



[54] INTERACTIVE COMPUTER SYSTEM FOR PROVIDING AN INTERACTIVE PRESENTATION WITH PERSONALIZED VIDEO, AUDIO AND GRAPHICS RESPONSES FOR MULTIPLE VIEWERS

4207885 7/1992 Japan .
6165170 6/1994 Japan .
8102961 10/1981 WIPO .
9403851 2/1994 WIPO .

OTHER PUBLICATIONS

[75] Inventors: Michael J. Freeman; Gregory W. Harper, both of New York, N.Y.

Harless et al., Interactive Video Disc Case Studies for Medical Education, Proceedings, 10th Annual Symposium on Computer Applications in Medical Care, Oct. 25-26, 1986, pp. 183-187.

[73] Assignee: ACTV, Inc., New York, N.Y.

Bock, Videodisk Standards: A Software View of the Technology, 8012 SMPTE Journal, vol. 92, No. 5, May 1983, pp. 571-576.

[*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Campbell, Optimal Decision Making in a Business Simulation, System Sciences, 1989 Annual Hawaii International Conference, vol. III, pp. 822-831.

[21] Appl. No.: 598,382

Dawson, Compression on the Fast Track, Cablevision, Apr. 22, 1991, pp. 22-30.

[22] Filed: Feb. 8, 1996

Martial et al., An Interactive Planner for Open Systems, Proceedings of the 4th Conference on Artificial Intelligence, Mar. 1988, pp. 293-298.

Related U.S. Application Data

(List continued on next page.)

[63] Continuation-in-part of Ser. No. 443,607, May 18, 1995, Pat. No. 5,724,091, which is a continuation-in-part of Ser. No. 166,608, Dec. 13, 1993, abandoned, which is a continuation of Ser. No. 797,298, Nov. 25, 1991, abandoned.

Primary Examiner—Stephen S. Hong
Attorney, Agent, or Firm—Dorsey & Whitney LLP

[51] Int. Cl. H04N 7/173

ABSTRACT

[52] U.S. Cl. 345/302; 348/10

The present invention is an interactive computer system which may operate on a computer network. Subscribers interact with a fully interactive program through the use of input devices and a personal computer or a television. The multiple video/audio datastreams may be received from a broadcast transmission source or may be resident in local or external storage. In response to user inputs, a personalized graphics, video and/or audio presentation is provided to the user either immediately or at a later time. If not presented immediately, the interactive computer system utilizes "trigger points" to determine when to enable multiple multimedia segments during the show. The CPU uses embedded or stored authoring commands for integrating the various multimedia elements. The interactive multimedia computer enables seamless flicker-free switching from one signal to another on the same or different channels.

[58] Field of Search 395/762, 806, 395/807, 173, 174, 327, 328; 434/307 R, 308; 364/514 A; 348/7, 8, 10; 345/302, 473, 474, 327, 328; 707/501

References Cited

U.S. PATENT DOCUMENTS

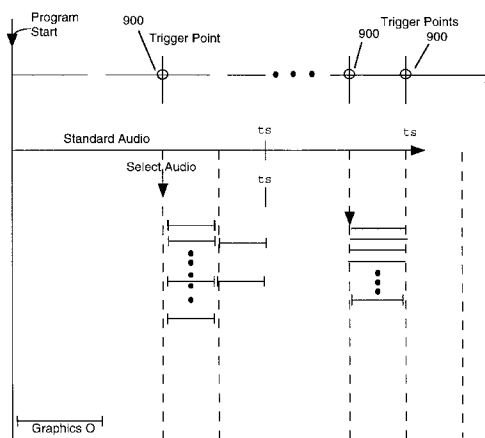
2,612,553 9/1952 Homrighous .
2,777,901 1/1957 Dostert 179/100.2

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

16314 10/1980 European Pat. Off. .
128481 12/1984 European Pat. Off. .
314572 5/1989 European Pat. Off. .
994233 6/1965 Germany .

19 Claims, 13 Drawing Sheets



U.S. PATENT DOCUMENTS

2,826,828	3/1958	Hamilton	35/9	5,001,554	3/1991	Johnson et al.	348/10
2,908,767	10/1959	Fritzinger	179/100.2	5,010,500	4/1991	Makkuni et al.	348/358
2,921,385	1/1960	Hamilton	35/9	5,014,125	5/1991	Pocock et al.	348/7
3,008,000	11/1961	Morchand	348/485	5,033,969	7/1991	Kamimura	434/322
3,020,360	2/1962	Gratian et al.	179/100.2	5,034,807	7/1991	Von Kohorn	348/13
3,194,895	7/1965	Treadwell	179/100.2	5,051,822	9/1991	Rhoades	463/25
3,221,098	11/1965	Feldman et al.	178/5.8	5,093,718	3/1992	Hoarty et al.	348/7
3,245,157	4/1966	Laviana	35/9	5,109,414	4/1992	Harvey et al.	380/9
3,255,536	6/1966	Livingston	35/9	5,109,482	4/1992	Bohrman	395/328
3,273,260	9/1966	Walker	35/9	5,157,491	10/1992	Kassatly	348/15
3,284,923	11/1966	Leslie	35/8	5,174,759	12/1992	Preston et al.	434/317
3,343,280	9/1967	Tolnai	35/35	5,176,520	1/1993	Hamilton	434/350
3,366,731	1/1968	Wallerstein	178/6	5,177,604	1/1993	Martinez	348/13
3,387,084	6/1968	Hine et al.	178/6.8	5,181,107	1/1993	Rhoades	348/13
3,440,342	4/1969	Beltrami	178/6.8	5,220,420	6/1993	Hoarty et al.	348/12
3,477,144	11/1969	Stillit	35/9	5,227,874	7/1993	Von Kohorn	705/10
3,484,950	12/1969	Serrell et al.	35/9	5,236,199	8/1993	Thompson, Jr.	463/41
3,485,946	12/1969	Jackson et al.	178/6	5,247,347	9/1993	Litteral et al.	348/7
3,538,621	11/1970	Mayeda	35/9	5,261,820	11/1993	Slye et al.	463/1
3,936,595	2/1976	Yanagimachi et al.	348/24	5,318,450	6/1994	Carver	434/336
3,947,972	4/1976	Freeman	434/321	5,388,197	2/1995	Rayner	395/328
3,988,528	10/1976	Yanagimachi et al.	348/24	5,454,722	10/1995	Holland et al.	434/322
4,034,990	7/1977	Baer	463/31	5,455,910	10/1995	Johnson et al.	395/806
4,264,924	4/1981	Freeman	348/11	5,467,288	11/1995	Fasciano et al.	364/514 R
4,264,925	4/1981	Freeman et al.	348/11	5,541,662	7/1996	Adams	348/460
4,290,142	9/1981	Schnee et al.	455/3.1	5,557,724	9/1996	Sampat et al.	396/327
4,305,131	12/1981	Best	345/327	5,585,858	12/1996	Harper et al.	348/485
4,333,152	6/1982	Best	345/327	5,594,492	1/1997	O'Callaghan et al.	348/10
4,361,730	11/1982	Barber et al.	348/14	5,594,935	1/1997	Reber et al.	455/2
4,422,105	12/1983	Rodesch et al.	385/83	5,724,091	3/1998	Freeman et al.	348/13
4,507,680	3/1985	Freeman	348/10				
4,516,156	5/1985	Fabris et al.	348/15				
4,530,008	7/1985	McVoy	380/23				
4,536,791	8/1985	Campbell et al.	380/10				
4,573,072	2/1986	Freeman	348/10				
4,602,279	7/1986	Freeman	348/10				
4,635,132	1/1987	Nakamura	348/296				
4,644,515	2/1987	Allebest et al.	369/32				
4,694,490	9/1987	Harvey et al.	380/20				
4,701,896	10/1987	Allebest et al.	369/32				
4,704,725	11/1987	Harvey et al.	380/19				
4,750,036	6/1988	Martinez	348/358				
4,763,317	8/1988	Lehman et al.	370/358				
4,768,087	8/1988	Taub et al.	348/3				
4,786,967	11/1988	Smith, III et al.	348/485				
4,807,031	2/1989	Broughton et al.	348/460				
4,839,743	6/1989	Best et al.	386/318				
4,846,693	7/1989	Baer	434/308				
4,847,690	7/1989	Perkins	348/483				
4,847,700	7/1989	Freeman	386/99				
4,855,827	8/1989	Best	348/485				
4,862,268	8/1989	Campbell et al.	348/463				
4,875,096	10/1989	Baer et al.	348/485				
4,924,303	5/1990	Brandon et al.	348/7				
4,926,255	5/1990	Von Kohorn	348/13				
4,965,825	10/1990	Harvey et al.	380/9				
4,975,771	12/1990	Kassatly	348/469				
4,987,486	1/1991	Johnson et al.	348/10				

OTHER PUBLICATIONS

Gault, Turning Cold Box Into Interactive TV, Crain's New York Business, Jul. 15, 1991, p. 17.

Tsuruta et al., A Knowledge Based Interactive Train Scheduling System Aiming at Large Scale Complex Planning Expert Systems, International Workshop on Artificial Intelligence for Industrial Applications, 1988, pp. 490-495.

Gilder, Now or Never, Forbes, Oct. 14, 1991, pp. 188-198.

Kim, First All-Digital HDTV Developed by Video Cipher, Multichannel News, Jun. 11, 1990, p. 35.

Kim, ATC: Technical Tidal Wave to Engulf Cable Industry, Multichannel News, Aug. 13, 1990, pp. 33-34.

Kim, Jerrold Offers Cable Digital Compression, Multichannel News, Mar. 11, 1991, p. 6.

Kim, Test Equipment for Digital Still a Puzzle, Multichannel News, May 27, 1991, p. 24.

Powell, Digitizing TV Into Obsolescence, New York Times, Oct. 20, 1991.

Waterset al., Talking Back to the Tube, Newsweek, Dec. 3, 1990, pp. 56-57.

Will it Revolutionize HDTV?, Broadcasting, Jun. 4, 1990, pp. 33-34.

Video Storage In Digital Transmission, Specs Technology, Cable Television Laboratories, vol. 3, No. 7, Sep. 1991, pp. 1-6.

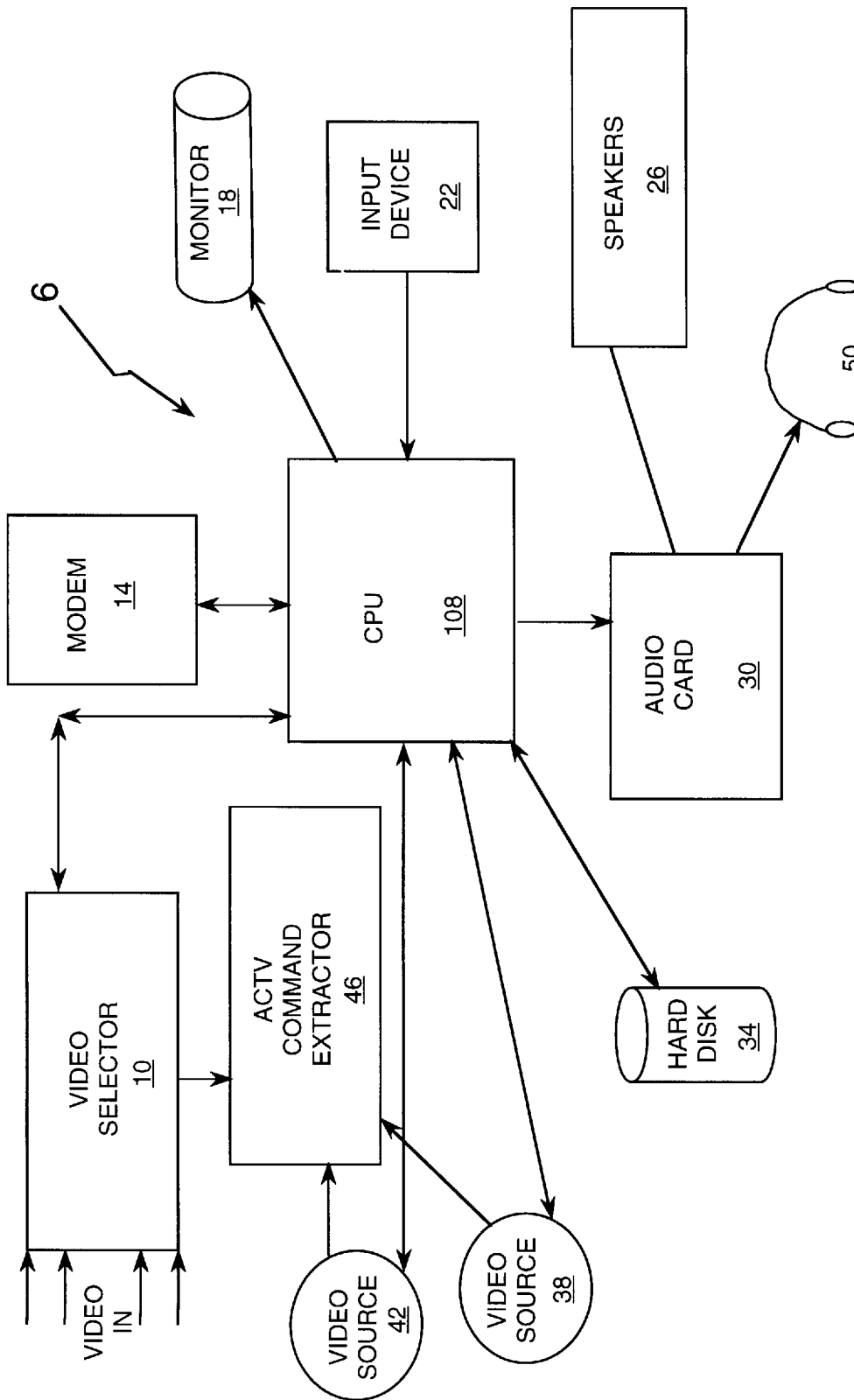


Figure 1

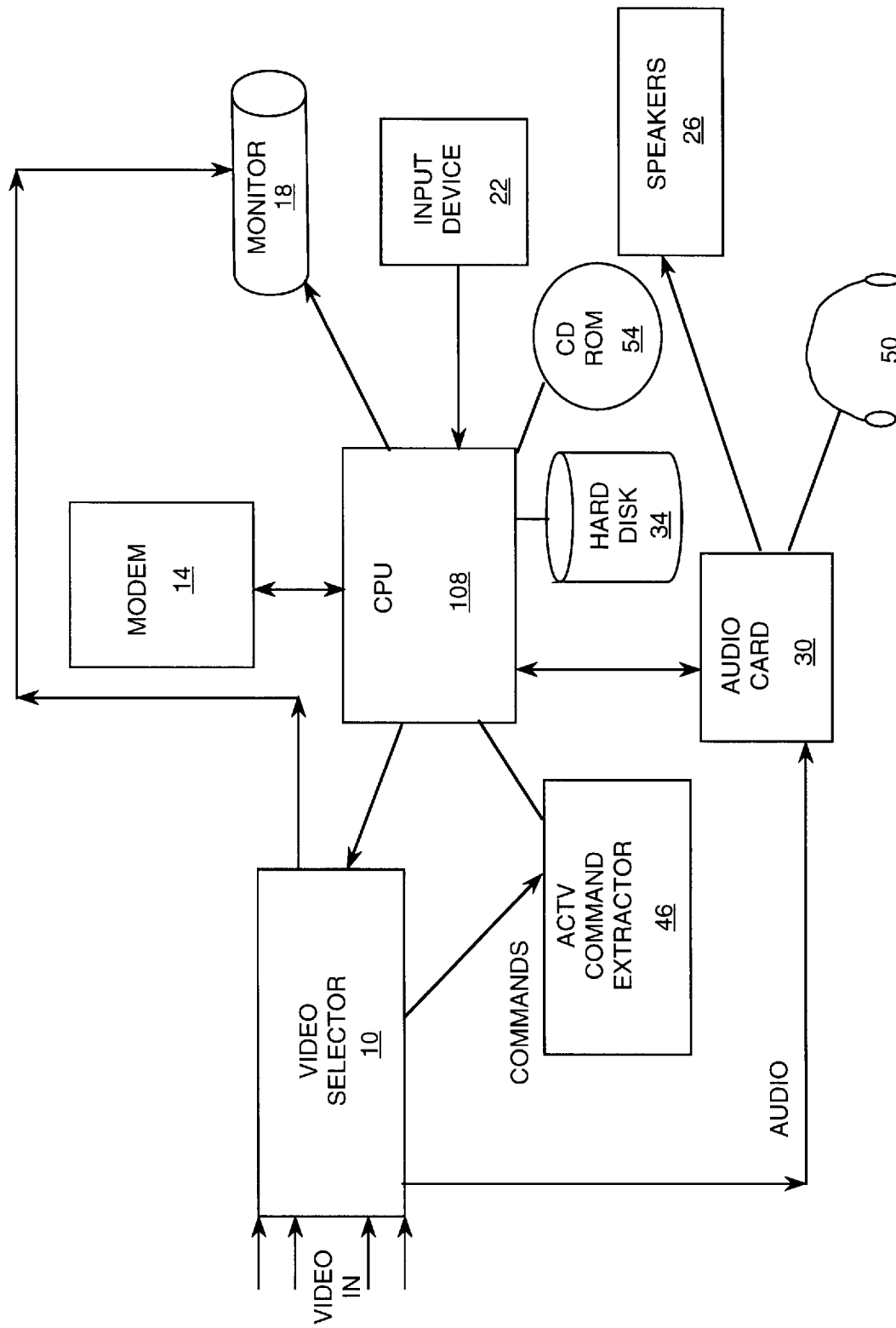


Figure 2

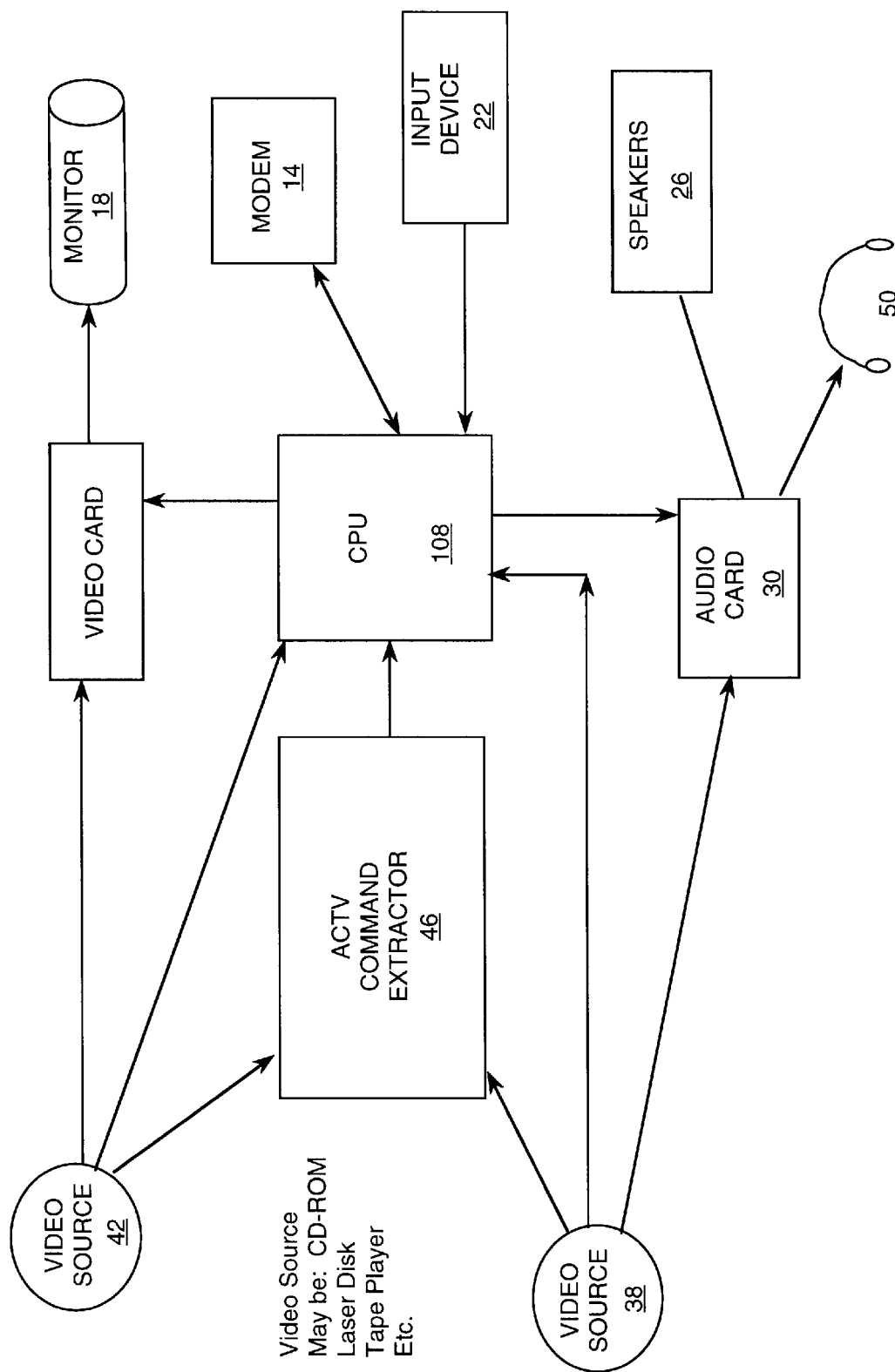


Figure 3

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.