



US005157384A

United States Patent [19]

[11] Patent Number: **5,157,384**

Greanias et al.

[45] Date of Patent: **Oct. 20, 1992**

[54] ADVANCED USER INTERFACE

[75] Inventors: **Evon C. Greanias**, Chevy Chase, Md.; **Guy F. Verrier**, Reston, Va.; **Gordon W. Arbeitman**, Gaithersburg; **Alan R. Tannenbaum**, Washington Grove, both of Md.; **Yu L. An**, Vienna, Va.

[73] Assignee: **International Business Machines Corporation**, Armonk, N.Y.

[21] Appl. No.: **344,879**

[22] Filed: **Apr. 28, 1989**

[51] Int. Cl.⁵ **G09G 5/00**

[52] U.S. Cl. **340/706; 340/712**

[58] Field of Search **340/706, 712; 364/188, 364/189, 190; 178/118**

[56] References Cited

U.S. PATENT DOCUMENTS

4,451,895	5/1984	Sliwowski	364/521
4,587,630	5/1986	Straton et al.	340/706
4,689,761	8/1987	Yurchenco	364/708
4,726,065	2/1988	Froessl	381/41
4,803,463	2/1989	Sado	
4,899,138	2/1990	Araki et al.	340/712
4,903,012	2/1990	Ohuchi	340/712
4,908,612	3/1990	Bromley et al.	340/706
4,931,950	6/1990	Isle et al.	364/188
4,972,496	11/1990	Sklarew	

OTHER PUBLICATIONS

"Multimedia User Interface for Office Workstation" By Ishii, et al. Euromicro, pp. 433-440, 1985.

Primary Examiner—Jeffery A. Brier

[57] ABSTRACT

An advanced user interface for use with a computer system operating on an integrated operating environment. The integrated operating environment allows a plurality of application programs to be running simultaneously, one of which is designated the active application program to which all input data is directed. The advanced user interface allows a user to select among user-friendly input devices to operate any application program according to his individual preferences without change to the application program code. The advanced user interface includes alternate input modules which translate the input signals transmitted from the various input devices into input messages useable by the rest of the interface. The advanced user interface also includes interface profiles which contain mappings of the input messages against corresponding commands useable by the application programs, the integrated operating environment or other modules of the advanced user interface itself. An environment link module refers to the interface profiles and matches the input message against the corresponding command for the application program active at the time the input signal was transmitted and send the corresponding command to that application program.

47 Claims, 7 Drawing Sheets

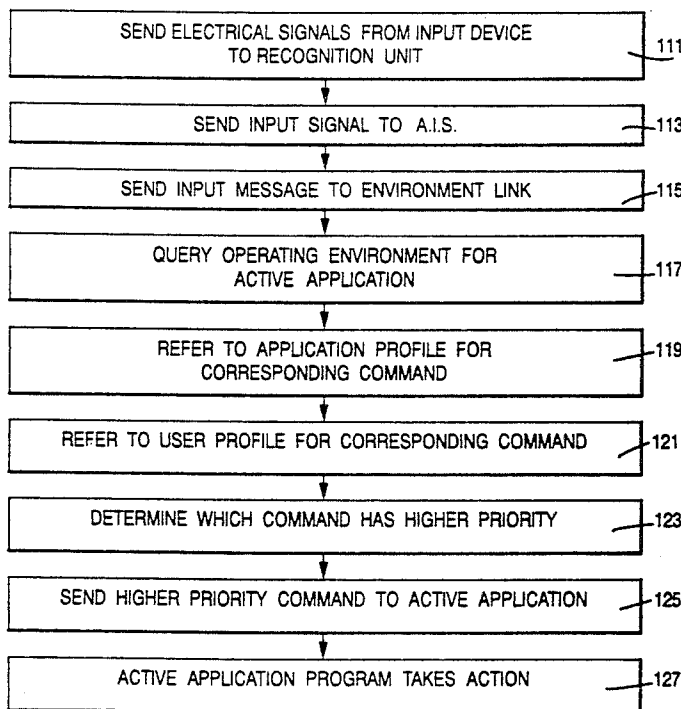


FIG. 1 PRIOR ART

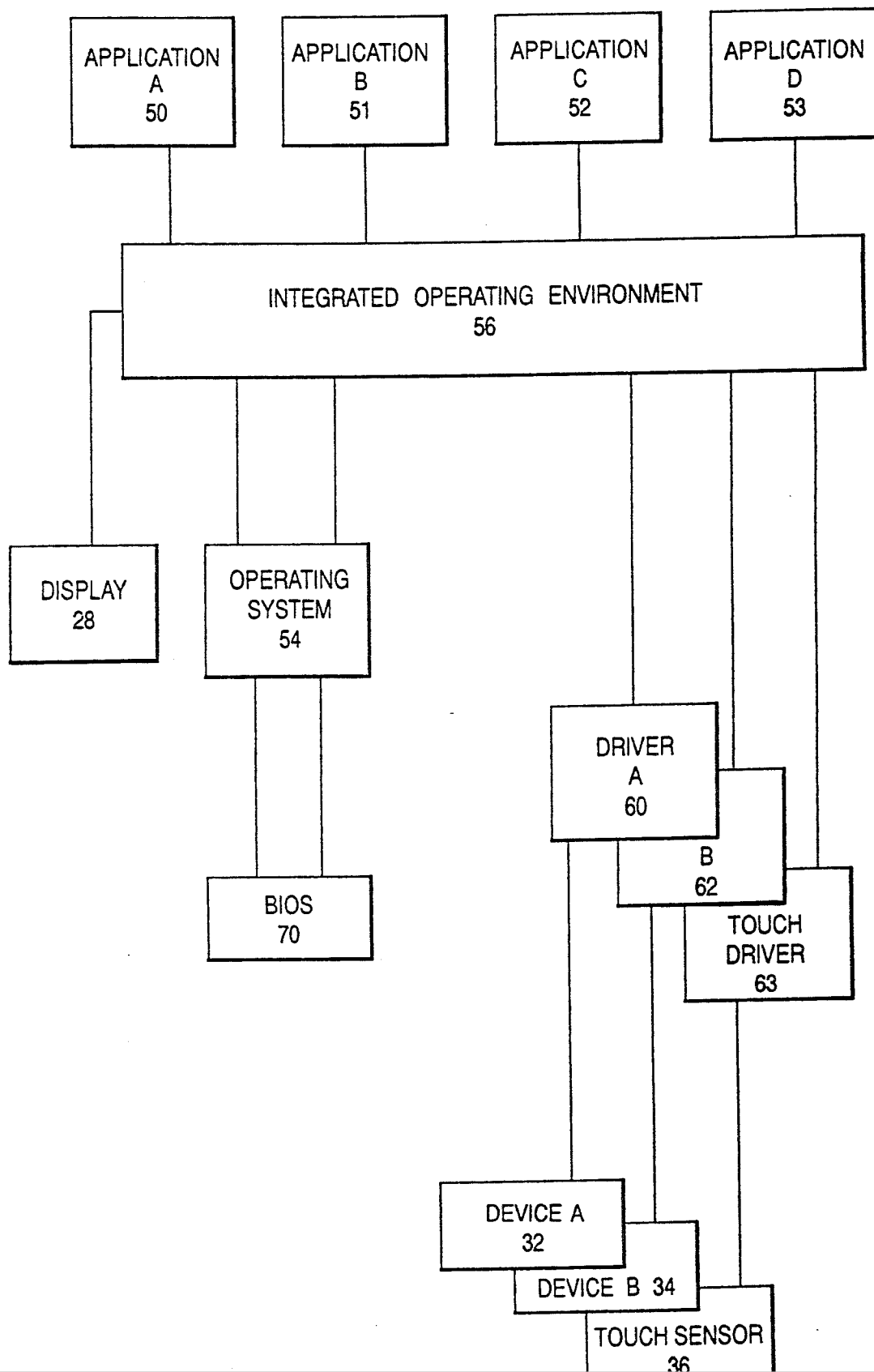


FIG. 2

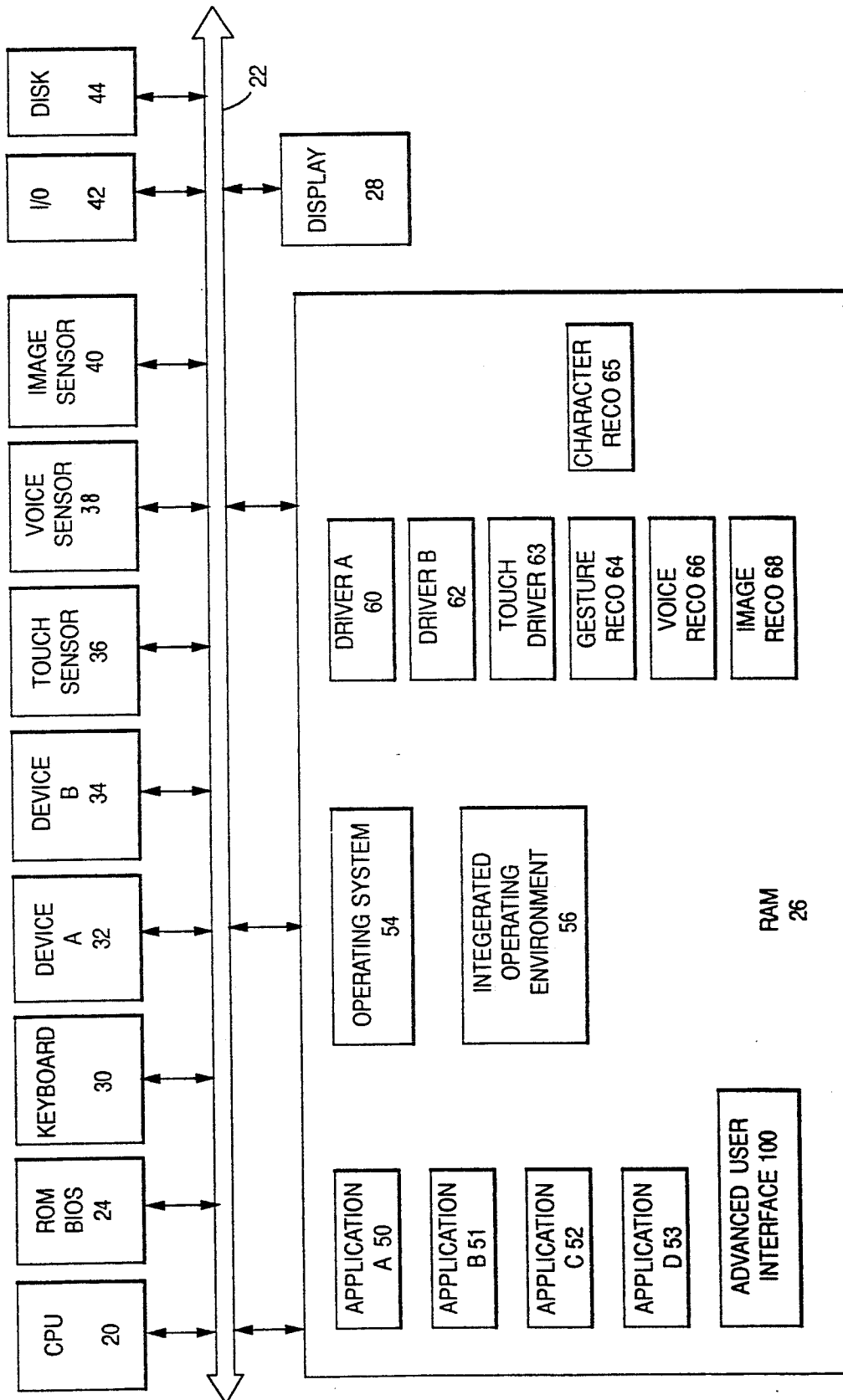


FIG. 3

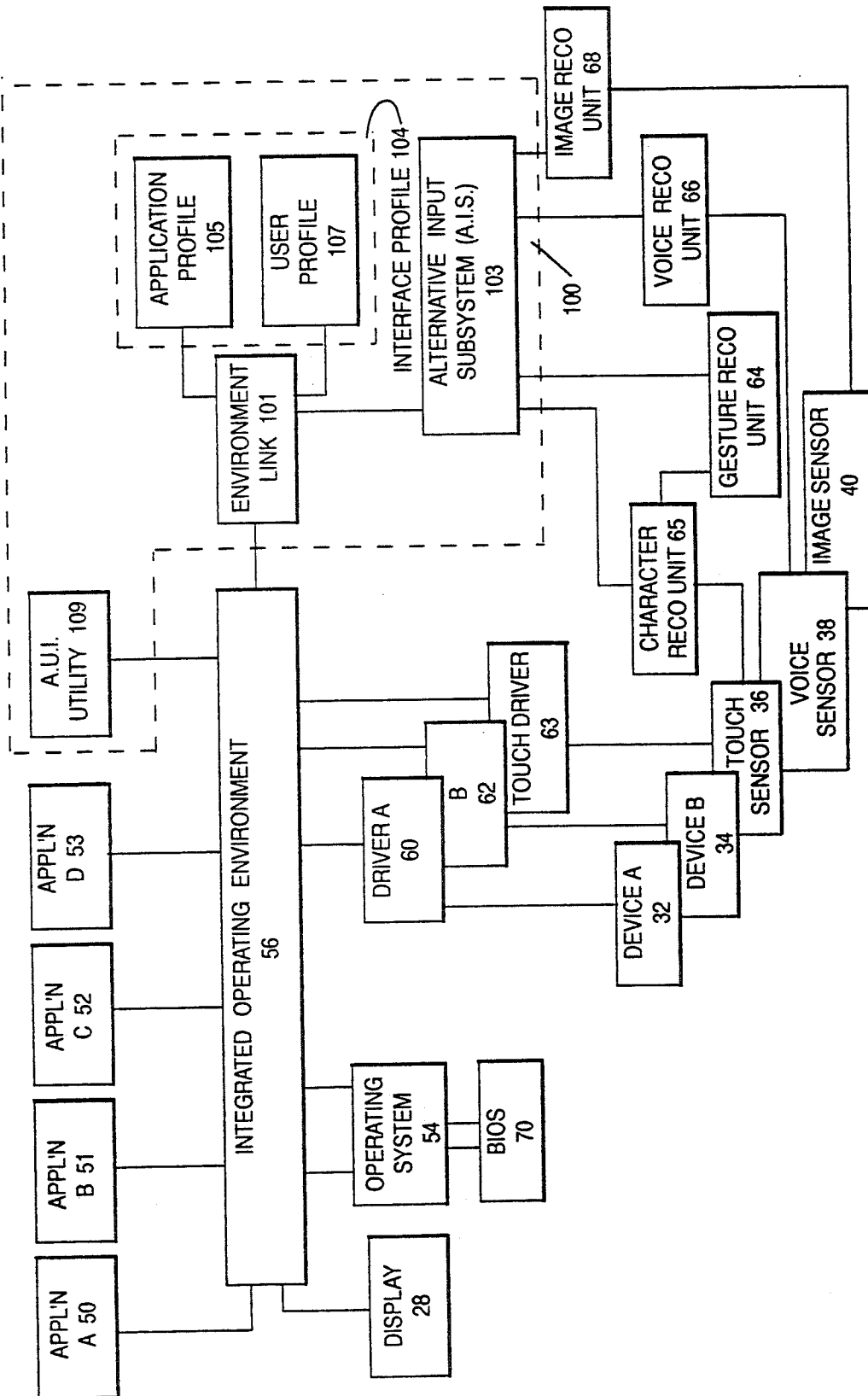


FIG. 4

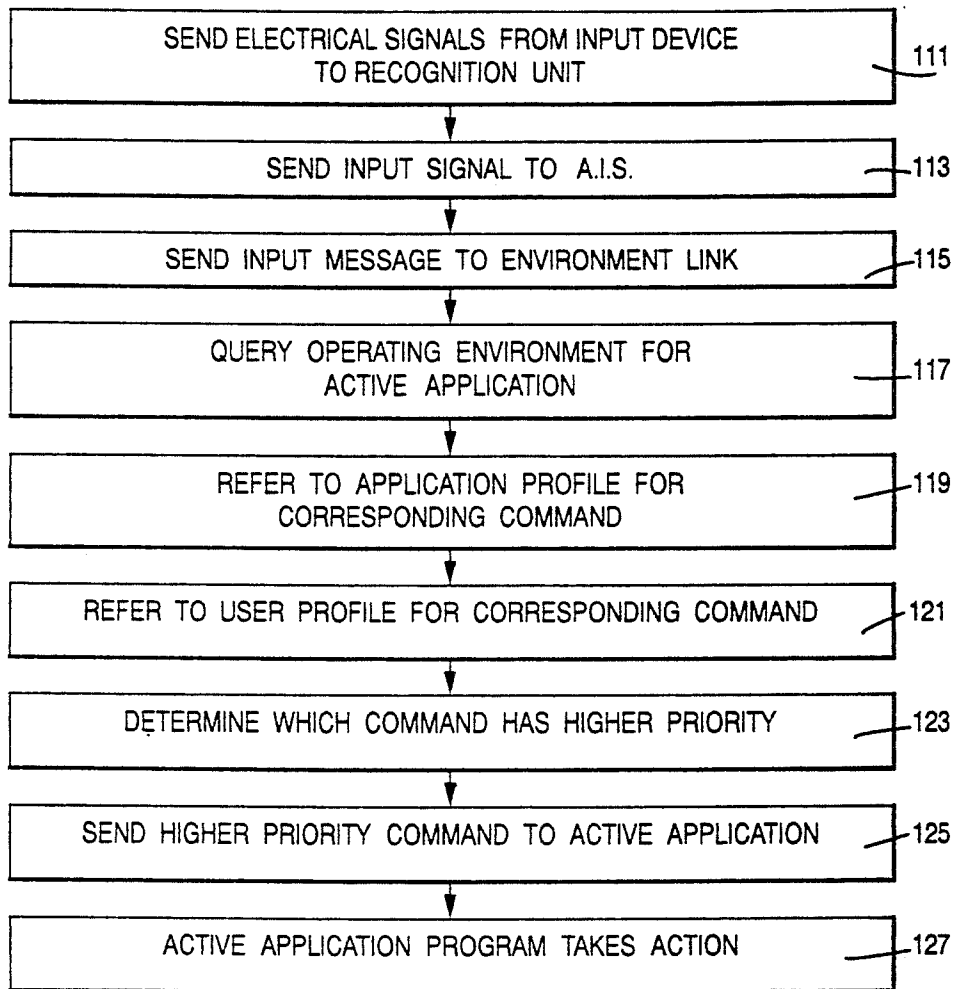


FIG. 5

INPUT MESSAGE	COMMENT ON USER ACTION	COMMAND	COMMENT ON COMMAND
GS/CIRC	CIRCLE GESTURE ON TOUCH SENSOR	KEYBD. UTL	INVOKE THE POP-UP KEYBOARD
VS/CUT	'CUT' COMMAND TO VOICE SENSOR	-- CUT--	SEND A MENU SELECT MESSAGE TO SELECT 'CUT' OPTION
GS/LA	LEFT ARROW GESTURE ON TOUCH SENSOR		EXECUTE 'FORM FILLER' MACRO WHICH CONTAINS A SEQUENCE OF COMMANDS AND UTILITIES

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.