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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Glenn W. Hutton  
Serial No.: 08/533,115  
Filed: September 25, 1995  
For: POINT-TO-POINT INTERNET PROTOCOL  
Examiner: Richard J. Gregson, Esq.  
Art Unit: 2302

CERTIFICATE OF MAILING

I hereby certify that the following correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on December 2, 1997.

*Bruce D. Jobse*  
Bruce D. Jobse

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

AMENDMENT

RECEIVED  
DEC 11 57  
COMM 2300

In the Title

Please delete the title as filed and insert -- Method and Apparatus for Establishing Point-to-Point Communications Over a Computer Network --.

In the Specification

01/23/1998 KDUNCAN 00000072 DAB-200065 00533115  
01 FC:202 287.00 CH  
02 FC:203 165.00 CH

Page 1, line 20, after "interfacing" insert --to--.

Page 6, line 18, change "by" to --to--.

Page 7, line 6, change "read-only" to --random access--;

line 14, change "other" to --another--.

Page 12, line 17, change "the connection server 26" to --a connection service

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provider--.

Page 13, line 6, change "the connection server 26" to --a connection service provider--.

In the Claims

Please amend the claims as follows:

22. (Amended) A computer program product for use with a computer system, the computer system having first processor operatively coupled to a second processor [and second processors] and a server [operatively coupled] over a computer network, the computer program product comprising:

a computer useable medium having program code means embodied in the medium for establishing a point-to-point communications link between the first processor and a second processor over a computer network, the medium further comprising:

program code means for transmitting an E-mail signal comprising a network protocol address [from] of the first processor to the second processor [server] over the computer network;

program code means for receiving a second network protocol address from the second processor over the computer network; and

program code means, responsive to the second network protocol address, for establishing a point-to-point communication link between the first processor and the second processor over a computer network.

42. (Amended) The method of claim 41 wherein [the elements generated in steps A and B are graphic elements and] the step of establishing a [point-to-communication] point-to-point link as described in step C is performed in response to a user manipulating the graphic elements on the graphic user interface.

Please add the following claims:

*subcl*

54. A method of locating a user over a computer network comprising the steps of :

- a. maintaining an Internet accessible list having a plurality of entries, each entry comprising an electronic mail address and a corresponding Internet protocol address for a process currently connected to the Internet; and
- b. in response to identification of one of the list entries by a requesting process, providing one of the electronic mail address and the corresponding Internet protocol address of the identified entry to the requesting process.

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55. A method for locating users having dynamically assigned network protocol addresses over a computer network, the method comprising the steps of:

- a. maintaining in a computer memory, a network accessible compilation of entries, each entry comprising a network protocol address and a corresponding identifier for a user connected to the computer network;
- b. in response to identification of one of the entries by a requesting process providing one of the identifier and the network protocol address to the requesting process.

56. The method of claim 55 further comprising the step of:

- c. modifying the compilation of entries.

57. The method of claim 56 wherein step c further comprises:

- c.1 adding an entry to the compilation upon the occurrence of a predetermined event.

58. The method of claim 57 wherein the predetermined event comprises notification by a user process of an assigned network protocol address.

59. The method of claim 56 wherein step c further comprises:

c.1 deleting an entry from the compilation upon the occurrence of a predetermined event.

60. A computer program product for use with a server apparatus operatively coupled over a computer network to one or more computer processes, the computer program product comprising a computer usable medium having program code embodied in the medium the program code comprising:

a. program code configured to maintain, in a computer memory, a network accessible compilation of entries, each entry comprising a network protocol address and a corresponding identifier for a process connected to the computer network; and

b. program code responsive to identification of one of the entries by a requesting process and configured to provide one of the identifier and the network protocol address to the requesting process.

61. The computer program product of claim 60 further comprising:

c. program code configured to modify the compilation of entries.

62. The computer program product of claim 61 wherein program code configured to modify comprises:

c.1 program code configured to add an entry to the compilation upon the occurrence of a predetermined event.

63. The computer program product of claim 62 wherein the predetermined event comprises notification by a process of an assigned network protocol address.

64. The computer program product of claim 60 wherein step c further



comprises:

c.1 program code configured to delete an entry from the compilation upon the occurrence of a predetermined event.

65. A computer program product for use with a server operatively coupled over a computer network to a plurality of processes, the computer program product comprising a computer usable medium having program code embodied thereon the program code comprising:

- a. program code configured to receive the current network protocol address of one of the processes coupled to the network;
- b. program code configured to receive an identifier associated with said one process, and
- c. program code configured to receive queries for one of the network protocol address and the associated identifier of said one process from other processes over the computer network.

66. A computer program product for use with a computer system, the computer system including a first process operatively coupled over a computer network to a second process and a server process, the computer program product comprising a computer usable medium having computer readable program code embodied therein, the program code means comprising:

- a. program code configured to access a directory database, the database having a network protocol address for a plurality of processes having on-line status with respect to the computer network; and
- b. program code responsive to one of the network protocol addresses and configured to establish a point-to-point communication link from the first process to the second process over the computer network.

67. In a first computer process operatively coupled over a computer network to a second process and an address server, a method of establishing a point-to-point communication between the first and second processes comprising the steps of:

- A. querying the address server as to whether the second process is connected to the computer network;
- B. receiving a network protocol address of the second process from the address server, when the second process is connected to the computer network; and
- C. in responsive to the network protocol address of the second process, establishing a point-to-point communication link with the second process over the computer network.

68. In a first computer process operatively coupled over a computer network to a second process and an E-mail server, a method of establishing a point-to-point communication between the first and second processes comprising the steps of:

- A. transmitting an E-mail signal comprising a network protocol address of the first process to the second process over the computer network;
- B. receiving a second network protocol address from the second process over the computer network; and
- C. in responsive to the second network protocol address, establishing a point-to-point communication link between the first process and the second process over a computer network.

#### REMARKS

Applicant has considered carefully the Office Action dated June 2, 1997 and the references cited therein. In response, the title, specification, and claims have been amended. Applicant respectfully requests reexamination of the application.

The title of the application has now been changed to "METHOD AND APPARATUS FOR ESTABLISHING POINT-TO-POINT COMMUNICATIONS OVER A

COMPUTER NETWORK. Applicant asserts that the title as amended is indicative of the invention to which the claims are directed.

Regarding the multiple information disclosures submitted prior to examination, many of the submitted references were located during patentability searches not performed by applicant's current counsel. Applicant's current counsel submitted such references under the continuing duty of candor under 37 C.F.R. §§56, 1.97, 1.98. The Applicant is relying on the Examiner's expertise to determine the relevance of the references to the claimed subject matter.

As requested by the Examiner, the applicant has checked the specification for minor errors and has, in response, amended the specification as set forth herein. No new matter is believed to be added by these changes to the specification.

Claim 22 has been amended to conform the claim language with the specification. Such amendments are not required to distinguish the claimed subject matter over any of the cited references, whether considered singularly or in combination.

Claim 42 has been amended to correct a grammatical error and any potential problems under 37 C.F.R. §112, second paragraph. Such amendment is not required to distinguish the claimed subject matter over any of the cited references, whether considered singularly or in combination.

Applicant submits herewith a declaration of prior invention under 37 CFR 1.131 to overcome the rejection of all claims under 35 U.S.C. §103 as being unpatentable over Civanlar et al. in view of Morgan et al. and/or further in view of December et al. The declaration is submitted with a facsimile signature of the declarant inventor. The original signed declaration will be submitted as soon as it becomes available. In light of the declaration and accompanying exhibits, all rejections based on the Civanlar et al. reference are deemed moot.

In addition, Applicant has the following remarks. One of the major factors

inhibiting dynamic communications over the Internet, and other computer networks, is the inability to obtain the current dynamically assigned network protocol address of a user process connected to the network. This problem is analogous to trying to call someone whose telephone number changes after each call. Applicant's invention provides techniques for determining the current dynamically assigned network protocol address of a user process connected to the network. The first technique utilizes a dedicated server which acts as a network address/information directory from which calling processes can obtain information. When a first process connects to the network, the process logs-on to the server and provides the server with the network protocol address under which the first process is currently operating. A second process wishing to establish communications with the first process, connects to the server and request the network protocol address under which the first process is currently operating. Upon receipt of the network protocol address of the first process, the second process establishes communications with the first process directly, without any intervention from the address/ information server.

The Examiner has repeatedly indicated that Civanlar et al. in view of Morgan et al. teach an address server and database utilized to initiate communications between two nodes. Conversely, in the present invention, communications between two nodes, e.g. processes, are initiated by solely by one of the processes. The address server may have optionally supplied address information to one of the processes, but the address server does not establish the point-to-point communication connection between the nodes. Applicant has reviewed Civanlar et al. in view of Morgan et al. and has found no disclosure or suggestion of this first claimed technique whether the references are considered singularly or in combination.

Applicant's invention provides a second techniques for determining the current dynamically assigned network protocol address of a user process connected to the network. In the second technique, a first process wishing to establish communications with a second process, sends, via E-mail, the network protocol address under which



the first process is currently operating to the second process. Upon receipt of the E-mail message, the second process sends to the first process, via E-mail, the network protocol address under which the second process is currently operating. Upon receipt of the network protocol address of the second process, the first process establishes communications with the second process directly, without any intervention from the address/ information server. This second technique may be used in addition to or in place of the first technique. As with the first technique, communications between two nodes, e.g. processes, are initiated by solely by one of the processes. The address server does not establish the point-to-point communication connection between the nodes. Applicant has reviewed Civanlar et al. in view of Morgan et al. and further in view of December et al. and has found no disclosure or suggestion of this second claimed technique whether the references are considered singularly or in combination.

Applicant respectfully traverses the rejection of claims 32-42 and 43-53 under 35 U.S.C. §103 as being unpatentable over Civanlar et al. in view of Morgan et al. and further in view of December et al. Claims 32-42 are directed to a method for establishing a point-to-point communication link from a caller processor to a callee processor over a computer network by associating graphic elements representing communication line and a first callee processor. Claims 43-53 essentially comprise a computer program product claim counterparts to claims 32-42. Applicant has reviewed the cited references in detail and can find no suggestion or disclosure of generating graphic elements representing a communication line or a callee processor or establishment of a point-to-point communication link by associating the graphic element.

Applicant submits herewith new claims 54-68 to more particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. All claims are believed allowable over any of the references cited by the Applicant, whether considered singularly or in combination. Accordingly, Applicant believes this application is in condition for allowance and a notice to that effect is respectfully requested. If the



Examiner has any questions regarding this amendment or the application in general he is invited to call the Applicant's attorney at the number listed below.

The Commissioner is hereby authorized to charge any other fees under 37 C.F.R. §1.16 and 1.17 that may be required, or credit any overpayment, to our Deposit Account No. 20-0065.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Bruce D. Jobse", is written over a horizontal line.

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