



US005794016A

United States Patent [19]

Kelleher

[11] Patent Number: **5,794,016**[45] Date of Patent: **Aug. 11, 1998**[54] **PARALLEL-PROCESSOR GRAPHICS ARCHITECTURE**[75] Inventor: **Brian Michael Kelleher**, Palo Alto, Calif.[73] Assignee: **Dynamic Pictures, Inc.**, Palo Alto, Calif.[21] Appl. No.: **570,088**[22] Filed: **Dec. 11, 1995**[51] Int. Cl.⁶ **G06F 15/80**[52] U.S. Cl. **395/505; 395/509; 395/497.04; 395/412**

[58] Field of Search 395/502, 505, 395/506, 507, 509, 401, 402, 497.01-497.04, 412-419, 515, 516; 382/303, 304

[56] **References Cited****U.S. PATENT DOCUMENTS**

4,761,736	8/1988	Di Orto	395/402
4,949,280	8/1990	Littlefield	395/505
5,117,468	5/1992	Hino et al.	382/304
5,276,798	1/1994	Peaslee et al.	395/505
5,315,699	5/1994	Imai et al.	395/505
5,377,320	12/1994	Abi-Ezzi et al.	395/502
5,388,206	2/1995	Poulton et al.	395/505

5,392,393	2/1995	Deering et al.	395/505
5,408,606	4/1995	Eckart	395/502
5,434,967	7/1995	Tannenbaum et al.	395/506
5,440,682	8/1995	Deering	395/503
5,493,643	2/1996	Soderberg et al.	395/505

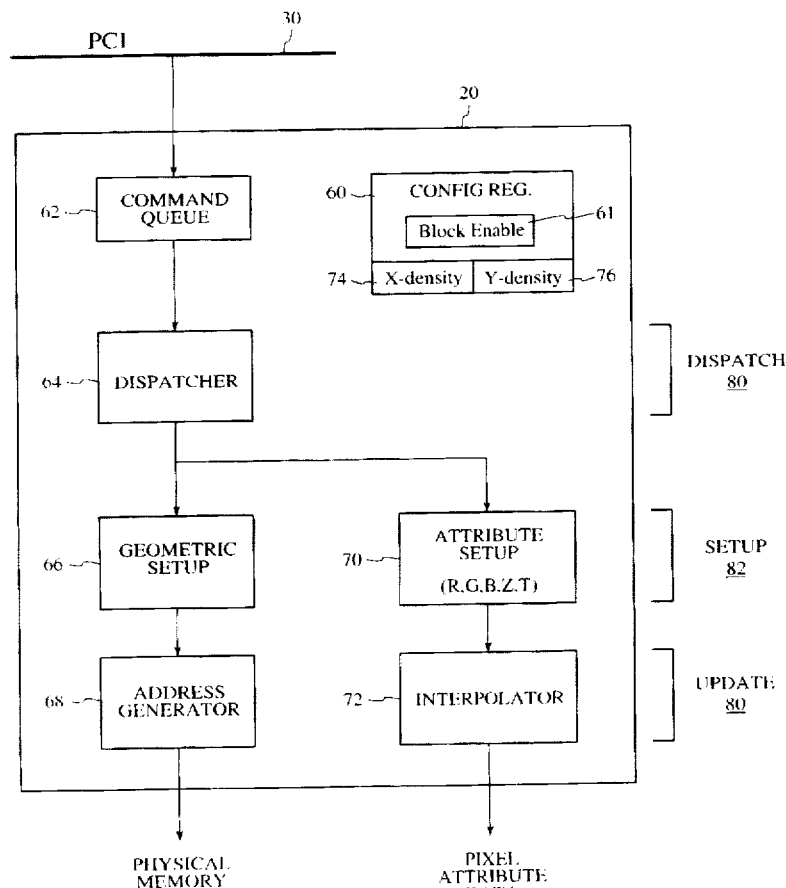
OTHER PUBLICATIONS

"Simulation and Expected Performance Analysis of Multiple Processor Z-Buffer Systems", Frederick I. Parke, Computer Graphics, vol. 14, No. 3, pp. 46-56 (Jul., 1980).
 "High-Performance Polygon Rendering", Kurt Akeley, Tom Jermoluk, Silicon Graphics, Inc., pp. 6-12, (1988).

Primary Examiner—Kee M. Tung
 Attorney, Agent, or Firm—Sawyer & Associates

[57] **ABSTRACT**

A parallel-processor graphics architecture appropriate for multimedia graphics workstations that is scalable to the needs of a user. The graphics architecture includes one or more rendering processors and a graphics memory that is partitioned into blocks. Noncontiguous groups of the blocks are then assigned to different processors. The parallel-processor graphics architecture is scalable by the number of rendering processors utilized, and is configurable with respect to the allocation of the groups of the blocks to specific rendering processors.

10 Claims, 8 Drawing Sheets

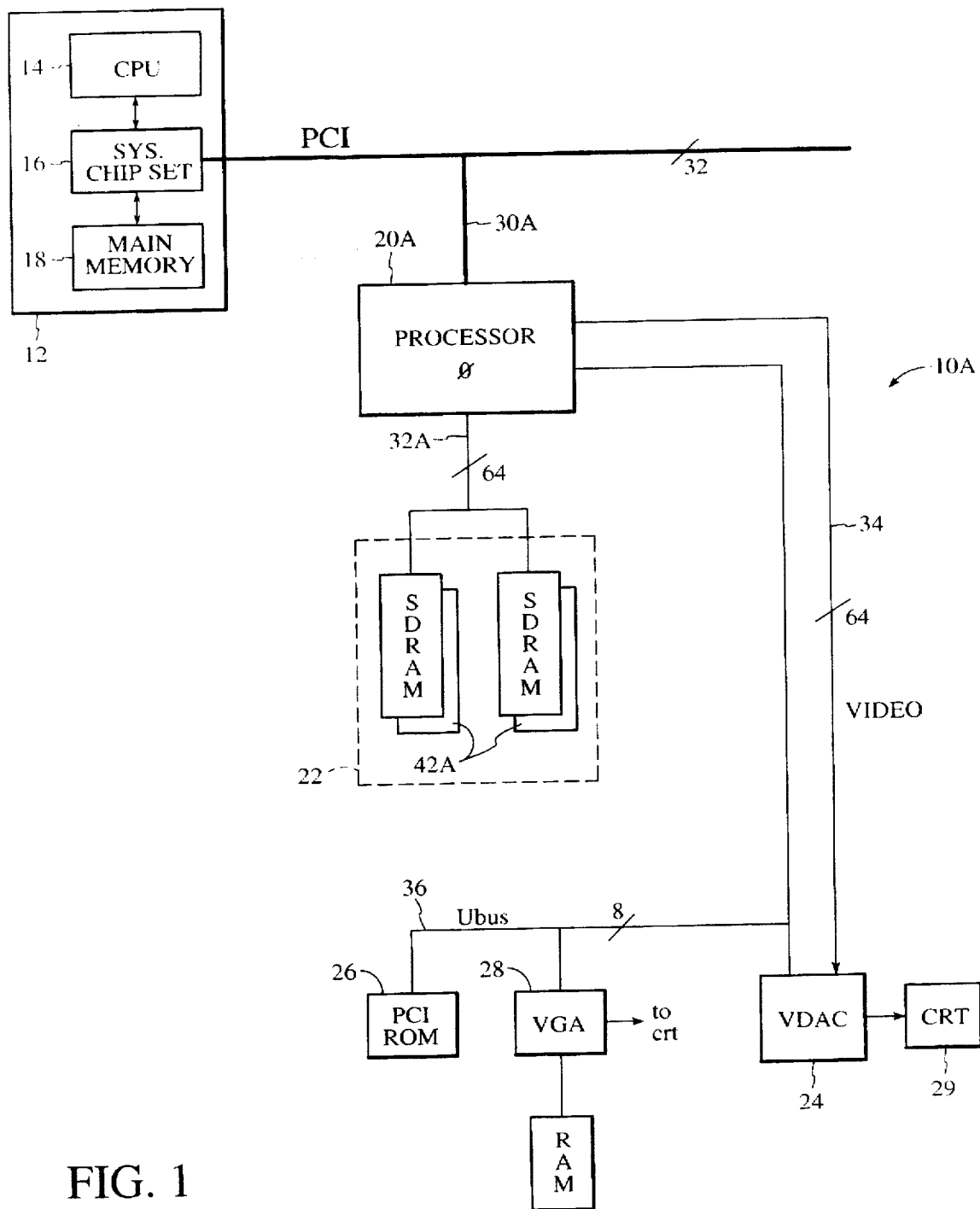


FIG. 1

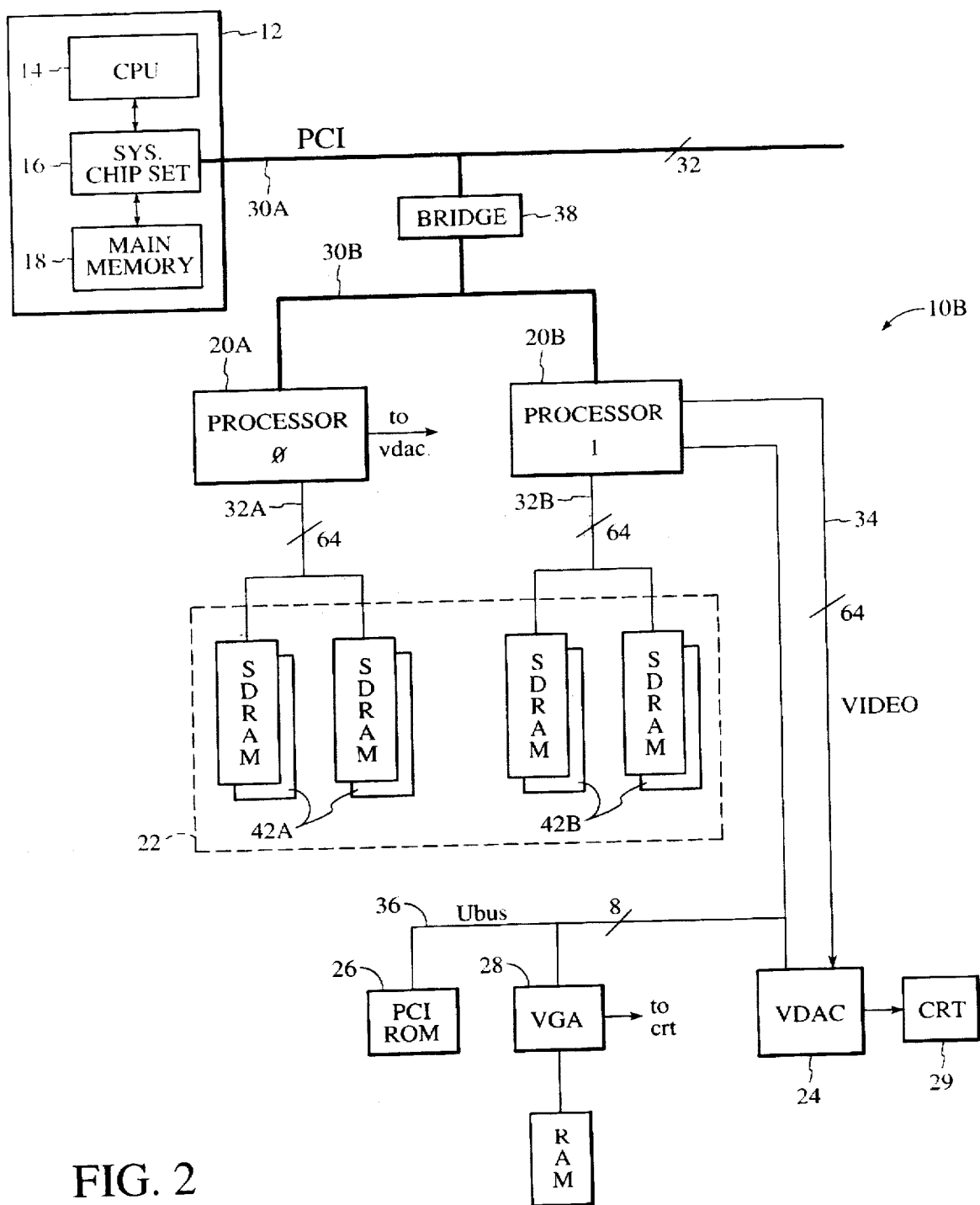
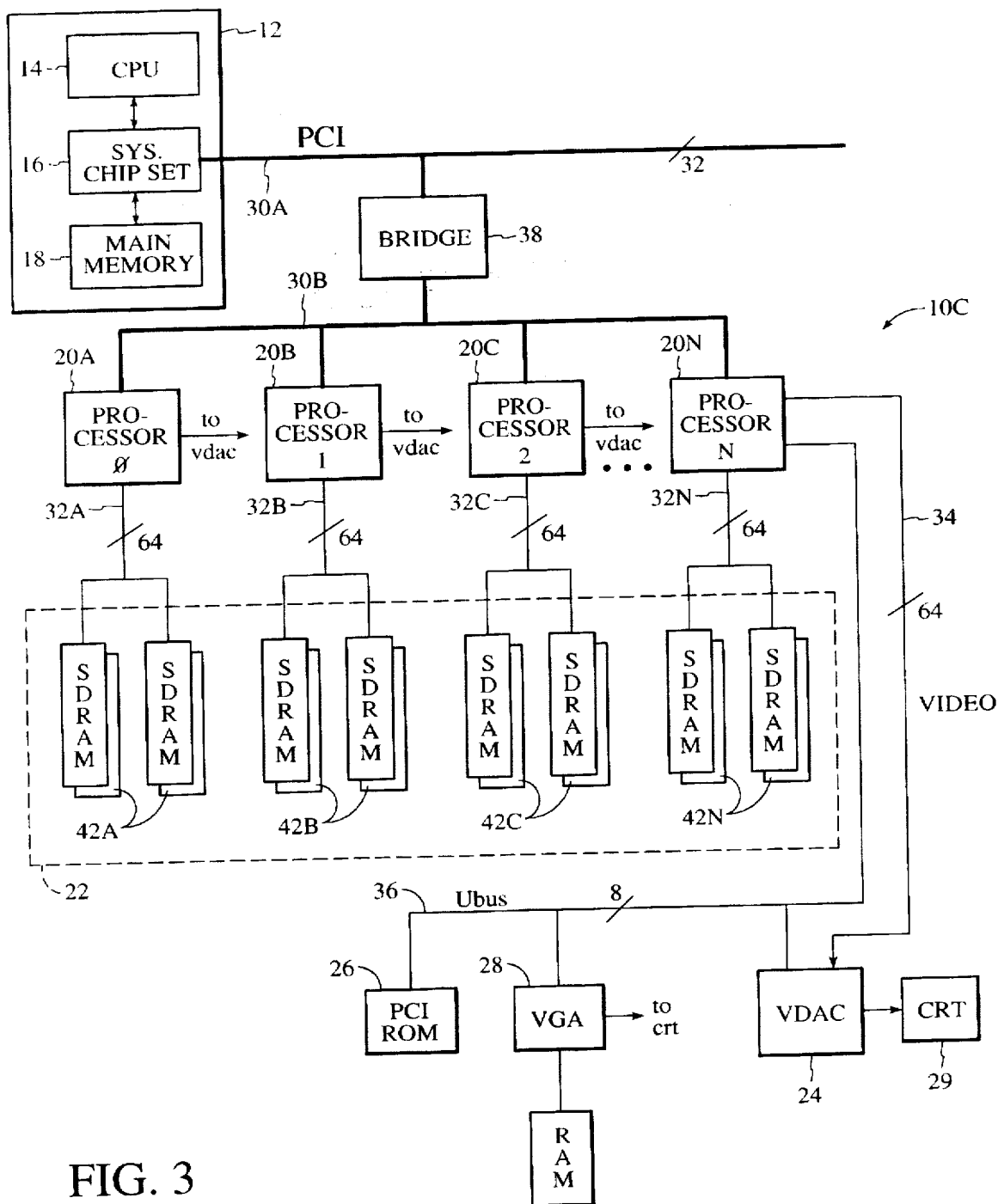


FIG. 2



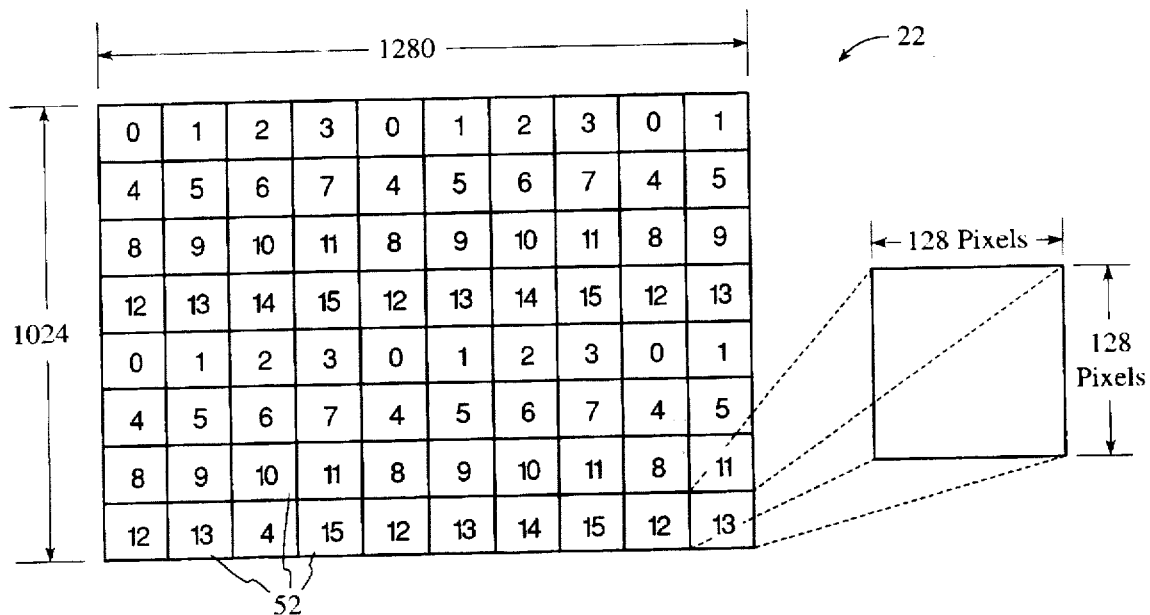


FIG. 4

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.