



(12) **United States Patent**
Jones et al.

(10) **Patent No.:** **US 6,453,355 B1**
(45) **Date of Patent:** ***Sep. 17, 2002**

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

(75) Inventors: **Anne Jones**, Redwood City; **Jay Geagan**, San Jose; **Kevin L. Gong**, Sunnyvale; **Alagu Periyannan**; **David W. Singer**, both of San Francisco, all of CA (US)

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

(*) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

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

(21) Appl. No.: **09/139,378**

(22) Filed: **Aug. 25, 1998**

Related U.S. Application Data

(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; 345/327; 370/259**

(58) **Field of Search** **709/231, 230; 345/327; 370/259**

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,873,777 A	3/1975	Uehara et al.	
3,932,698 A	1/1976	Yanagimachi et al.	
5,319,707 A	6/1994	Wasilewski et al.	
5,448,568 A	9/1995	Delpuch et al.	
5,497,373 A	* 3/1996	Hulen et al.	370/259
5,544,198 A	8/1996	Saalfrank	
5,778,187 A	7/1998	Monteiro et al.	
5,784,277 A	7/1998	Meyer	
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.	

5,838,678 A	11/1998	Davis et al.	
5,915,094 A	* 6/1999	Kouloheris et al.	345/327
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.	345/327
5,987,501 A	11/1999	Hamilton et al.	
6,055,246 A	4/2000	Jones	
6,134,243 A	* 10/2000	Jones et al.	370/465
6,157,674 A	* 12/2000	Oda et al.	375/240
6,175,871 B1	* 1/2001	Schuster et al.	709/231

FOREIGN PATENT DOCUMENTS

EP	0497449	8/1992
EP	0702309	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.

* cited by examiner

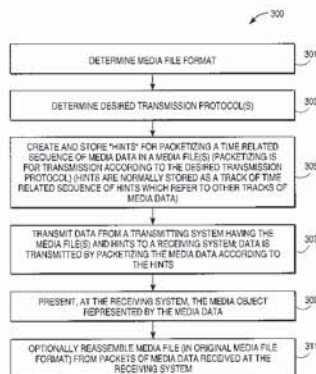
Primary Examiner—Krisna Lim

(74) *Attorney, Agent, or Firm*—Blakely, Sokoloff, Taylor & Zafman LLP

(57) **ABSTRACT**

Methods and apparatuses for processing media data transmitted in a data communication medium. A digital processing system is provided with a time related sequence of media data provided to the digital processing system based on a set of data, wherein the set of data indicates a method to transmit the time related sequence of media data according to a transmission protocol. The set of data, itself, is a time related sequence of data associated with the time related sequence of media data. The time related sequence of media data may be presented and/or stored by the digital processing system.

44 Claims, 14 Drawing Sheets



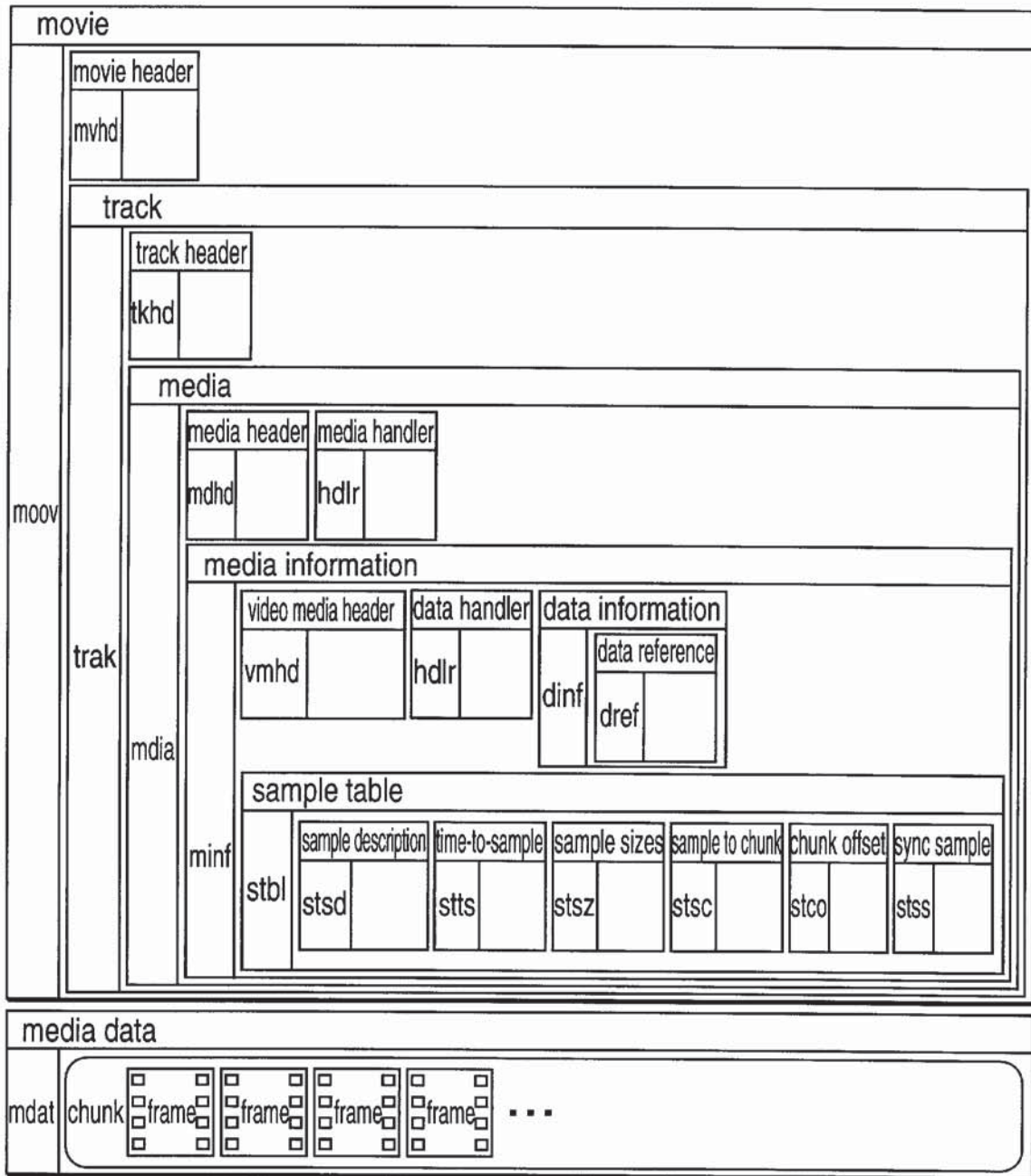


FIG. 1

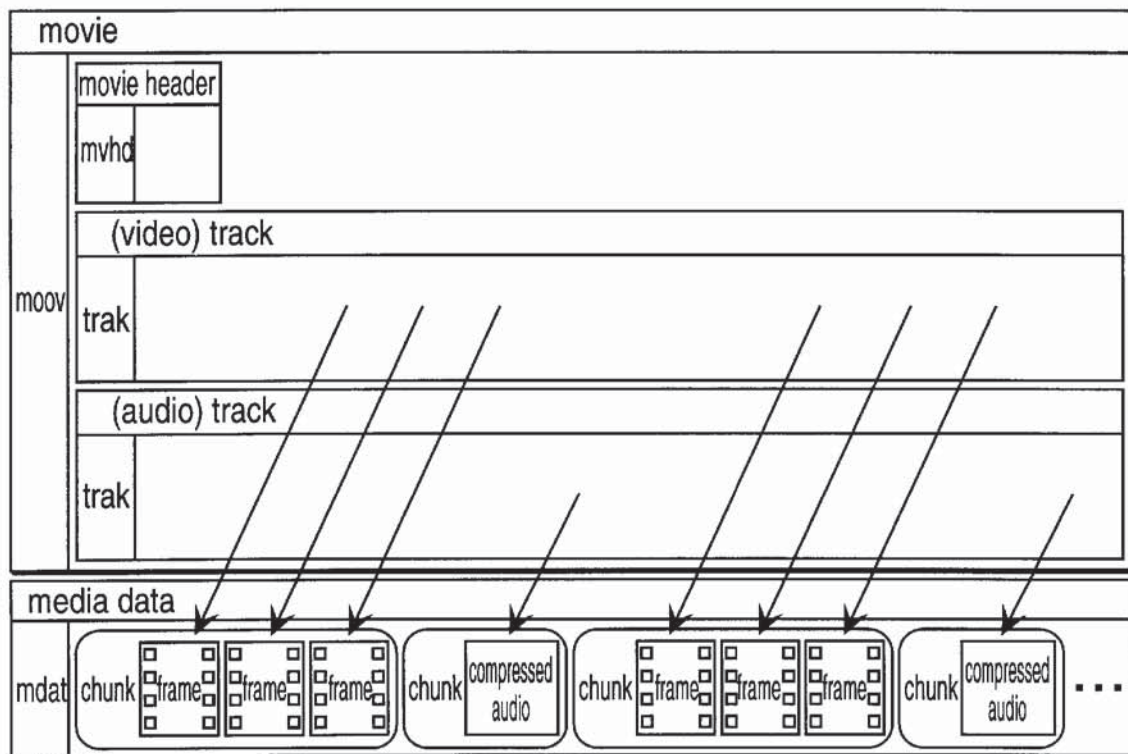


FIG. 2

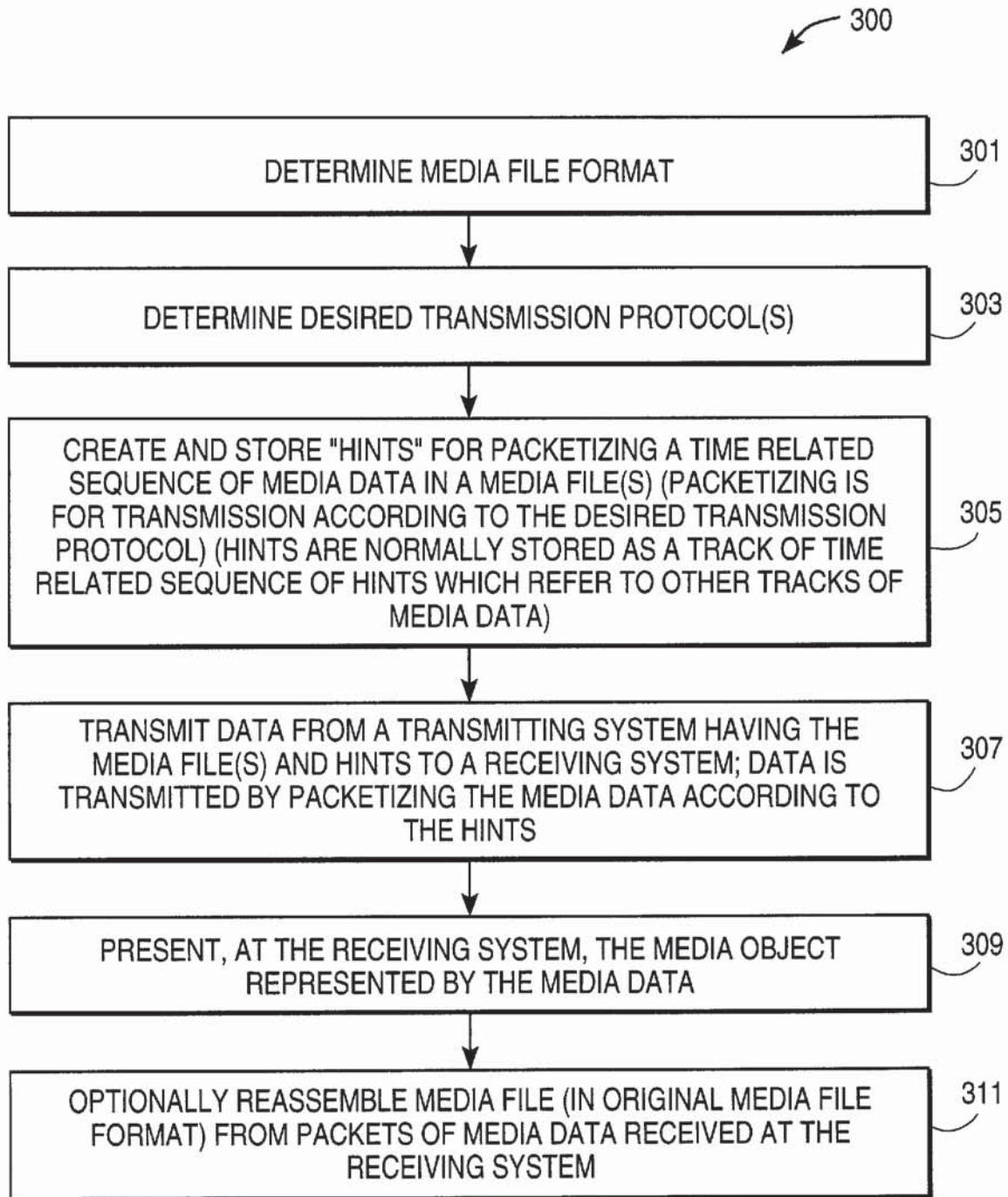


FIG. 3

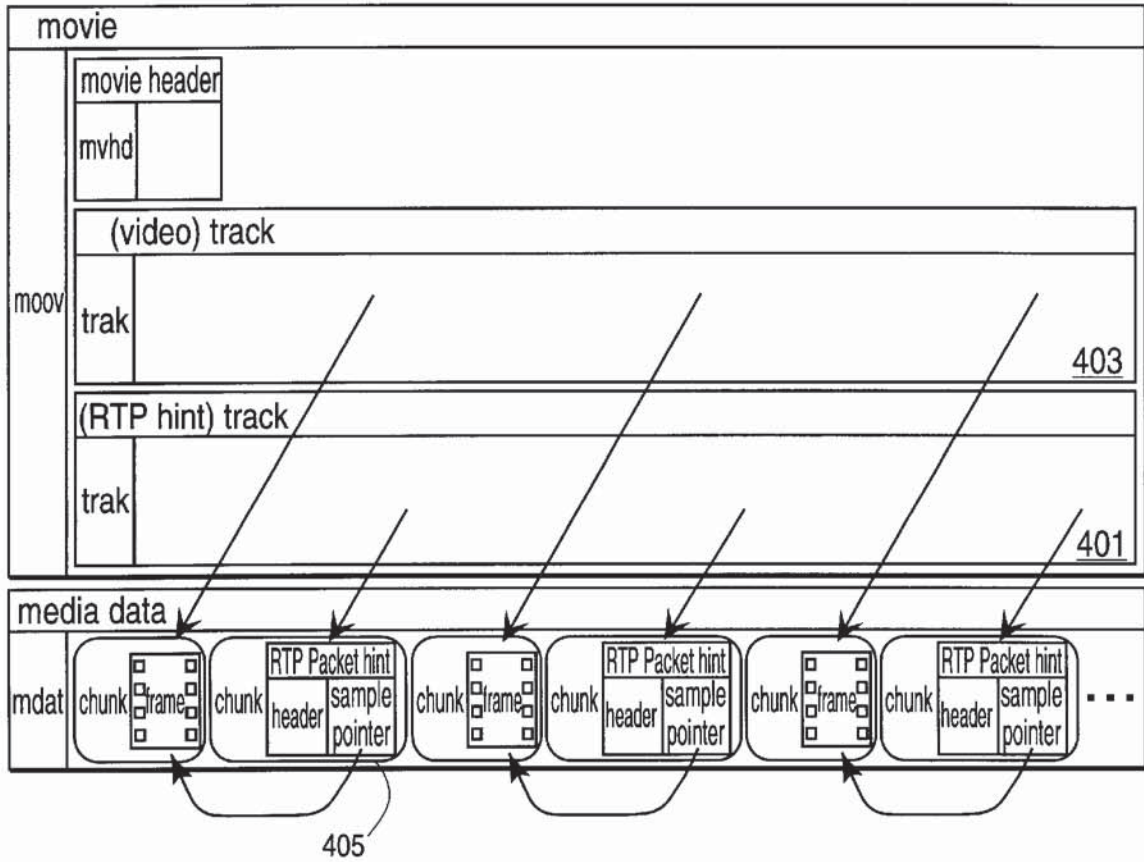


FIG. 4

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.