



- [54] **SYSTEM AND METHOD FOR VOLTAGE SWITCHING TO SUPPLY VARIOUS VOLTAGES AND POWER LEVELS TO A PERIPHERAL DEVICE**
5,560,022 9/1996 Dunstan et al. 395/750.01
5,652,895 7/1997 Poisner 395/750.04
5,742,514 4/1998 Bonola 379/258
- [75] Inventors: Sergio Amoni, Raleigh; Paul Daniel Kangas, Cary; John David Landers, Jr., Raleigh, all of N.C.
- [73] Assignee: International Business Machines Corporation, Armonk, N.Y.
- [21] Appl. No.: 842,695
- [22] Filed: Apr. 15, 1997
- [51] Int. Cl.⁶ G06F 1/26
- [52] U.S. Cl. 395/750.01; 395/750.02; 364/492
- [58] Field of Search 395/750.01, 750.03, 395/750.07, 750.06; 364/707, 492

OTHER PUBLICATIONS

Halfhill, T. R., "The New PC," *BYTE*, Oct. 1995, pp. 52-64.
 Klein, R. H., "Bus Pass for Serial Killers," *New Electronics*, 9 Jan. 1996, pp. 18-19.
Universal Serial Bus Specification, 1.0 Final Draft Revision, Nov. 13, 1995, Copyright ©1995, Compaq Computer Corporation, et al.
 Wright, M., Ed., "USB and IEEE 1394: Pretenders, Contenders, or Locks for Ubiquitous Desktop Deployment?" *EDN*, Apr. 25, 1996, pp. 79-91.

Primary Examiner—Gopal C. Ray
 Attorney, Agent, or Firm—John D. Flynn; Winstead, Sechrest & Minick, PC

[57] ABSTRACT

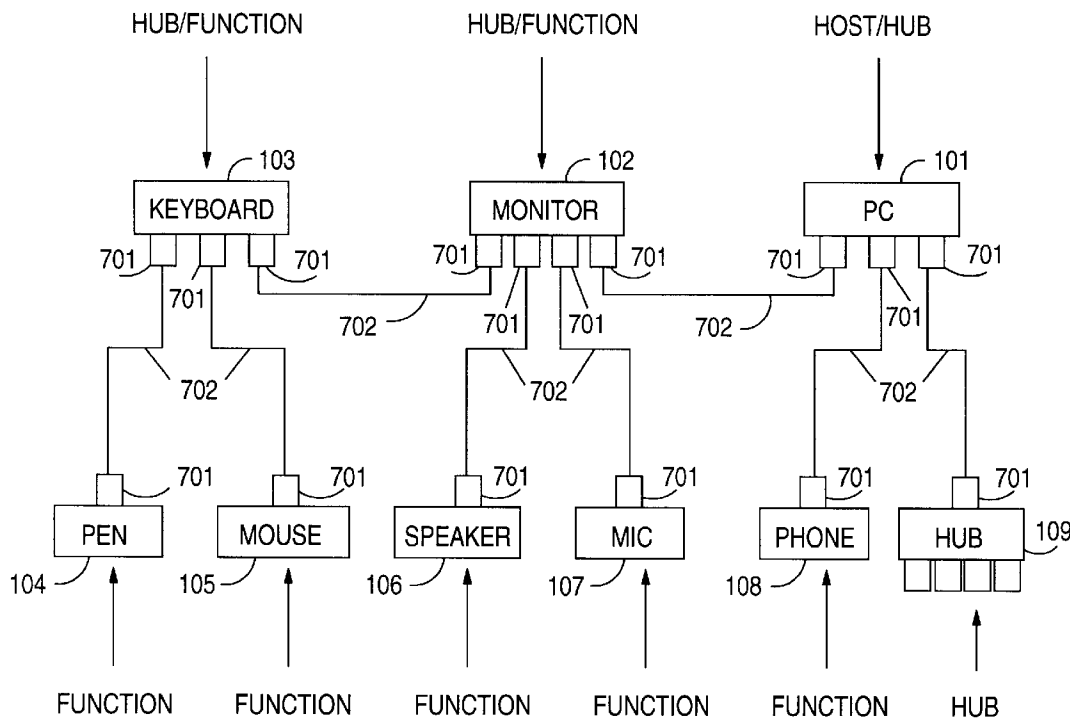
Within a data processing system, such as a personal computer, non-standard, or auxiliary, voltage and current may be supplied to an attached peripheral device along with standard Universal Standard Bus (USB) power and signaling. A communication protocol is enabled between the host system and the peripheral device to permit the peripheral device to communicate its power requirements to the host device so that the host device can switch the proper voltage and current through the USB cable to the peripheral device. This allows the peripheral device to obtain power without having to connect to an AC power supply.

21 Claims, 9 Drawing Sheets

[56] References Cited

U.S. PATENT DOCUMENTS

4,782,355	11/1988	Sakai et al.	396/72
4,884,287	11/1989	Jones et al.	375/377
4,901,217	2/1990	Wilson	363/126
5,121,500	6/1992	Arlington et al.	395/750.07
5,179,710	1/1993	Coschieri	395/750.01
5,313,642	5/1994	Seigel	395/750.05
5,408,669	4/1995	Stewart et al.	395/750.01
5,483,656	1/1996	Oprescu et al.	395/750.03
5,493,684	2/1996	Gephardt et al.	395/750.04
5,514,859	5/1996	Seigel	235/462



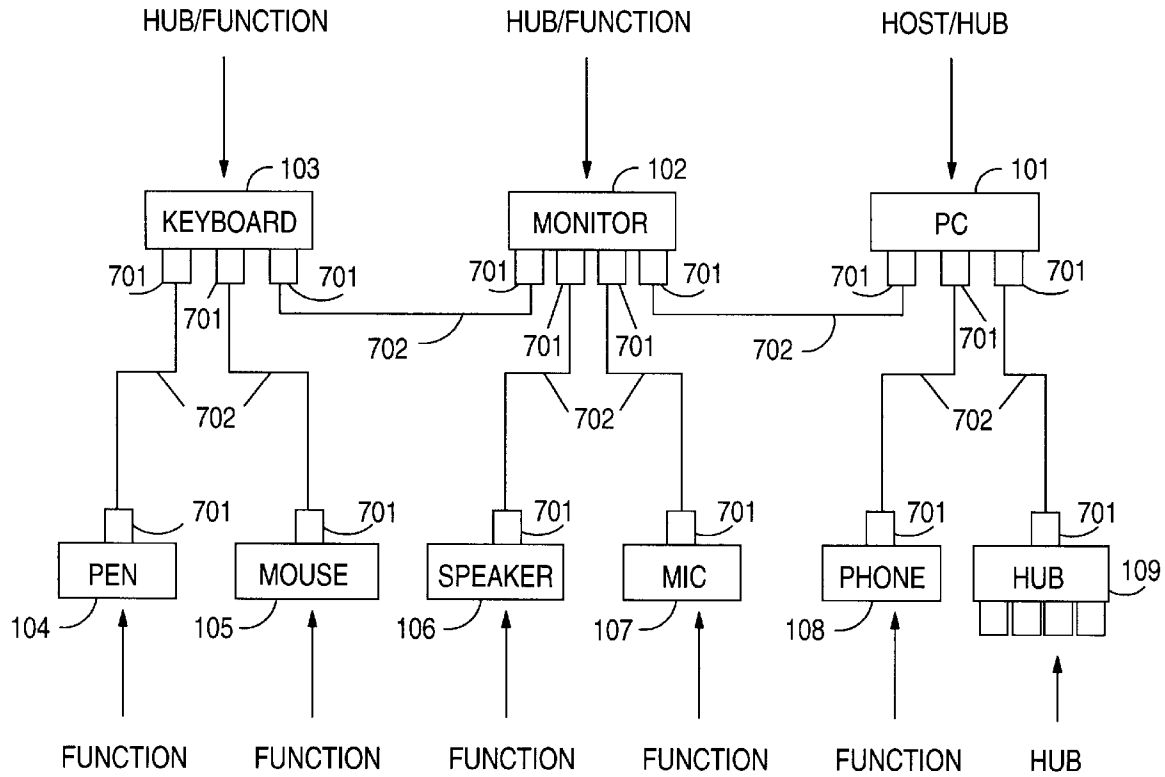


FIG. 1

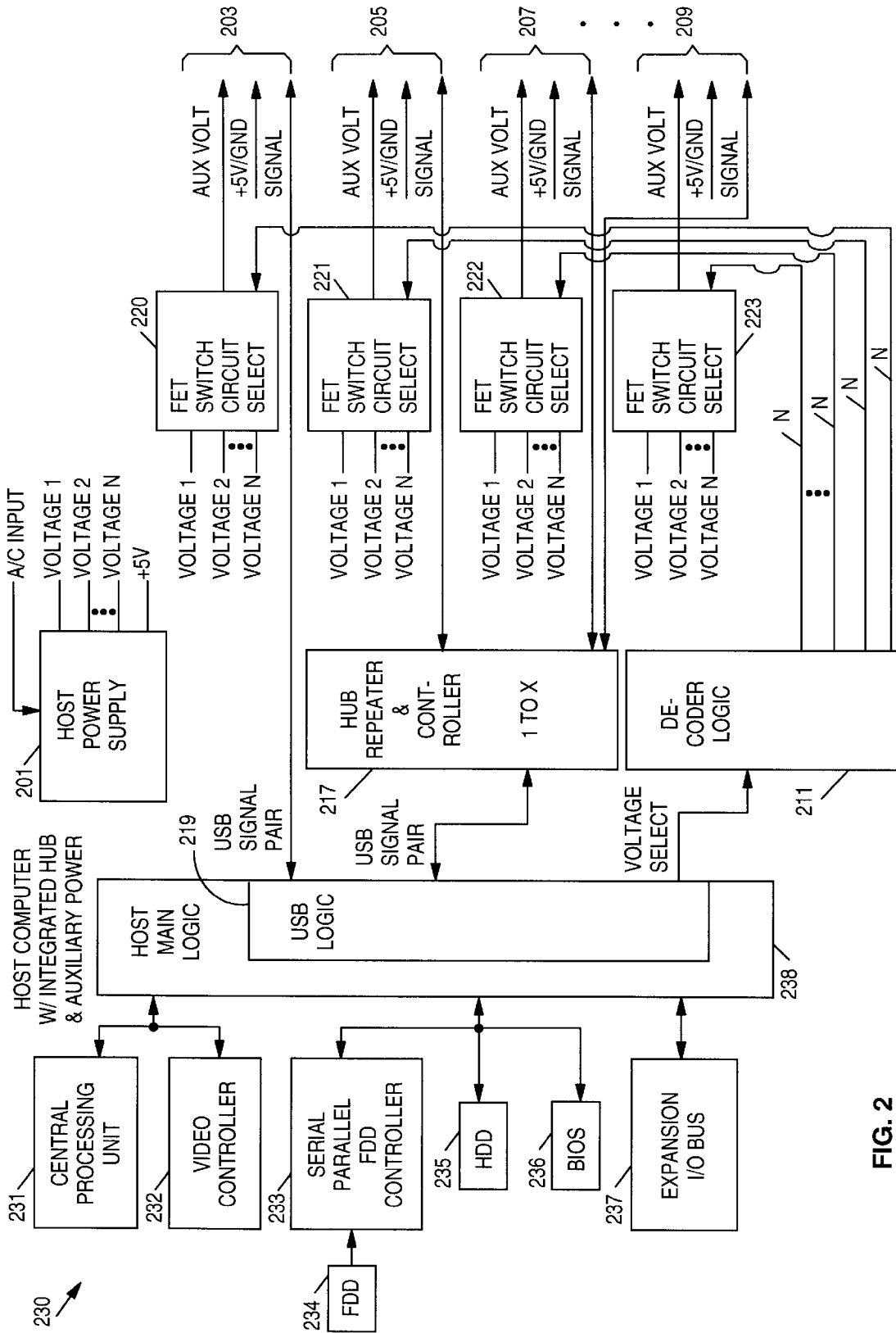
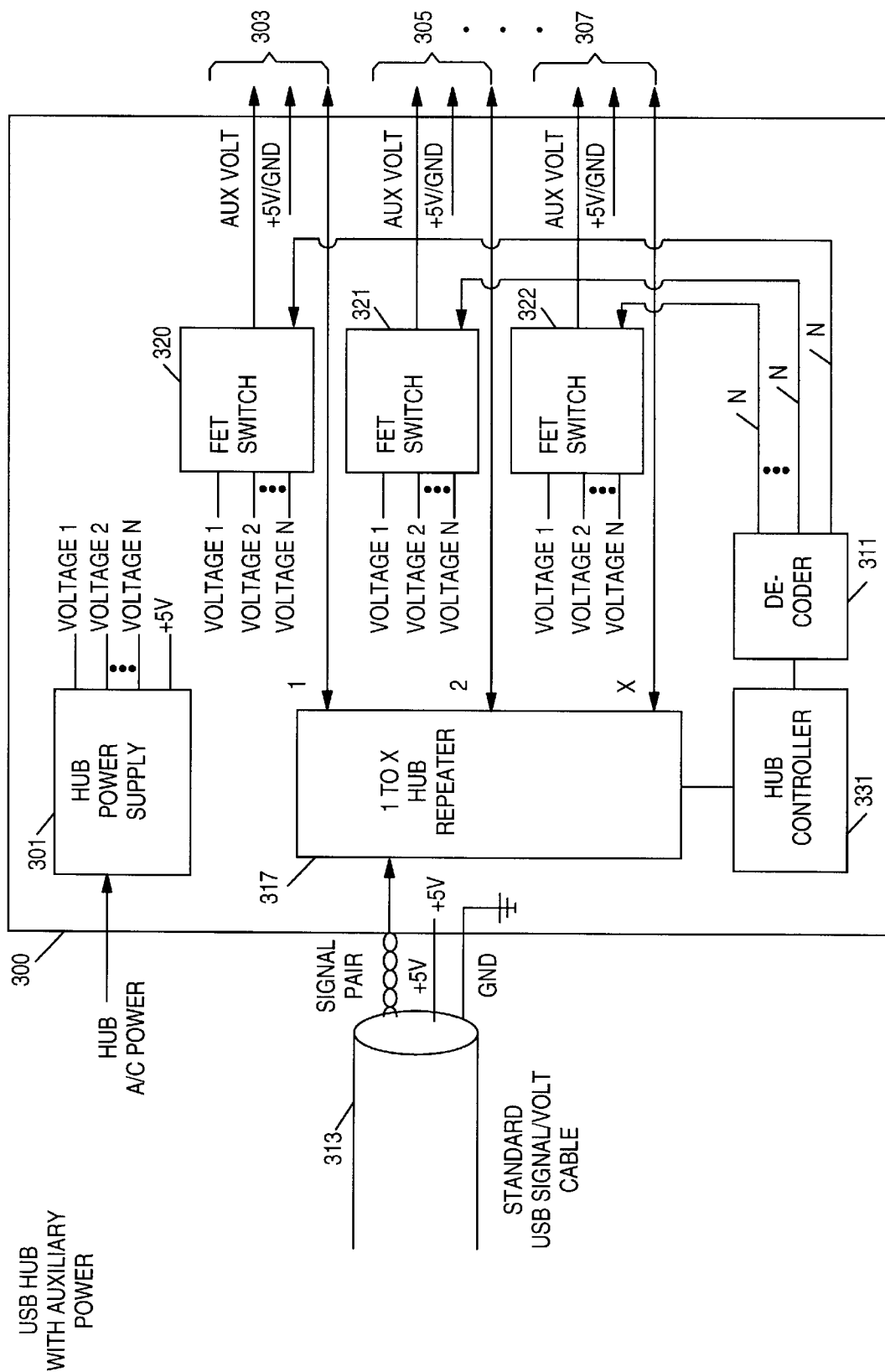


FIG. 2



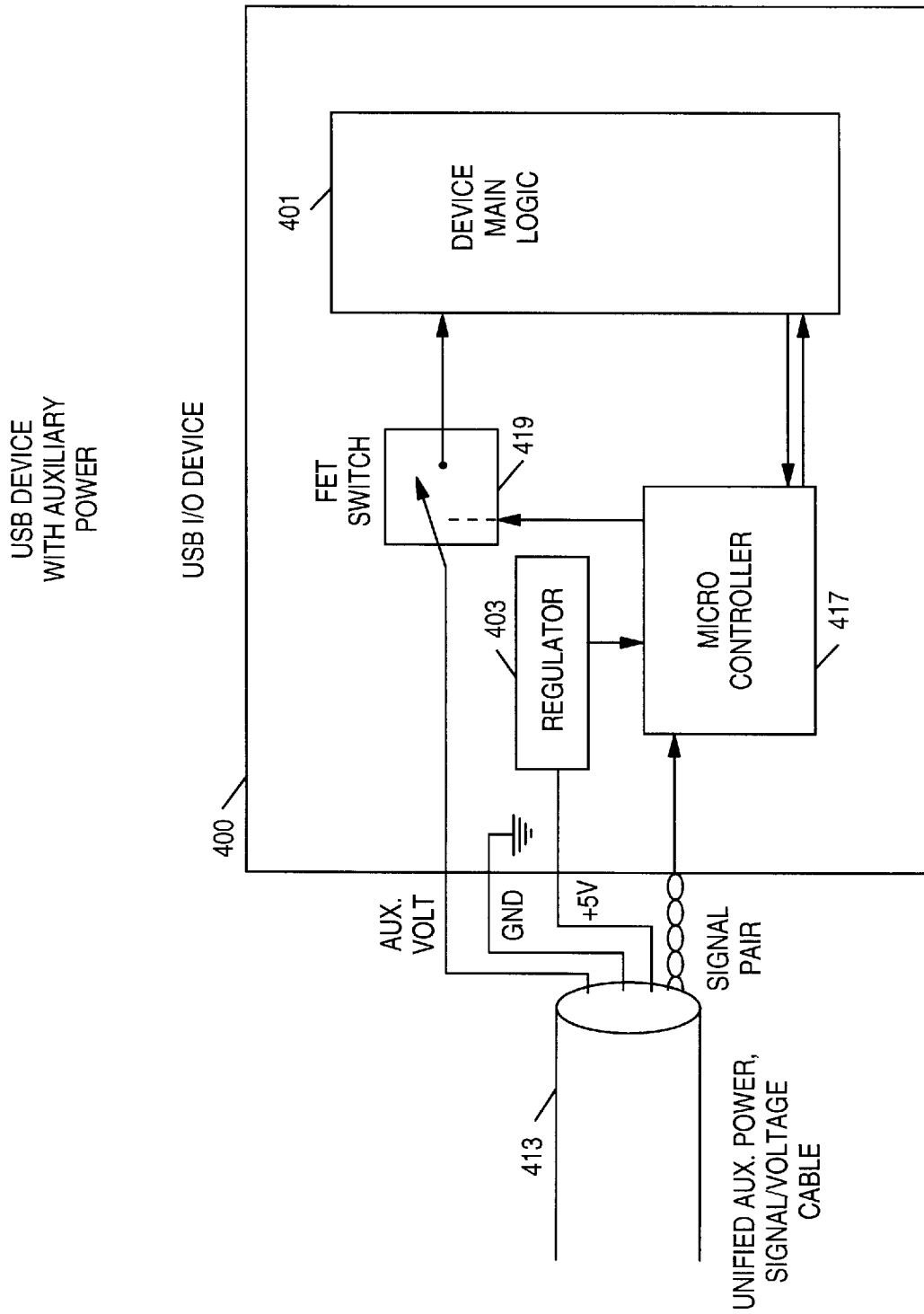


FIG. 4

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.