

US006409602B1

(12) United States Patent Wiltshire et al.

US 6,409,602 B1 (10) Patent No.:

(45) Date of Patent: Jun. 25, 2002

(54) SLIM TERMINAL GAMING SYSTEM

(75) Inventors: Michael S. Wiltshire; James J.

Lisenbee, both of Reno, NV (US); Jayant S. Karmarkar, Aptos, CA (US); Timothy A. Wiltshire, Reno, NV

(US)

Assignee: New Millenium Gaming Limited,

Reno, NV (US)

Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/199,529

(22) Filed: Nov. 24, 1998

Related U.S. Application Data

(63)Continuation-in-part of application No. 09/187,135, filed on Nov. 6, 1998, now abandoned.

463/16, 18, 19, 24, 26, 27, 29, 36, 37,

38, 39, 40, 41, 43; 707/1, 2, 3, 101, 102, 104, 501, 513; 700/91, 92, 93; 273/148 B

(56)References Cited

U.S. PATENT DOCUMENTS

4,572,509 A	2/1986	Sitrick	273/85
4,856,787 A	8/1989	Itkis	273/237
4.866.515 A	9/1989	Tagawa et al.	358/86

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

WO WO 97/43846 11/1997 H04L/29/06

OTHER PUBLICATIONS

Bolot, et al., "Adding Voice To Distributed Games On The Internet", IEEE Infocom '98, vol. 2, pp. 480-487 (Mar. 29-Apr. 1998).

Bricker, et al., "Experience With DREGS", Proceedings of the Summer 1987 UNSENIX Conference, pp. 471–481 (Jun. 8-12, 1987).

Vanderheiden, "Anywhere anytime (+ anyone) access to the next-generation WWW", Computer Networks and ISDN Systems 29, pp. 1439-1446 (1997).

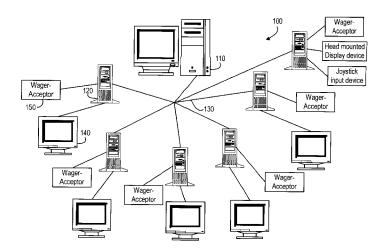
(List continued on next page.)

Primary Examiner—Jessica J. Harrison (74) Attorney, Agent, or Firm—Skjerven Morrill MacPherson LLP; Fabio E. Marino

ABSTRACT

A computer gaming system and method of operation thereof are provided that both drastically reduce the cost of gaming stations and allow contemporaneous access to multiple game programs from a single gaming station. The computer gaming system of the present invention allows for transparent modifications and upgrades to the gaming programs by executing gaming programs on a server/host computer connected to a plurality of client/terminal computers via communication pathways. Each client/terminal computer comprises a client/terminal program that allows input and output streams of the gaming program executed on the server/host computer to be separated and redirected to the client/ terminal computers. Since the gaming programs are executed entirely on the server/host computer, with only wagering input and display output operations being executed on the client/terminal computers, the cost of the hardware and software required for each client/terminal computer is greatly reduced. A patron of a client/terminal computer can access any of the gaming programs executed on the server/ host computer. Modifications and upgrades of the gaming programs only need to be performed on the server/host computer. By using a stereo head-mounted display together with a joystick input device and wireless communication pathways, the present invention allows a patron to participate in a mobile gaming environment.

29 Claims, 18 Drawing Sheets





U.S. PATENT DOCUMENTS

5,179,517 A	1/1993	Sarbin et al 364/410
5,305,195 A	4/1994	Murphy 364/401
5,404,567 A	4/1995	DePietro et al 455/63
5,429,361 A	7/1995	Raven et al 273/138
5,430,791 A	7/1995	Feit et al 379/67
5,465,082 A	11/1995	Chaco 340/825.54
5,476,259 A	12/1995	Weingardt 273/85
5,530,232 A	6/1996	Taylor 235/380
5,530,469 A	6/1996	Garfinkle 348/1
5,553,864 A	9/1996	Sitrick 463/31
5,559,313 A	9/1996	Claus et al 235/380
5,578,808 A	11/1996	Taylor 235/380
5,586,257 A	12/1996	Perlman 463/42
5,586,937 A	12/1996	Menashe 463/41
5,617,331 A	4/1997	Wakai et al 364/514
5,630,757 A	5/1997	Gagin et al 463/43
5,640,192 A	6/1997	Garfinkle 348/1
5,649,118 A	7/1997	Carlisle et al 395/241
5,655,961 A	* 8/1997	Acres et al 463/27 X
6,003,123 A	8/1997	Carter et al 711/207 X
5,755,621 A	* 5/1998	Marks et al 463/42 X
5,800,268 A	9/1998	Molnick 463/40
5,833,540 A	11/1998	Miodunski et al 463/42
5,845,283 A	* 12/1998	Williams et al 707/101 X
5,851,149 A	12/1998	Xidos et al 463/42
6,003,094 A	2/1999	Dean 709/303 X
5,903,732 A	* 5/1999	Reed et al 395/200.59 X
5,905,248 A	* 5/1999	Russell et al 235/462 X
5,913,164 A	* 6/1999	Pawa et al 455/427 X
5,918,039 A	* 6/1999	Buswell et al 395/527
5,951,653 A	* 9/1999	Hill et al 709/304 X
5,958,028 A	* 9/1999	Bean et al 710/62 X

5,971,271 A	* 10/1999	Wynn et al 235/380 X
5,971,849 A	* 10/1999	Falciglia 463/16
5,974,409 A	* 10/1999	Sanu et al 707/3 X
5,980,093 A	* 11/1999	Jones et al 364/489 X
5,983,190 A	* 11/1999	Trower, II et al 704/276 X
5,991,760 A	* 11/1999	Gauvin et al 707/10 X
5,991,790 A	11/1999	Shah et al 709/100 X
5,996,068 A	11/1999	Dwyer, III et al 712/228 X
6,003,066 A	12/1999	Ryan et al 709/201 X
6,085,247 A	* 7/2000	Parsons, Jr. et al 709/227
6,141,737 A	* 10/2000	Krantz et al 711/171

OTHER PUBLICATIONS

Richardson, et al., "Virtual Network Computing, IEEE Internet Computing", 6 pp. (Jan.–Feb. 1998). Zukowski, et al. "Metis: A Thin–client Application Frame-

Zukowski, et al. "Metis: A Thin-client Application Framework", Conference On Object-Oriented Technologies and Systems, pp. 103–114 (Jun. 16–20, 1997).

Nance, "Wireless Wonder", Review from Byte, p. 115 (Sep. 1997).

Lavitt, "Entertainment Firm Bets On In-Flight Video Gambling", Aviation Week & Space Technology, International Product News, p. 56 (Feb. 19, 1996).

Hendry, Smart Card Security and Applications, Artech House, Inc., pp. 195–206 (1997).

Busey, "Secrets of the MUD Wizard", First Edition, Samsnet Publishing, entire book (1995).

Maloni, et al., "netgames™ Your Guide to the Games People Play on the Electronic Highway", Random House Electronic Publishing, entre book (1994).

* cited by examiner

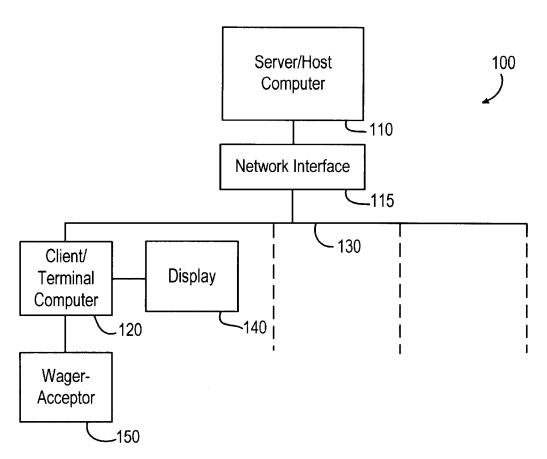


Fig. 1A

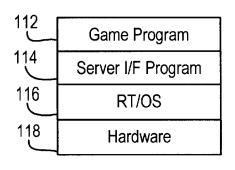


Fig. 1B

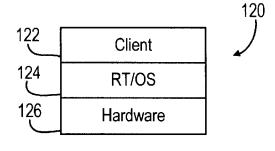
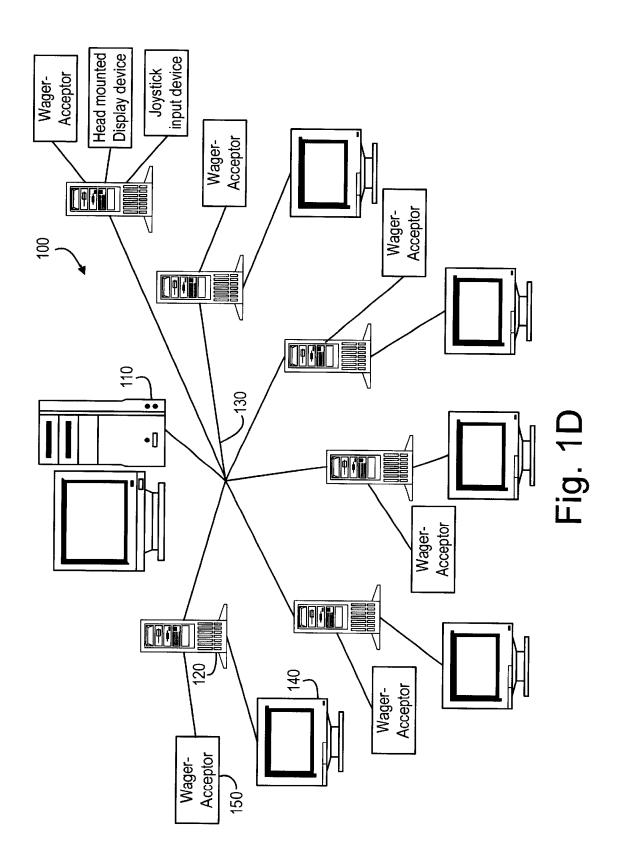


Fig. 1C





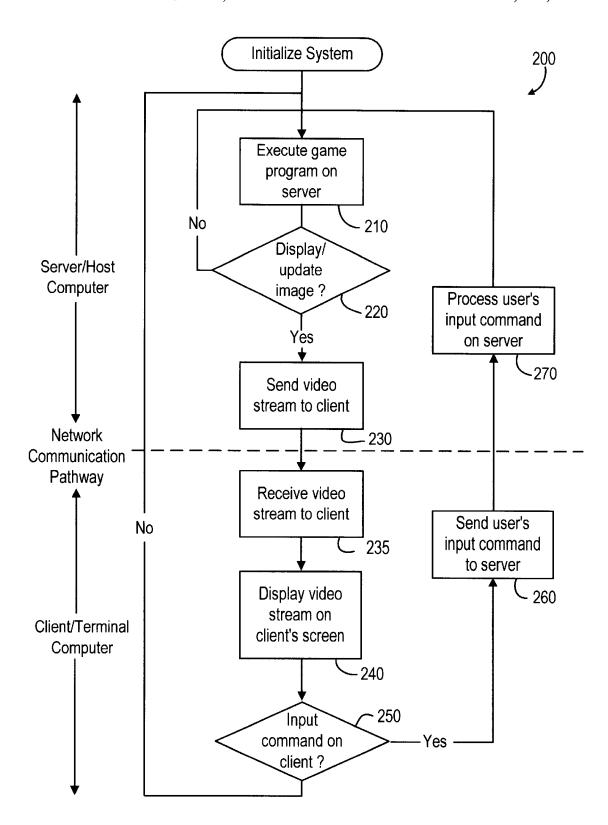


Fig. 2



DOCKET A L A R M

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.

