A	3/1996	Hulen et al.	
5,544,198	A	8/1996	Saalfrank	
5,623,490	A	4/1997	Richter et al.	
5,655,117	A	8/1997	Goldberg et al.	
5,659,539	A	8/1997	Porter et al.	
5,694,334	A	12/1997	Donahue et al.	

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

EP	0 497 449	8/1992
EP	0 702 309	3/1996

OTHER PUBLICATIONS

P. England, et al. "RAVE: Real–time services for the Web," *Computer Networks and ISDN Systems* 28 (1996), pp. 1547–1558.

A. Walsh, "Programming QuickTime, Multimedia to the Macs," *Dr. Dobbs Journal*, 17:7 (Jul. 1992), XP 000600303, pp. 76, 78–80, 102, and 104–105.

PCT International Search Report for PCT Int'l Appln. No. PCT/US99/00953 mailed Jul. 26, 1999.

PCT International Search Report for PCT Int'l Appln. No. PCT/US99/00954 mailed Jul. 26, 1999.

PCT International Search Report for PCT Int'l Appln. No. PCT/US99/00955 mailed Jul. 26, 1999.

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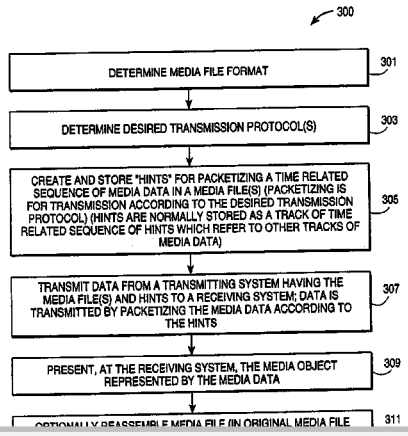
(57) **ABSTRACT**

Methods and apparatuses for processing media data for transmission in a data communication medium. A set of data indicates how to transmit a time related sequence of media data according to 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. The set of data may be utilized by a digital processing system to transmit the time related sequence of media data (e.g., by packets generated according to the transmission protocol and the set of data).

81 Claims, 14 Drawing Sheets



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U.S. PATENT DOCUMENTS

5,774,666	A	6/1998	Portuesi	
5,778,187	A	7/1998	Monteiro et al.	
5,784,277	A	7/1998	Meyer	364/400.01
5,799,150	A	8/1998	Hamilton et al.	
5,802,294	A	9/1998	Ludwig et al.	
5,818,441	A	10/1998	Throckmorton et al.	345/328
5,838,678	A	11/1998	Davis et al.	370/389
5,864,682	A	1/1999	Porter et al.	
5,915,094	A	6/1999	Kouloheris et al.	
5,928,330	A	7/1999	Goetz et al.	
5,956,729	A	9/1999	Goetz et al.	
5,966,120	A	10/1999	Arazi et al.	
5,987,501	A	11/1999	Hamilton et al.	
5,987,509	A	11/1999	Portuesi	
6,055,246	A	4/2000	Jones	
6,064,771	A	5/2000	Migdal et al.	
6,112,226	A	8/2000	Weaver et al.	
6,119,154	A	9/2000	Weaver et al.	
6,134,243	A	10/2000	Jones et al.	
6,138,147	A	10/2000	Weaver et al.	
6,157,674	A	12/2000	Oda et al.	
6,157,871	A1	1/2001	Schuster et al.	
6,327,418	B1	12/2001	Barton	
6,453,355	B1 *	9/2002	Jones et al.	709/230
6,512,778	B1 *	1/2003	Jones et al.	370/465
6,578,070	B1	6/2003	Weaver et al.	
2003/0131117	A1 *	7/2003	Jones et al.	709/230
2003/0204555	A1 *	10/2003	Jones et al.	709/200

* cited by examiner

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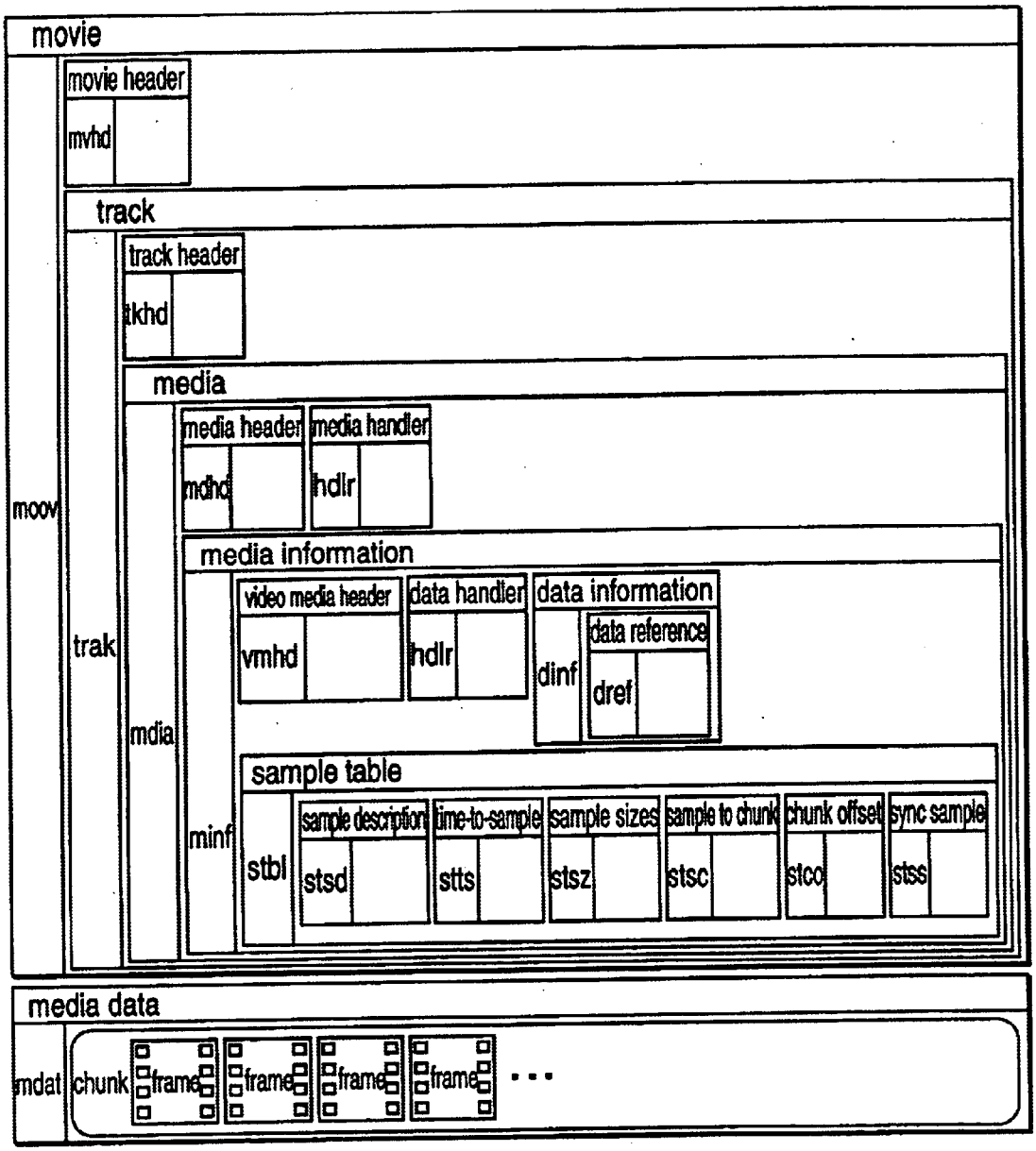

FIG. 1

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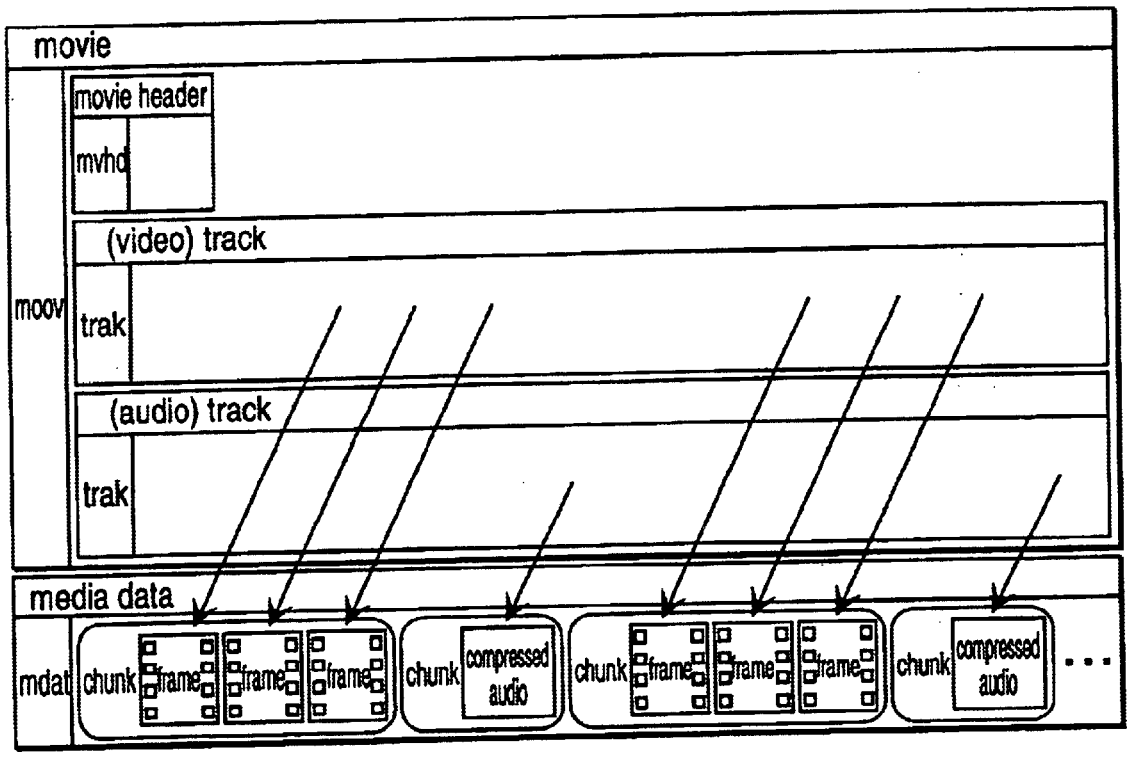

FIG. 2

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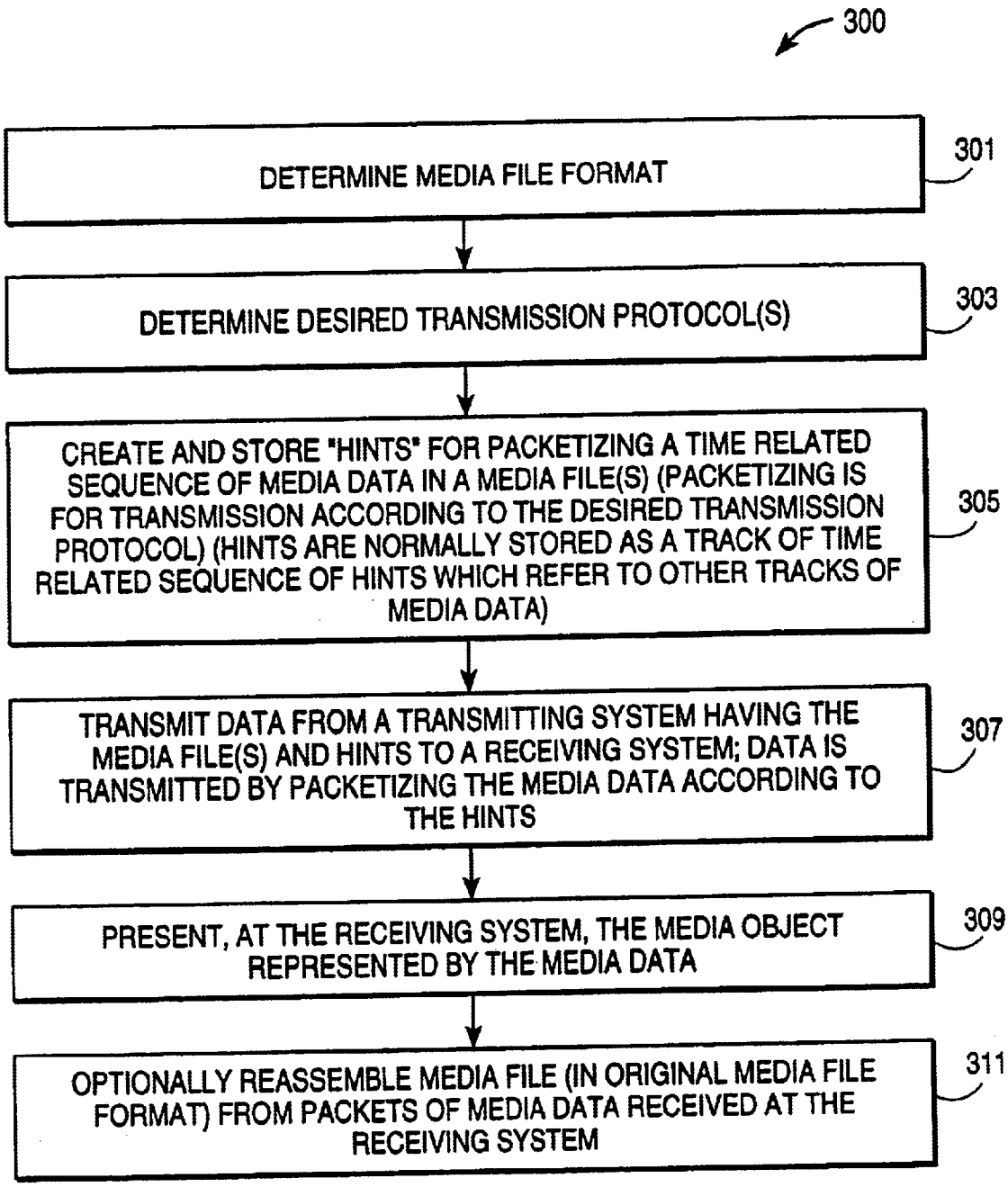

FIG. 3

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