



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

(10) **Patent No.:** **US 6,772,212 B1**
(45) **Date of Patent:** **Aug. 3, 2004**

- (54) **AUDIO/VISUAL SERVER**
- (75) Inventors: **Dannie C. Lau**, Santa Clara, CA (US);
Daniel Benyamin, Oakland, CA (US);
Brendan T. Dowling, Malibu, CA (US)
- (73) Assignee: **PhatNoise, Inc.**, Los Angeles, 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.
- (21) Appl. No.: **09/521,182**
- (22) Filed: **Mar. 8, 2000**
- (51) Int. Cl.⁷ **G11B 2/10; G06F 15/16**
- (52) U.S. Cl. **709/228; 709/203; 364/515**
- (58) **Field of Search** **709/206, 203, 709/217, 218, 222, 225, 228, 232; 710/8, 10; 705/51; 364/514, 515**

6,061,232	A	5/2000	Ho	.....	361/685
6,078,112	A	6/2000	Saunders et al.	.....	307/125
6,132,243	A	10/2000	Hirata et al.	.....	439/541.5
6,142,796	A	11/2000	Behl et al.	.....	439/131
6,155,853	A	12/2000	Kajiura	.....	439/159
6,163,817	A	* 12/2000	Shteyn et al.	.....	710/8
6,176,734	B1	1/2001	Juntwait et al.	.....	439/493
6,212,555	B1	4/2001	Brooks, Jr.		
6,233,226	B1	5/2001	Gringeri et al.	.....	370/252
6,233,623	B1	5/2001	Jeffords et al.	.....	709/316
6,236,997	B1	5/2001	Bodamer et al.	.....	707/10
6,317,141	B1	* 11/2001	Pavley et al.	.....	345/732
6,330,337	B1	12/2001	Nicholson et al.	.....	381/86
6,344,801	B1	2/2002	Aoki et al.	.....	340/815.4
6,378,010	B1	4/2002	Burks	.....	710/68
6,385,596	B1	* 5/2002	Wiser et al.	.....	705/51
6,457,640	B2	* 10/2002	Ramachandran et al.	...	235/379
6,487,145	B1	11/2002	Berhan	.....	369/30.15
6,721,489	B1	* 4/2004	Benyamin et al.	.....	386/46

- (56) **References Cited**
- U.S. PATENT DOCUMENTS**
- 4,833,554 A 5/1989 Dalziel et al. 360/98.04
- 4,982,303 A 1/1991 Krenz 360/137
- 5,173,888 A 12/1992 An 369/33
- 5,253,133 A 10/1993 Guo 360/97.01
- 5,319,519 A 6/1994 Sheppard et al. 361/685
- 5,390,027 A 2/1995 Henmi et al.
- 5,408,449 A 4/1995 Oh 369/32
- 5,454,080 A 9/1995 Fasig et al. 395/283
- 5,541,738 A 7/1996 Mankovitz
- 5,557,541 A * 9/1996 Schulhof et al. 700/94
- 5,612,927 A 3/1997 Morrison et al. 361/685
- 5,620,244 A 4/1997 Yang 312/333
- 5,726,373 A * 3/1998 Choi et al. 84/609
- 5,734,119 A * 3/1998 France et al. 84/622
- 5,816,861 A 10/1998 Cheng 439/653
- 5,841,424 A 11/1998 Kikinis 345/168
- 5,860,068 A 1/1999 Cook
- 5,865,651 A 2/1999 Dague et al. 439/680
- 5,914,941 A 6/1999 Janky
- 5,926,624 A 7/1999 Katz et al.
- 6,016,522 A 1/2000 Rossum 710/52
- 6,023,290 A 2/2000 Seita
- 6,055,478 A 4/2000 Heron 701/213

OTHER PUBLICATIONS

Excerpts from www.empeg.com, 1999.
 Clarion AutoPC 310C Owner's Manual, Clarion Co. Ltd., 1998.
 RCA LYRA User's Guide, RD2201/2202/2204, 1999.

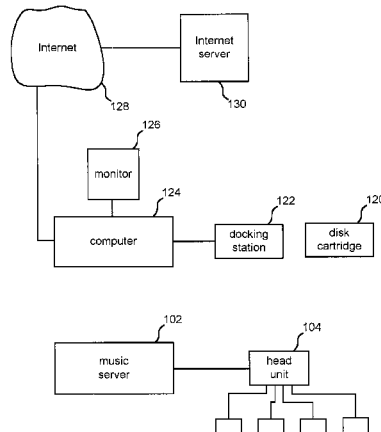
* cited by examiner

Primary Examiner—Frantz B. Jean
Assistant Examiner—Khanh Quang Dinh
 (74) *Attorney, Agent, or Firm*—Vierra Magen Marcus Harmon & DeNiro LLP

(57) **ABSTRACT**

An audio/visual server is described that can be used to store and play audio/visual data. A removable hard disk (or other media) is connected to a dock that is in communication with a computer. While the removable hard disk is connected to the dock, audio/visual data can be transferred from the computer to the hard disk. After the hard disk is removed from the dock and connected to the audio/visual server, the server can access and play the audio/visual data. In one embodiment, the audio/visual server stores and plays music, emulates a disc changer, and communicates with an automobile stereo head unit. The interface with the head unit is programmable so that multiple head units can be supported.

36 Claims, 16 Drawing Sheets



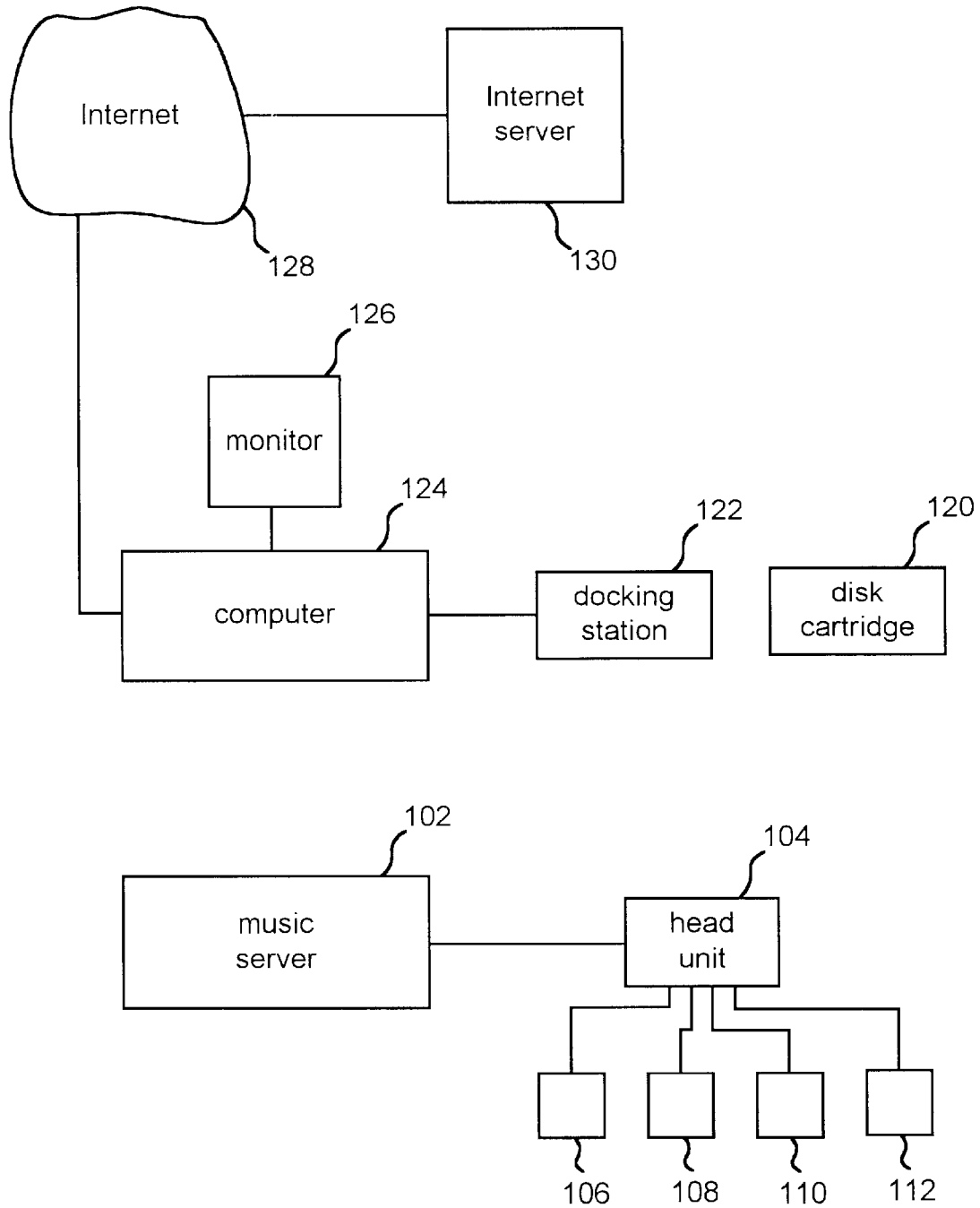


Fig. 1

Fig. 2

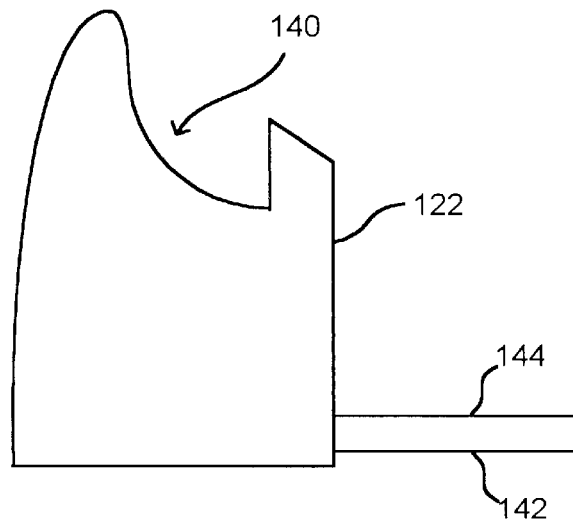
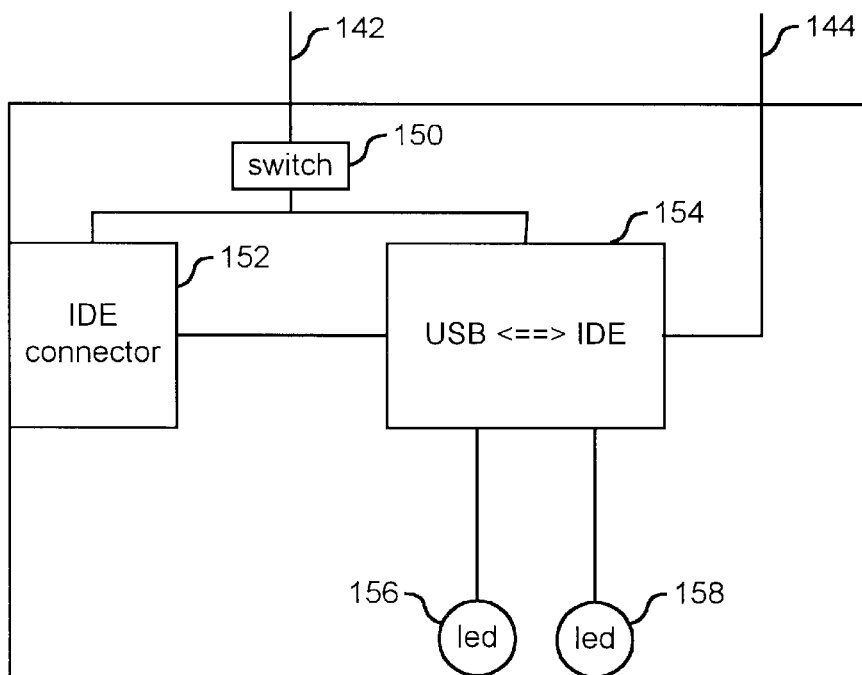


Fig. 3



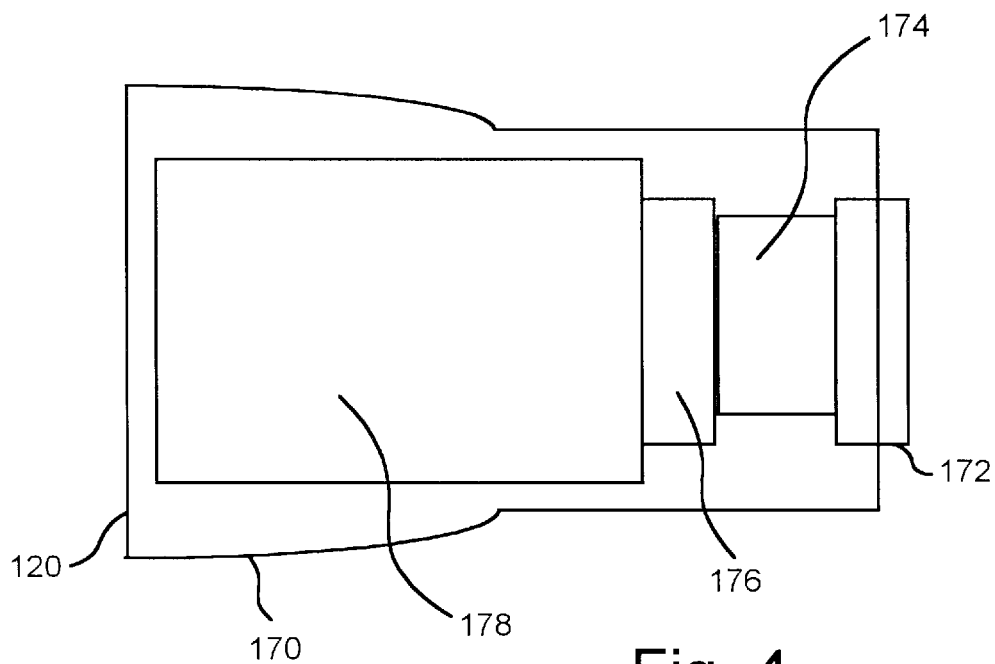


Fig. 4

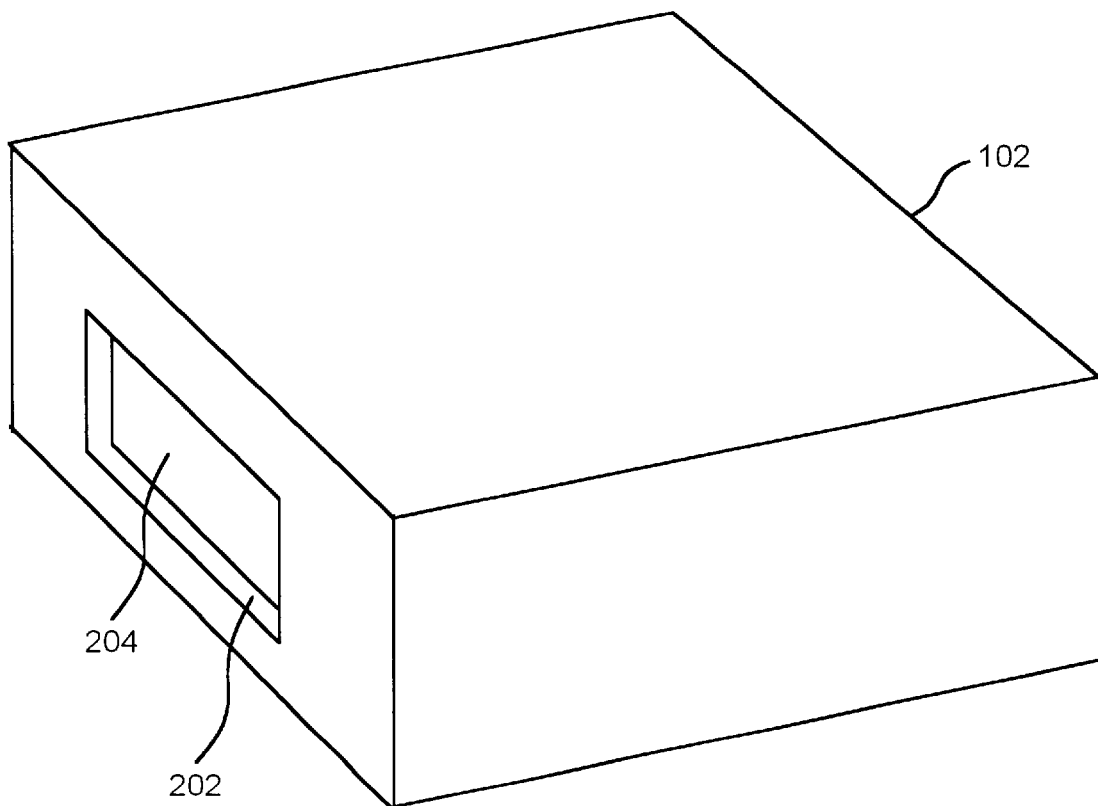
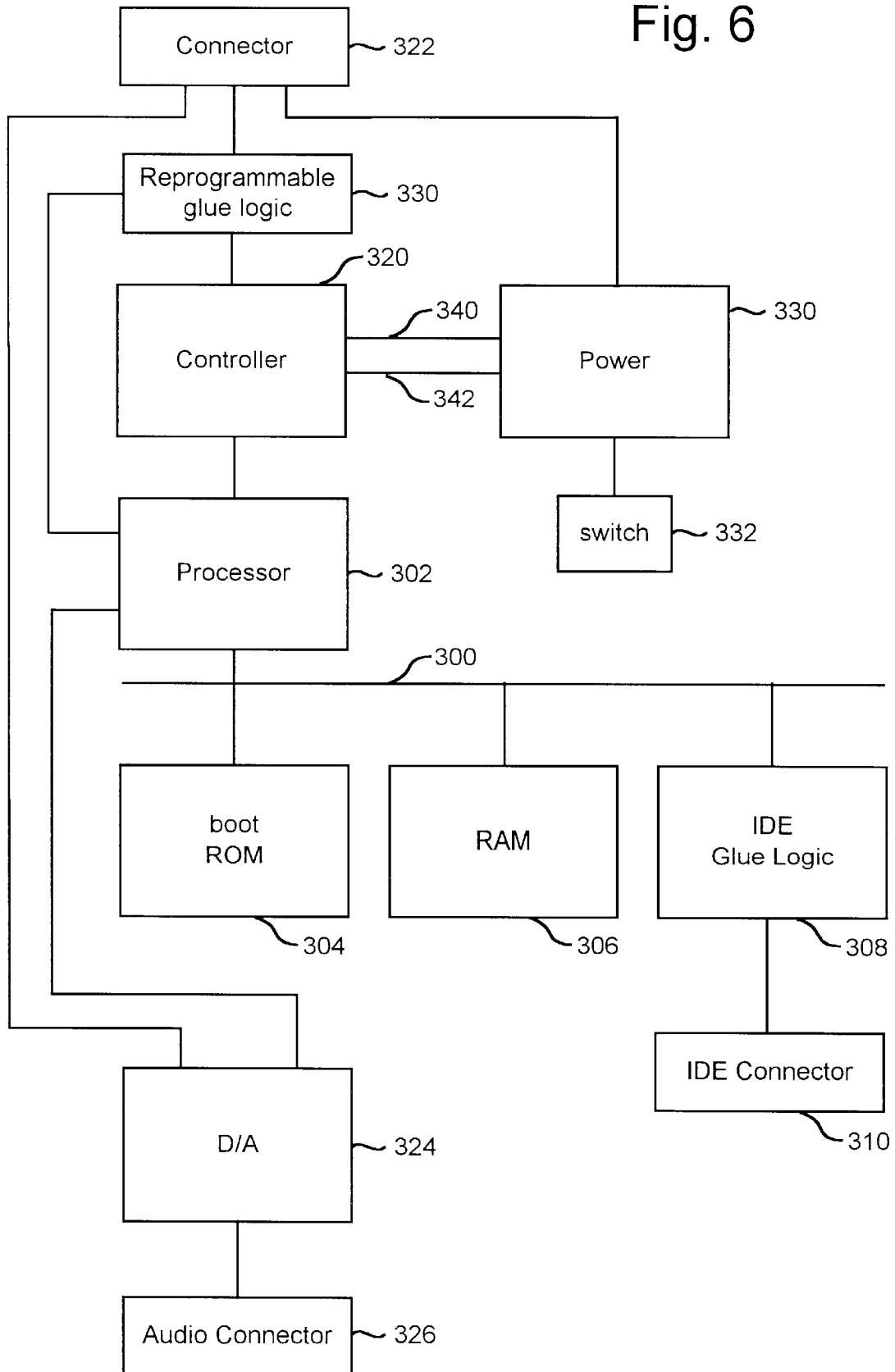


Fig. 5

Fig. 6



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.