



US005900021A

**United States Patent** [19][11] **Patent Number:** **5,900,021****Tiede et al.**[45] **Date of Patent:** **May 4, 1999**[54] **PAD INPUT SELECT CIRCUIT FOR USE WITH BOND OPTIONS**[75] Inventors: **John William Tiede; Jon Allan Faue**, both of Colorado Springs, Colo.[73] Assignees: **United Memories, Inc.**, Colorado Springs; **Nippon Steel Semiconductor Corporation**, Chiba, Japan[21] Appl. No.: **08/833,105**[22] Filed: **Apr. 4, 1997**[51] **Int. Cl.<sup>6</sup>** ..... **G06F 12/00; G11C 7/00**[52] **U.S. Cl.** ..... **711/170; 365/189.02; 365/230.02**[58] **Field of Search** ..... **711/170; 365/189.02, 365/230.02; 395/653**[56] **References Cited****U.S. PATENT DOCUMENTS**

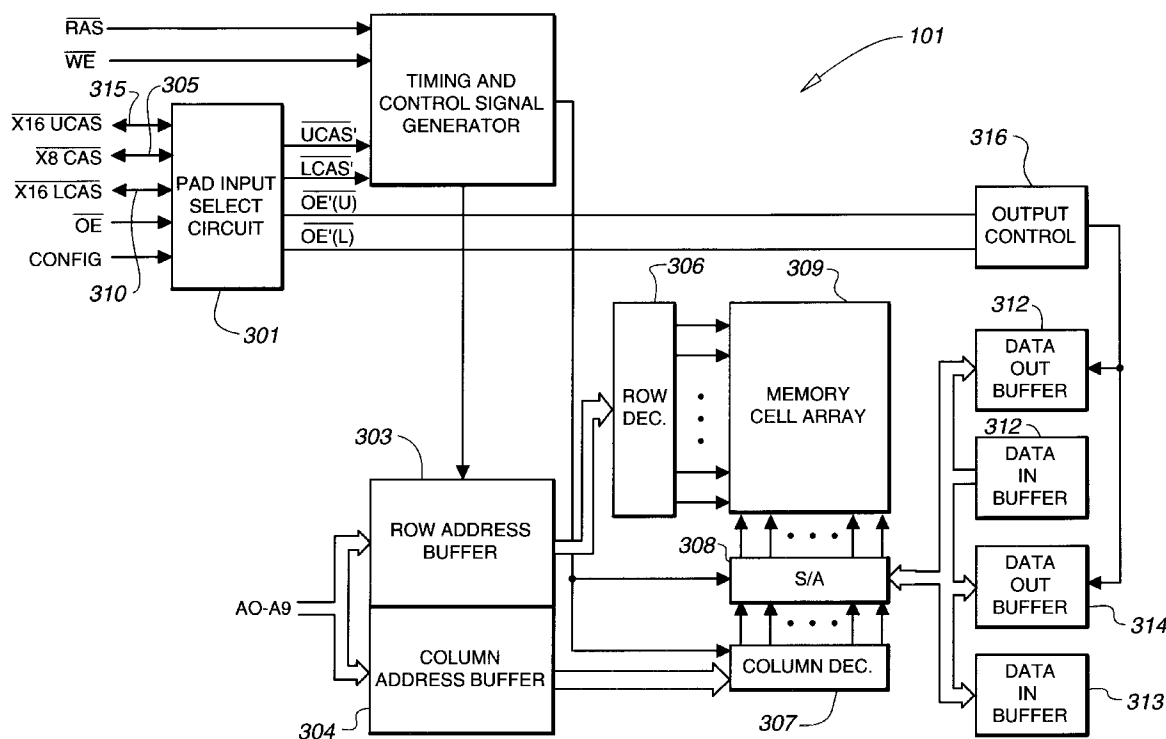
4,551,634	11/1985	Takahashi et al. .	
4,825,099	4/1989	Barton .....	307/270
5,373,470	12/1994	Jones, Jr. ....	365/189.05
5,406,525	4/1995	Nicholes .	
5,572,718	11/1996	Scriber et al. .	
5,600,271	2/1997	Erickson et al. ....	327/108
5,706,235	1/1998	Roohparvar et al. ....	365/201
5,757,704	5/1998	Hachiya .....	365/189.02

**FOREIGN PATENT DOCUMENTS**

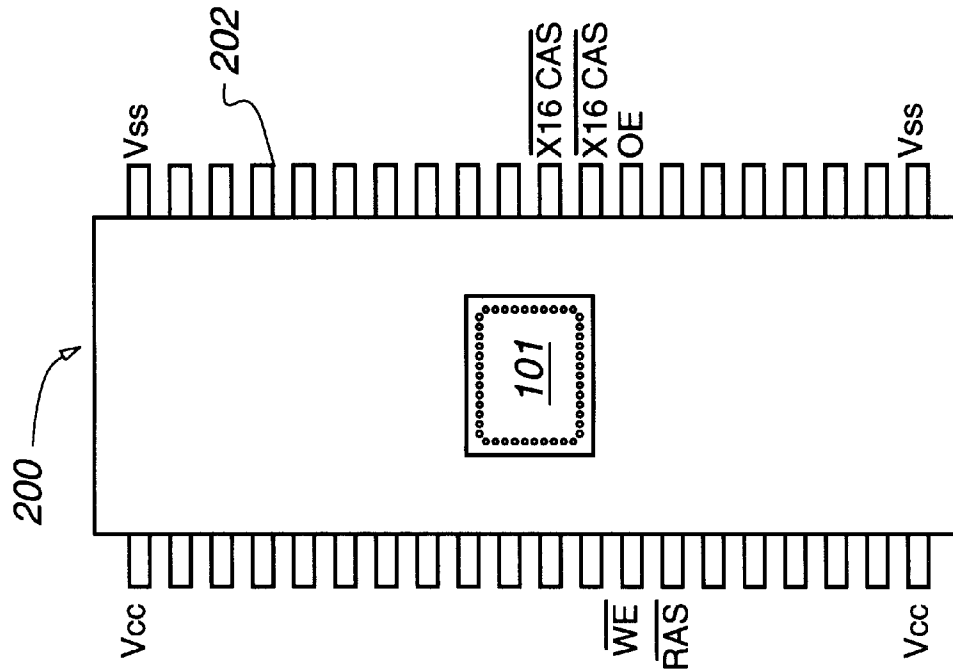
0 198 429 A2	10/1986	European Pat. Off. .
0 513 968 A2	11/1992	European Pat. Off. .
2 271 449	4/1994	United Kingdom .

*Primary Examiner*—Tod R. Swann*Assistant Examiner*—Tuan V. Thai*Attorney, Agent, or Firm*—Richard A. Bachand; Stuart T. Langley; Holland & Hart llp[57] **ABSTRACT**

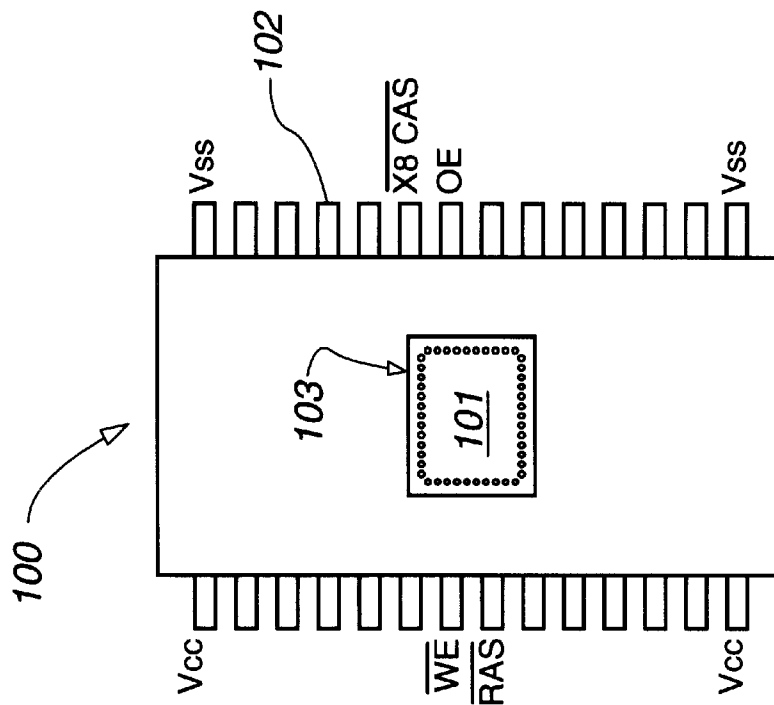
A configurable input device for an integrated circuit having a plurality of input pads, the input device including a plurality of buffers, where each buffer is associated with one of the input pads. Each buffer receives a mode select signal and the buffer is responsive to the mode select signal to place the buffer in an enabled mode or a disabled mode. A receiver portion within each buffer is coupled to the associated input pad. The receiver portion pulls the associated input pad to a preselected logic state while the buffer is in the disabled mode. An output driver within each buffer generates an output signal responsive to a signal on the associated input pad while the buffer is in the enable mode and provides a high impedance while the buffer is in the disabled mode. An output node is coupled to the output drivers of the plurality of buffers.

**18 Claims, 5 Drawing Sheets**

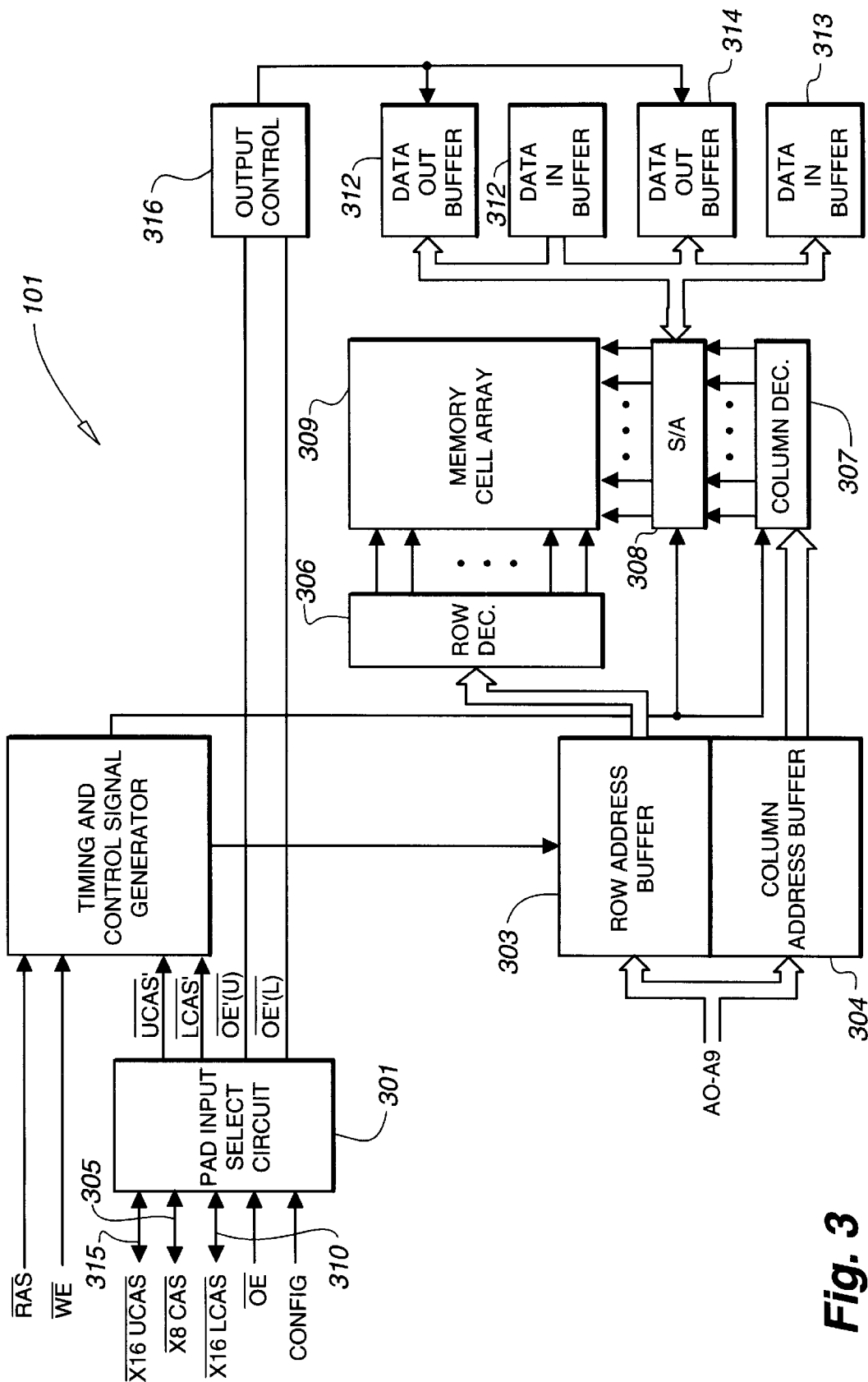
Qualcomm Incorporated



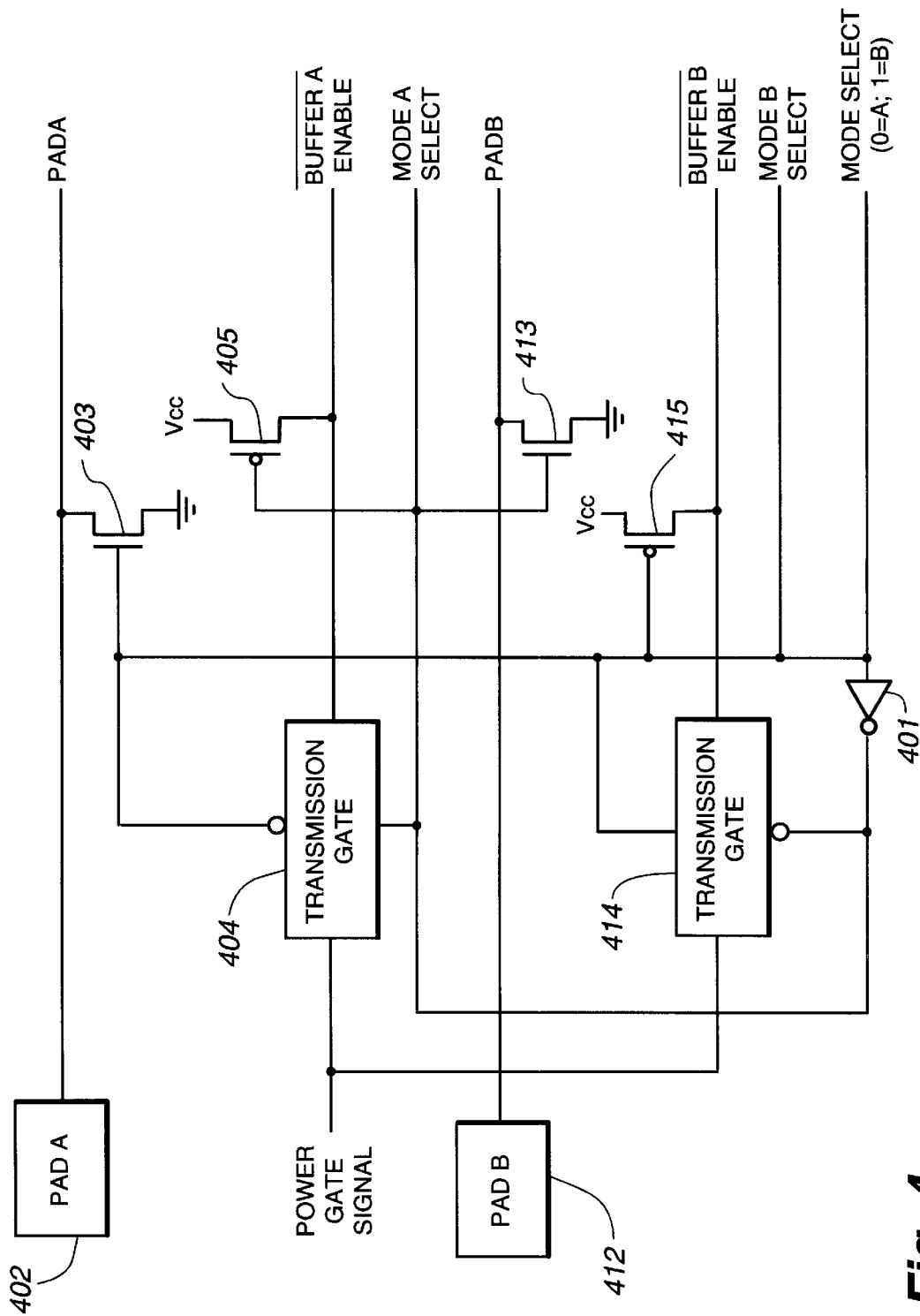
**Fig. 2**

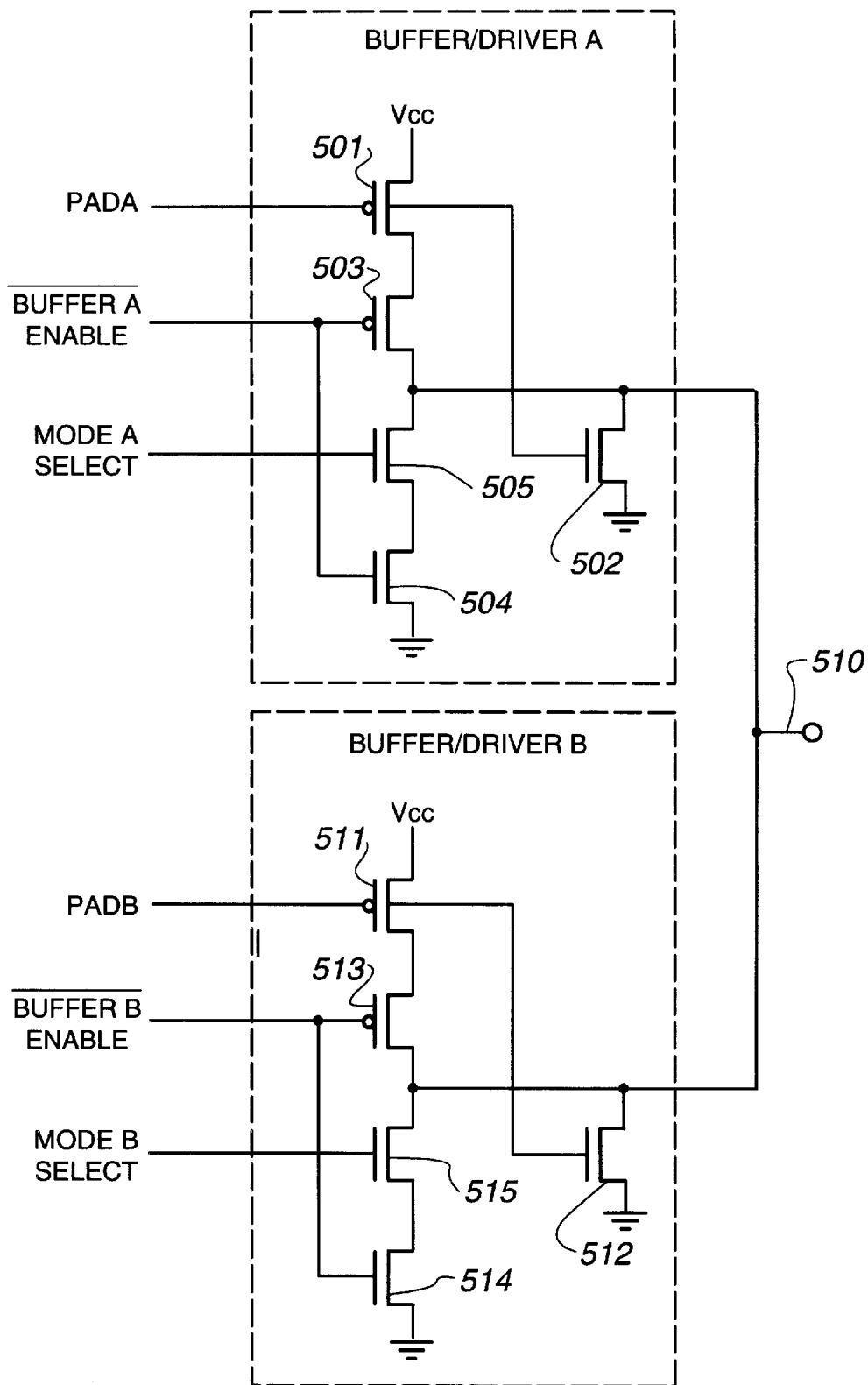


**Fig. 1**



**Fig. 3**

**Fig. 4**

**Fig. 5**

# 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.