



US006167428A

United States Patent [19]
Ellis

[11] **Patent Number:** **6,167,428**
[45] **Date of Patent:** **Dec. 26, 2000**

[54] **PERSONAL COMPUTER
MICROPROCESSOR FIREWALLS FOR
INTERNET DISTRIBUTED PROCESSING**

[76] Inventor: **Frampton E. Ellis**, Suite B2, 2895 S.
Abingdon St., Arlington, Va. 22206

[21] Appl. No.: **09/320,660**

[22] Filed: **May 27, 1999**

Related U.S. Application Data

- [63] Continuation-in-part of application No. 08/980,058, Nov. 26, 1997, and a continuation of application No. PCT/US97/21812, Nov. 28, 1997.
- [60] Provisional application No. 60/031,855, Nov. 29, 1996, provisional application No. 60/032,207, Dec. 2, 1996, provisional application No. 60/033,871, Dec. 20, 1996, provisional application No. 60/066,313, Nov. 21, 1997, and provisional application No. 60/066,415, Nov. 24, 1997.

- [51] **Int. Cl.**⁷ **G06F 15/173**
- [52] **U.S. Cl.** **709/201; 709/209; 713/201**
- [58] **Field of Search** **709/201, 200,**
709/203, 208, 209, 210, 211, 100, 104,
105; 713/200, 201

[56] **References Cited**

U.S. PATENT DOCUMENTS

5,291,494	3/1994	Bruckert et al.	371/11.3
5,349,682	9/1994	Rosenberry	709/102
5,381,534	1/1995	Shi	709/203
5,392,400	2/1995	Berkowitz et al.	709/203
5,426,741	6/1995	Butts, Jr. et al.	710/129
5,550,984	8/1996	Gelb	709/245
5,572,643	11/1996	Judson	709/218
5,590,284	12/1996	Crosetto	712/29
5,615,127	3/1997	Beatty et al.	716/7
5,666,484	9/1997	Orimo et al.	714/18
5,680,548	10/1997	Trugman	709/203

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

0 647 052 A1	9/1994	European Pat. Off. .
0 840216 A2	5/1998	European Pat. Off. .

OTHER PUBLICATIONS

- Litzkow, et al., "Condor—A Hunter of Idle Workstations", 1988 IEEE, pp. 104–111.
- Theimer, et al., "Finding Idle Machines in a Workstation-Based Distributed System", IEEE Transactions on Software Engineering, Nov., 1989, vol. 15, No. 11, pp. 1444–1458.
- Brown et al., Special Edition Using Netscape™ 2 Second Edition, Que Corporation, 1995, Ch. 1–2.
- Gilder, "Angst and Awe on the Internet by George Gilder", Forbes ASAP, Dec. 4, 1995.
- Tandiary, et al., "Batrun: Utilizing Idle Workstations for Large-Scale Computing", Summer 1996, pp. 41–48.
- Brisbin, "Shopping for Internet access", MacUser, Dec., 1994, v.10, p. 133(2).
- Gilder, "The Bandwidth Tidal Wave", Forbes ASAP, Dec. 5, 1994.

(List continued on next page.)

Primary Examiner—Dung C. Dinh
Attorney, Agent, or Firm—Pillsbury Madison & Sutro
Intellectual Property

[57] **ABSTRACT**

This invention relates to computer networks having computers like personal computers (1) or network servers (2) with microprocessors linked (5) by transmission means (4, 14) and having hardware, and other means such that at least one parallel processing operation occurs that involve at least two computers in the network. This invention also relates to large networks composed of smaller networks, like the Internet (3), wherein more than one separate parallel processing operation involving more than one set of computers occurs simultaneously and wherein ongoing processing linkages can be established between microprocessors of separate computers connected to the network. This invention further relates to business arrangements enabling the shared used of network microprocessors for parallel and other processing wherein personal computer owners provide microprocessor processing power to a network, in exchange for linkage to other computers including linkage to other microprocessors; the basis of the exchange between owners and providers being whatever terms to which the parties agree.

83 Claims, 6 Drawing Sheets

