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Heim, Payne & Chorush, L.L.P.
609 Main St., Suite 3200
Houston, TX 77002

EXAMINER

SORRELL, ERON J

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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Duane Morris LLP - Washington, D.C.
901 New York Avenue, N.W.
Suite 700 East
Washington, DISTRICT OF COLUMBIA 20001

***EX PARTE* REEXAMINATION COMMUNICATION TRANSMITTAL FORM**

REEXAMINATION CONTROL NO. 90/015,315 .

PATENT UNDER REEXAMINATION 8693369 .

ART UNIT 3992 .

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Office Action in Ex Parte Reexamination	Control No. 90/015,315	Patent Under Reexamination 8693369	
	Examiner ERON J SORRELL	Art Unit 3992	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

- a. ☐ Responsive to the communication(s) filed on _____.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

b. ☐ This action is made FINAL.

c. ☐ A statement under 37 CFR 1.530 has not been received from the patent owner.

A shortened statutory period for response to this action is set to expire 2 month(s) from the mailing date of this letter.
Failure to respond within the period for response will result in termination of the proceeding and issuance of an *ex parte* reexamination certificate in accordance with this action. 37 CFR 1.550(d). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).**
If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|--|---|
| 1. ☐ Notice of References Cited by Examiner, PTO-892. | 3. ☐ Interview Summary, PTO-474. |
| 2. ☐ Information Disclosure Statement, PTO/SB/08. | 4. ☐ _____. |

Part II SUMMARY OF ACTION

- 1a. ☒ Claims 1-17 are subject to reexamination.
- 1b. ☐ Claims _____ are not subject to reexamination.
2. ☐ Claims _____ have been canceled in the present reexamination proceeding.
3. ☐ Claims _____ are patentable and/or confirmed.
4. ☒ Claims 1-17 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ The drawings, filed on _____ are acceptable.
7. ☐ The proposed drawing correction, filed on _____ has been (7a) ☐ approved (7b) ☐ disapproved.
8. ☒ Acknowledgment is made of the priority claim under 35 U.S.C. 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the certified copies have
 - 1 ☐ been received.
 - 2 ☐ not been received.
 - 3 ☒ been filed in Application No. 12/935,040.
 - 4 ☐ been filed in reexamination Control No. _____.
 - 5 ☐ been received by the International Bureau in PCT application No. _____.

* See the attached detailed Office action for a list of the certified copies not received.

9. ☐ Since the proceeding appears to be in condition for issuance of an *ex parte* reexamination certificate except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte* Quayle, 1935 C.D. 11, 453 O.G. 213.
10. ☐ Other: _____

cc: Requester (if third party requester)

U.S. Patent and Trademark Office

PTOL-466 (Rev. 08-13)

Office Action in Ex Parte Reexamination

Part of Paper No. 20240516

Ex. 3001

DETAILED ACTION

Summary of the Proceeding to Date

On October 23, 2023, a Third-Party Requester, Unified Patents, LLC ("Requester") filed a Request for Ex Parte Reexamination of claims 1-3 and 5-17 of U.S. Patent No. 8,693,369 to Boucadair ("the '369 Patent") ("the Request").

On January 18, 2024 an Order Granting Reexamination was mailed which indicated that claims 1-17 of the '369 Patent would be subject to reexamination, as the Request was found to raise at least one substantial new question of patentability ("SNQ").

Listing of Prior Art

- i. U.S. Patent No. 7,624,195 to Biswas et al. ("Biswas");
- ii. ii. U.S. Patent No. 8,363,647 to Fangman et al. ("Fangman").

Claim interpretation

Per MPEP 2258(G),

During reexamination ordered under 35 U.S.C. 304, and also during reexamination ordered under 35 U.S.C. 257, claims are

given the broadest reasonable interpretation consistent with the specification and limitations in the specification are not read into the claims (*In re Yamamoto*, 740 F.2d 1569, 222 USPQ 934 (Fed. Cir. 1984)). In a reexamination proceeding involving claims of an expired patent, claim construction pursuant to the principle set forth by the court in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316, 75 USPQ2d 1321, 1329 (Fed. Cir. 2005) (words of a claim "are generally given their ordinary and customary meaning" as understood by a person of ordinary skill in the art in question at the time of the invention) should be applied since the expired claim are not subject to amendment. See *Ex parte Papst-Motoren*, 1 USPQ2d 1655 (Bd. Pat. App. & Inter. 1986). The statutory presumption of validity, 35 U.S.C. 282, has no application in reexamination (*In re Etter*, 756 F.2d 852, 225 USPQ 1 (Fed. Cir. 1985)).

The '369 Patent has not expired, therefore the claims will given the broadest reasonable interpretation consistent with the specification.

Statutory Basis for Rejections

35 USC § 102

The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Biswas-based Rejections

Claim(s) 1-17 are is/are rejected under pre-AIA 35 U.S.C. 102(e) as being anticipated by Biswas.

Referring to claim 1, Biswas teaches a method of routing an IP data packet in a telecommunications network (see item 105 in figure 1) to a destination equipment (see item 120a in figure 1), said packet comprising a primary destination address and a

destination port number (see line 66 of column 2 to line 5 of column 3, "...traffic from each responsible device uses the outside address and a port within the port range as an identifier for itself to communicate with outside devices."), said method comprising, on reception of said packet, the following steps:

determining a port mask assigned to the destination equipment, the port mask defining a range of port numbers to which the destination port number belongs (see lines 56-60 of column 4, "This can be achieved by giving a disjoint port-range along with the outside address to the aggregator. The gateway could then maintain a mapping between the aggregator's assigned outside-address/port-range and the aggregator's inside-address." see also lines 42-47 of column 7, "If port ranges were used, one convenient mechanism that could be used to quickly route messages based on port range is by extending subnetting concepts to port ranges. A 16-bit port number could be viewed, for example, as either a set of 4-byte nibbles (a nibble has 4 bits) or 2-byte octets (an octet has 8 bits).");

selecting at least one identifier of the destination equipment of the packet from a plurality of equipment identifiers associated with said primary destination address based on the port mask (see lines 42-48 of column 6, "When the

gateway 110 received an outside packet, it could either encapsulate (tunnel) the outside packet to the aggregator's second inside address or perform very basic header-only NAT on the outside packet such that the outside address is modified to the second inside address. This second inside address is routable in this private domain 105."); and

routing the packet to the destination equipment based on said identifier (see lines 6-8 of column 5, "When the gateway 110 received an outside packet, it could then route the packet to a selected aggregator based on both the outside address and the port number." see lines 42-48 of column 6, "When the gateway 110 received an outside packet, it could either encapsulate (tunnel) the outside packet to the aggregator's second inside address or perform very basic header-only NAT on the outside packet such that the outside address is modified to the second inside address. This second inside address is routable in this private domain 105.").

Referring to claim 2, Biswas teaches the method of claim 1 (as shown above), and further teaches the at least one identifier is a secondary destination address of the destination equipment (see lines 42-48 of column 6, "When the gateway 110

received an outside packet, it could either encapsulate (tunnel) the outside packet to the aggregator's second inside address or perform very basic header-only NAT on the outside packet such that the outside address is modified to the second inside address. This second inside address is routable in this private domain 105." The second inside address is a secondary destination address.).

Referring to claim 3, Biswas teaches the method according to claim 2 (as shown above) and further teaches before the routing step, a step of transforming the packet by adding said secondary address to the packet, and routing the packet based on said secondary destination address (see lines 42-48 of column 6, *"When the gateway 110 received an outside packet, it could either encapsulate (tunnel) the outside packet to the aggregator's second inside address or perform very basic header-only NAT on the outside packet such that the outside address is modified to the second inside address).*

Referring to claim 4, Biswas teaches the routing method according to claim 1 (as shown above), and Biswas further teaches the at least one identifier is a route identifier

specific to said destination equipment and the packet is routed based on said specific route identifier (see lines 35-40 of column 4, *"One solution is to assign each aggregator at least two inside addresses. Only if the aggregator receives a packet addressed to the second inside address will it know that NAT functions are required."* See also lines 37-48 of column 6, *"Tunneling requires that an aggregator first requests a inside address via DHCP, the DHCP server will also reserve the next consecutive inside address for the aggregator... ..Tunneling requires that an aggregator first requests a inside address via DHCP, the DHCP server will also reserve the next consecutive inside address for the aggregator."*).

Referring to claim 5, Biswas teaches a device (see item 110 in figure 1) for routing an IP data packet in a telecommunications network (see item 105 in figure 1) to a destination equipment (see item 120a in figure 1), said packet comprising a primary destination address and a destination port number (see line 66 of column 2 to line 5 of column 3, *"...traffic from each responsible device uses the outside address and a port within the port range as an identifier for itself to communicate with outside devices."*), wherein said device comprises, on reception of said packet:

a processor (see item 305 in figure 3) that determines a port mask assigned to the destination equipment, the port mask defining a range of port numbers to which the destination port number belongs (see lines 56-60 of column 4, *"This can be achieved by giving a disjoint port-range along with the outside address to the aggregator. The gateway could then maintain a mapping between the aggregator's assigned outside-address/port-range and the aggregator's inside-address."* see also lines 42-47 of column 7, *"If port ranges were used, one convenient mechanism that could be used to quickly route messages based on port range is by extending subnetting concepts to port ranges. A 16-bit port number could be viewed, for example, as either a set of 4-byte nibbles (a nibble has 4 bits) or 2-byte octets (an octet has 8 bits)."*);

the processor selects an identifier of the destination equipment of the packet from a plurality of equipment identifiers associated with said primary destination address based on the port mask (see lines 42-48 of column 6, *"When the gateway 110 received an outside packet, it could either encapsulate (tunnel) the outside packet to the aggregator's second inside address or perform very basic header-only NAT on the outside packet such that the outside address is modified to*

the second inside address. This second inside address is routable in this private domain 105."); and

a communication unit (see item 310 in figure 3) that routes the packet to the destination equipment based on said identifier (see lines 6-8 of column 5, "When the gateway 110 received an outside packet, it could then route the packet to a selected aggregator based on both the outside address and the port number." see lines 42-48 of column 6, "When the gateway 110 received an outside packet, it could either encapsulate (tunnel) the outside packet to the aggregator's second inside address or perform very basic header-only NAT on the outside packet such that the outside address is modified to the second inside address. This second inside address is routable in this private domain 105.").

Referring to claim 6, Biswas teaches Telecommunications network equipment (see items 110 and 120a) adapted to receive an IP data packet comprising a primary destination address and a destination port number (see line 66 of column 2 to line 5 of column 3, "...traffic from each responsible device uses the outside address and a port within the port range as an identifier for itself to communicate with outside devices."),

comprising at least one routing device (see item 110 in figure 1) comprising:

a processor (see item 305 in figure 3) that determines a port mask assigned to a destination equipment, the port mask defining a range of port numbers to which the destination port number belongs (see lines 56-60 of column 4, *"This can be achieved by giving a disjoint port-range along with the outside address to the aggregator. The gateway could then maintain a mapping between the aggregator's assigned outside-address/port-range and the aggregator's inside-address."* see also lines 42-47 of column 7, *"If port ranges were used, one convenient mechanism that could be used to quickly route messages based on port range is by extending subnetting concepts to port ranges. A 16-bit port number could be viewed, for example, as either a set of 4-byte nibbles (a nibble has 4 bits) or 2-byte octets (an octet has 8 bits)."*);

the processor selects an identifier of the destination equipment of the packet from a plurality of equipment identifiers associated with said primary destination address based on the port mask (see lines 42-48 of column 6, *"When the gateway 110 received an outside packet, it could either encapsulate (tunnel) the outside packet to the aggregator's second inside address or perform very basic header-only NAT on*

the outside packet such that the outside address is modified to the second inside address. This second inside address is routable in this private domain 105."); and

a communication unit that routes the packet to the destination equipment based on said identifier (see item 310 in figure 3) that routes the packet to the destination equipment based on said identifier (see lines 6-8 of column 5, "When the gateway 110 received an outside packet, it could then route the packet to a selected aggregator based on both the outside address and the port number." see lines 42-48 of column 6, "When the gateway 110 received an outside packet, it could either encapsulate (tunnel) the outside packet to the aggregator's second inside address or perform very basic header-only NAT on the outside packet such that the outside address is modified to the second inside address. This second inside address is routable in this private domain 105.").

Referring to claim 7, Biswas teaches a method of configuring a piece of terminal equipment (see item 125a in figure 1) connected to a telecommunications network (see item 105 in figure 1), comprising, on reception of a configuration request sent by said equipment, the following steps:

assigning to said piece of terminal equipment a primary address shared with a plurality of pieces of terminal equipment (see lines 23-37 of column 7, "As with the aggregator, the CPEs would need to be both alerted to outside packets requiring NAT functions and have access to the outside address and/or port-ranges in order to perform the NAT functions. Therefore, just as the aggregators would be aware of their outside addresses and/or port-ranges, so would the CPEs. When a CPE requests an inside address, the aggregator (or some device in concert with the aggregator) would reply with an inside DHCP address and the outside address and/or port-ranges.");

assigning to said piece of terminal equipment a port mask defining a range of numbers dedicated to it and a routing identifier (see lines 23-37 of column 7, "As with the aggregator, the CPEs would need to be both alerted to outside packets requiring NAT functions and have access to the outside address and/or port-ranges in order to perform the NAT functions. Therefore, just as the aggregators would be aware of their outside addresses and/or port-ranges, so would the CPEs. When a CPE requests an inside address, the aggregator (or some device in concert with the aggregator) would reply with an inside DHCP address and the outside address and/or port-ranges."); and

sending to said piece of terminal equipment a configuration message comprising said primary address, said port mask, and said routing identifier (see lines 23-37 of column 7, "As with the aggregator, the CPEs would need to be both alerted to outside packets requiring NAT functions and have access to the outside address and/or port-ranges in order to perform the NAT functions. Therefore, just as the aggregators would be aware of their outside addresses and/or port-ranges, so would the CPEs. When a CPE requests an inside address, the aggregator (or some device in concert with the aggregator) would reply with an inside DHCP address and the outside address and/or port-ranges.").

Referring to claim 8, Biswas teaches the method according to claim 7 (as shown above), and further teaches a step of assigning to said piece of terminal equipment an identifier of a routing device adapted to route a data packet comprising said primary address as the destination address to said piece of terminal equipment, and the configuration message further comprising said routing device identifier (see lines 23-37 of column 7, The terminal equipment is configured via a DHCP process, wherein the request and response messages would have to use the network address of the configuring server.)).

Referring to claim 9, Biswas teaches the configuration method according to claim 7 (as shown above), wherein said configuration message is further sent to a routing device that routes to said piece of terminal equipment a data packet containing said primary address as the destination address (see lines 23-37 of column 7, *"As with the aggregator, the CPEs would need to be both alerted to outside packets requiring NAT functions and have access to the outside address and/or port-ranges in order to perform the NAT functions. Therefore, just as the aggregators would be aware of their outside addresses and/or port-ranges, so would the CPEs. When a CPE requests an inside address, the aggregator (or some device in concert with the aggregator) would reply with an inside DHCP address and the outside address and/or port-ranges."* see also lines 29-50 of column 5).

Referring to claim 10, Biswas teaches a configuration server (see lines 27-31 of column 7, *"...aggregator (or some device in concert with the aggregator..."*) in a telecommunications network, wherein, on reception of a configuration request sent by a piece of terminal equipment, comprising:

a processor (see item 305 in figure 3) that assigns a primary address to said piece of terminal equipment, said primary address being shared with a plurality of pieces of terminal equipment (see lines 23-37 of column 7, "As with the aggregator, the CPEs would need to be both alerted to outside packets requiring NAT functions and have access to the outside address and/or port-ranges in order to perform the NAT functions. Therefore, just as the aggregators would be aware of their outside addresses and/or port-ranges, so would the CPEs. When a CPE requests an inside address, the aggregator (or some device in concert with the aggregator) would reply with an inside DHCP address and the outside address and/or port-ranges.");

the processor assigns to said piece of terminal equipment a port mask defining a range of numbers dedicated to it and a routing identifier (see lines 23-37 of column 7, "As with the aggregator, the CPEs would need to be both alerted to outside packets requiring NAT functions and have access to the outside address and/or port-ranges in order to perform the NAT functions. Therefore, just as the aggregators would be aware of their outside addresses and/or port-ranges, so would the CPEs. When a CPE requests an inside address, the aggregator (or some device in concert with the aggregator) would reply with an

inside DHCP address and the outside address and/or port-ranges."); and

a communication unit (see item 310 in figure 3) that sends to said piece of terminal equipment a configuration message comprising said primary address, said port mask, and said routing identifier (see lines 23-37 of column 7, "As with the aggregator, the CPEs would need to be both alerted to outside packets requiring NAT functions and have access to the outside address and/or port-ranges in order to perform the NAT functions. Therefore, just as the aggregators would be aware of their outside addresses and/or port-ranges, so would the CPEs. When a CPE requests an inside address, the aggregator (or some device in concert with the aggregator) would reply with an inside DHCP address and the outside address and/or port-ranges.").

Referring to claim 11, Biswas teaches a method of configuring a piece of terminal equipment (see item 125a in figure 1) connected to a telecommunications network (see item 105 in figure 1), wherein, on reception of a configuration message comprising configuration data comprising a primary address, a port mask defining a range of port numbers that is

dedicated thereto, and a routing identifier (see lines 60-65 of column 2, *"The edge router then receives an assignment of the inside address, a range of useable ports and a notification of an outside address that outside devices will use to communicate with the responsible devices."*), said method comprises the following steps:

storing said configuration data (see lines 60-65 of column 2, *"The edge router then receives an assignment of the inside address, a range of useable ports and a notification of an outside address that outside devices will use to communicate with the responsible devices."*); and

before sending a data packet into the telecommunications network, selecting a port number in the range of port numbers defined by the port mask (see line 66 of column 2 to line 5 of column 3, *"Additionally, the edge router ensures that traffic from each responsible device uses the outside address and a port within the port range as an identifier for itself to communicate with outside devices."*),

said data packet comprising as source address the primary address of said piece of terminal equipment and as source port number the selected port number (see line 66 of column 2 to line 5 of column 3, *"Additionally, the edge router ensures that*

traffic from each responsible device uses the outside address and a port within the port range as an identifier for itself to communicate with outside devices.").

Referring to claim 12, Biswas teaches the configuration method according to claim 11, wherein, once an identifier of a routing device adapted to route a data packet comprising said primary address as the destination address to said piece of terminal equipment has been received, said method further comprises a step of sending the configuration data to said routing device (see lines 51-53 of column 5, "*Once the inside and outside addresses and/or port-ranges are assigned, data identifying both addresses must be routed to the same device."*).

Referring to claim 13, Biswas teaches the configuration method according to claim 11 (as shown above), and Biswas further teaches wherein, on reception of a data packet comprising a destination address, a port number, and a routing identifier, said method further comprises a step of verifying that the port number belongs to the range of port numbers defined by the port mask, and a step of rejecting said packet if result of the verification is negative (see lines 6-8 of column

5, *"When the gateway 110 received an outside packet, it could then route the packet to a selected aggregator based on both the outside address and the port number."*).

Referring to claim 14, Biswas teaches a piece of client terminal equipment (see item 125a in figure 1) connected to a telecommunications network (see item 105 in figure 1), wherein, on reception of a configuration message comprising configuration data comprising a primary address shared with a plurality of pieces of terminal equipment, a port mask defining a range of port numbers that is dedicated to the piece of client terminal equipment, and a routing identifier, the piece of client terminal equipment comprising:

a memory that stores said configuration data (see lines 60-65 of column 2, *"The edge router then receives an assignment of the inside address, a range of useable ports and a notification of an outside address that outside devices will use to communicate with the responsible devices."*);

[before sending a data packet in the telecommunications network], a processor that selects a port number in the range of port numbers defined by the port mask (see line 66 of column 2 to line 5 of column 3, *"Additionally, the edge router ensures*

that traffic from each responsible device uses the outside address and a port within the port range as an identifier for itself to communicate with outside devices."),

[said data packet comprising as source address the primary address of said piece of client terminal equipment and as source port number the selected port number] (see line 66 of column 2 to line 5 of column 3, *"Additionally, the edge router ensures that traffic from each responsible device uses the outside address and a port within the port range as an identifier for itself to communicate with outside devices."*) (Note, the Examiner finds that the language directed toward the data packet (i.e. the bracketed language), does not provide any further limitations to the claim as it does not recite any structural limitations. That is to say, those limitations are directed towards how the apparatus is used and not any structural limitation of the apparatus. Per MPEP 2114(II), "[A]pparatus claims cover what a device *is*, not what a device *does*." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all

the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). In other words, the data packet is not seen as part of the claimed apparatus.).

Referring to claim 15, Biswas teaches a non-transitory computer readable medium encoded with program code instructions executable by a microprocessor to perform the method according to claim 1 (see lines 23-39 of column 9).

Referring to claim 16, Biswas teaches a non-transitory computer readable medium encoded with program code instructions executable by a microprocessor to perform the method according to claim 7 (see lines 23-39 of column 9).

Referring to claim 17, Biswas teaches a non-transitory computer-readable medium encoded with program code instructions executable by a microprocessor to perform the method according to claim 11 (see lines 23-39 of column 9).

Fangman-based rejections

Claim(s) 1-8, 10, 11, and 13-17 is/are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Fangman.

Referring to claim 1, Fangman teaches a method of routing an IP data packet in a telecommunications network to a destination equipment, said packet comprising a primary destination address and a destination port number, said method comprising, on reception of said packet (see line 60 of column 17 to line 9 of column 18, "*Conversely, when the SG 170 receives a data packet from the IP device destined for the IP telephone 120, the data packet may include a public destination IP address, a destination port number; and source information associated with the IP device...*"), the following steps:

determining a port mask assigned to the destination equipment, the port mask defining a range of port numbers to which the destination port number belongs (see line 60 of column 17 to line 9 of column 18, "*...where the destination port number is in the assigned range of port numbers for the IP telephone 120.*");

selecting at least one identifier of the destination equipment of the packet from a plurality of equipment identifiers associated with said primary destination address

based on the port mask (see line 60 of column 17 to line 9 of column 18, *"Performing a NAPPT on the data packet may include using the public destination IP address and the destination port number to uniquely identify the IP telephone 120, and changing the public destination IP address to a private destination IP address while leaving the destination port number unchanged."*); and

routing the packet to the destination equipment based on said identifier (see line 60 of column 17 to line 9 of column 18, *"After NAPPTing the data packet, the SG 170 may send the data packet to the IP telephone 120."*).

Referring to claim 2, Fangman teaches the method according to claim 1 of routing an IP data packet, wherein said at least one identifier is a secondary destination address of the destination equipment (see line 60 of column 17 to line 9 of column 18. The private address of the IP telephone is a secondary address).

Referring to claim 3, Fangman teaches, the method according to claim 2 of routing an IP data packet (as shown above), and

Fangman further teaches before the routing step, a step of transforming the packet by adding said secondary address to the packet, and routing the packet based on said secondary destination address (see line 60 of column 17 to line 9 of column 18, "*Performing a NAPPT on the data packet may include using the public destination IP address and the destination port number to uniquely identify the IP telephone 120, and changing the public destination IP address to a private destination IP address while leaving the destination port number unchanged.*").

Referring to claim 4, Fangman teaches the routing method according to claim 1 (as shown above), wherein the at least one identifier is a route identifier specific to said destination equipment and the packet is routed based on said specific route identifier (see line 60 of column 17 to line 9 of column 18).

Referring to claim 5, Fangman teaches a device (see item 170 in figure 2) for routing an IP data packet (see item 170 in figure 2) in a telecommunications network to a destination equipment (see item 120A in figure 2), said packet comprising a primary destination address and a destination port number (see line 60 of column 17 to line 9 of column 18, "...the data packet

may include a public destination IP address, a destination port number; and source information associated with the IP device..."), wherein said device comprises, on reception of said packet:

a processor that determines a port mask assigned to the destination equipment, the port mask defining a range of port numbers to which the destination port number belongs (see line 60 of column 17 to line 9 of column 18, "...where the destination port number is in the assigned range of port numbers for the IP telephone 120." see also lines 15-19 of column 31, "In general, the term "computer system" can be broadly defined to encompass any device having at least one processor which executes instructions from a memory medium, or any device which includes programmable logic that is configurable to perform a method or algorithm.");

the processor selects an identifier of the destination equipment of the packet from a plurality of equipment identifiers associated with said primary destination address based on the port mask (see line 60 of column 17 to line 9 of column 18, "Performing a NAPPT on the data packet may include using the public destination IP address and the destination port number to uniquely identify the IP telephone 120, and changing the public destination IP address to a private destination IP

address while leaving the destination port number unchanged.");
and

a communication unit that routes the packet to the destination equipment based on said identifier (see line 60 of column 17 to line 9 of column 18, "After NAPPTing the data packet, the SG 170 may send the data packet to the IP telephone 120.") .

Referring to claim 6, Fangman teaches a telecommunications network equipment adapted to receive an IP data packet comprising a primary destination address and a destination port number (se items 150 and 170 in figure 2), comprising at least one routing device comprising (see item 170 in figure 2):

a processor that determines a port mask assigned to the destination equipment, the port mask defining a range of port numbers to which the destination port number belongs (see line 60 of column 17 to line 9 of column 18, "...where the destination port number is in the assigned range of port numbers for the IP telephone 120." see also lines 15-19 of column 31, "In general, the term "computer system" can be broadly defined to encompass any device having at least one processor which executes instructions from a memory medium, or any device which includes

programmable logic that is configurable to perform a method or algorithm.");

the processor selects an identifier of the destination equipment of the packet from a plurality of equipment identifiers associated with said primary destination address based on the port mask (see line 60 of column 17 to line 9 of column 18, *"Performing a NAPPT on the data packet may include using the public destination IP address and the destination port number to uniquely identify the IP telephone 120, and changing the public destination IP address to a private destination IP address while leaving the destination port number unchanged.";* and

a communication unit that routes the packet to the destination equipment based on said identifier (see line 60 of column 17 to line 9 of column 18, *"After NAPPTing the data packet, the SG 170 may send the data packet to the IP telephone 120.";*).

Referring to claim 7, Fangman teaches a method of configuring a piece of terminal equipment (see item 120A in figure 1) connected to a telecommunications network, comprising,

on reception of a configuration request sent by said equipment,
the following steps:

assigning to said piece of terminal equipment a primary address shared with a plurality of pieces of terminal equipment (see lines 6-17 of column 8, *"The SG 170 may use a single, public IP address to provide NAT support for all the internal hosts needing VoIP protocol support. It may be able to use additional NAT addresses to support a large number of internal hosts, e.g., IP telephones 120."*);

assigning to said piece of terminal equipment a port mask defining a range of numbers dedicated to it and a routing identifier (see lines 30-33 of column 8, *"Instead of dynamically assigning ports to IP telephones, the SG 170 may allocate a range of port numbers for each IP telephone 120 as it acquires its lease during a DHCP process..."* see also lines 48-50 of column 11, *"In one embodiment, the internal hosts, or IP telephones, may use a private IP address assigned by the SG DHCP service in the normal fashion for all IP headers."*); and

sending to said piece of terminal equipment a configuration message comprising said primary address, said port mask, and said routing identifier (see lines 26-29 of column 3, *"The DHCP offer may include DHCP lease information based on the validated*

identifier, such as the range of port numbers and information indicating operational software for the IP telephone." see also lines 48-53 of column 8, "Specifically, via DHCP the SG 170 may perform one or more of the following: assign the IP address and network mask, set the SG 170 as the default gateway, set the DNS domain to the appropriate value, set the SG 170 as the TFTP/BOOTP server, provide the path and file name for the boot image, and set the host name." see also lines 64-67 of column 11, "The IP telephone 120 may also know the public IP address to which all its traffic is being NATed, so that the IP telephone 120 may inform the soft switch during the registration process, described below.").

Referring to claim 8, Fangman teaches the method according to claim 7 of configuring a piece of terminal equipment (as shown above), and Fangman further teaches a step of assigning to said piece of terminal equipment an identifier of a routing device adapted to route a data packet comprising said primary address as the destination address to said piece of terminal equipment, and the configuration message further comprising said routing device identifier (see lines 24-29 of column 16, "As indicated in 452, in one embodiment, the system may provide DHCP lease information, port range allocation, and Media Gateway

Controller (MGC) information, e.g., an MGC address, to the IP telephone 120 based on the identifier, e.g., the Vendor Class ID").

Referring to claim 10, Fangman teaches A configuration server in a telecommunications network, wherein, on reception of a configuration request sent by a piece of terminal equipment, comprising:

a processor (see lines 15-19 of column 31, "...at least one processor...") that assigns a primary address to said piece of terminal equipment, said primary address being shared with a plurality of pieces of terminal equipment (see lines 6-17 of column 8, "The SG 170 may use a single, public IP address to provide NAT support for all the internal hosts needing VoIP protocol support. It may be able to use additional NAT addresses to support a large number of internal hosts, e.g., IP telephones 120.");

the processor assigns to said piece of terminal equipment a port mask defining a range of numbers dedicated to it and a routing identifier (see lines 30-33 of column 8, "Instead of dynamically assigning ports to IP telephones, the SG 170 may allocate a range of port numbers for each IP telephone 120 as it

acquires its lease during a DHCP process..." see also lines 48-50 of column 11, "In one embodiment, the internal hosts, or IP telephones, may use a private IP address assigned by the SG DHCP service in the normal fashion for all IP headers."); and

a communication unit (see lines 5-11 of column 31, "...connects to the first computer over a network...") that sends to said piece of terminal equipment a configuration message comprising said primary address, said port mask, and said routing identifier (see lines 26-29 of column 3, "The DHCP offer may include DHCP lease information based on the validated identifier, such as the range of port numbers and information indicating operational software for the IP telephone." see also lines 48-53 of column 8, "Specifically, via DHCP the SG 170 may perform one or more of the following: assign the IP address and network mask, set the SG 170 as the default gateway, set the DNS domain to the appropriate value, set the SG 170 as the TFTP/BOOTP server, provide the path and file name for the boot image, and set the host name." see also lines 64-67 of column 11, "The IP telephone 120 may also know the public IP address to which all its traffic is being NATed, so that the IP telephone 120 may inform the soft switch during the registration process, described below.").

Referring to claim 11, Fangman teaches a method of configuring a piece of terminal equipment connected to a telecommunications network, wherein, on reception of a configuration message comprising configuration data comprising a primary address, a port mask defining a range of port numbers that is dedicated thereto, and a routing identifier, said method comprises the following steps:

storing said configuration data (see lines 29-33 of column 3, *"The Service Gateway may store the DHCP lease information. The IP telephone may store the DHCP lease information, and enable DHCP settings included in the DHCP lease information."*); and

before sending a data packet into the telecommunications network, selecting a port number in the range of port numbers defined by the port mask (see lines 39-50 of column 17, *"In 490, RTP flow related to the IP telephone call may be managed. For example, as indicated in 492, in one embodiment, the IP telephones may exchange RTP using one or more ports from the assigned port range received from the DHCP lease of 404 above. Then, as described above in 464 and 484, in 494, the Service Gateway 170 (as a NAT service) may change the IP source address, e.g., from private to public, leaving the port information unmodified. More specifically, the SG 170 may receive a data*

packet from the IP telephone 120, perform a network address persistent port translation (NAPPT) on the data packet, and send the NAPPTed data packet to a destination IP device."),

said data packet comprising as source address the primary address of said piece of terminal equipment and as source port number the selected port number (see lines 39-50 of column 17, "In 490, RTP flow related to the IP telephone call may be managed. For example, as indicated in 492, in one embodiment, the IP telephones may exchange RTP using one or more ports from the assigned port range received from the DHCP lease of 404 above. Then, as described above in 464 and 484, in 494, the Service Gateway 170 (as a NAT service) may change the IP source address, e.g., from private to public, leaving the port information unmodified. More specifically, the SG 170 may receive a data packet from the IP telephone 120, perform a network address persistent port translation (NAPPT) on the data packet, and send the NAPPTed data packet to a destination IP device.").

Referring to claim 13, Fangman teaches the configuration method according to claim 11, wherein, on reception of a data packet comprising a destination address, a port number, and a

routing identifier, said method further comprises a step of verifying that the port number belongs to the range of port numbers defined by the port mask a step of rejecting said packet if result of the verification is negative (see lines 60-65 of column 17, "Conversely, when the SG 170 receives a data packet from the IP device destined for the IP telephone 120, the data packet may include a public destination IP address, a destination port number; and source information associated with the IP device, where the destination port number is in the assigned range of port numbers for the IP telephone 120. In one embodiment, the public destination IP address and the destination port number may be used to uniquely identify the IP telephone 120." Note the rejection of packets not in range is implied by "when the port number is in the assigned range").

Referring to claim 14, Fangman teaches a piece of client terminal equipment connected to a telecommunications network (see item 120A in figure 2), wherein, on reception of a configuration message comprising configuration data comprising a primary address shared with a plurality of pieces of terminal equipment, a port mask defining a range of port numbers that is dedicated to the piece of client terminal equipment, and a routing identifier (see lines 26-33 of column 3, "The DHCP offer

may include DHCP lease information based on the validated identifier, such as the range of port numbers and information indicating operational software for the IP telephone." see also lines 50-56 of column 3, "For example, the IP telephone may send a public IP address of the IP telephone to the Media Gateway Controller, which may receive and store the public IP address of the IP telephone. In one embodiment, the IP telephone may also send a private IP address of the IP telephone to the Media Gateway Controller, which may receive and store the private IP address of the IP telephone." see also lines 48-67 of column 11), the piece of client terminal equipment comprising:

a memory that stores said configuration data (see lines 30-33 of column 3, "The IP telephone may store the DHCP lease information, and enable DHCP settings included in the DHCP lease information.");

[before sending a data packet in the telecommunications network,] a processor that selects a port number in the range of port numbers defined by the port mask (see lines 46-54 of column 17, "As mentioned above, the data packet may include a private source IP address of the IP telephone 120, a source port number (from the IP telephone's assigned range of port numbers), and destination information associated with the IP device."),

[said data packet comprising as source address the primary address of said piece of client terminal equipment and as source port number the selected port number] (Note, the Examiner finds that the language directed toward the data packet (i.e. the bracketed language), does not provide any further limitations to the claim as it does not recite any structural limitations. That is to say, those limitations are directed towards how the apparatus is used and not any structural limitation of the apparatus. Per MPEP 2114(II), "[A]pparatus claims cover what a device *is*, not what a device *does*." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). In other words, the data packet is not seen as part of the claimed apparatus.).

Referring to claim 15, Fangman teaches a non-transitory computer readable medium encoded with program code instructions

executable by a microprocessor to perform the method according to claim 1 (see line 62 of column 30 to line 4 of column 21).

Referring to claim 16, Fangman teaches a non-transitory computer readable medium encoded with program code instructions executable by a microprocessor to perform the method according to claim 7 (see line 62 of column 30 to line 4 of column 21).

Referring to claim 17, Fangman teaches a non-transitory computer-readable medium encoded with program code instructions executable by a microprocessor to perform the method according to claim 11 (see line 62 of column 30 to line 4 of column 21).

Submissions

In order to ensure full consideration of any amendments, affidavits or declarations, or other documents as evidence of patentability, such documents must be submitted in response to this Office action. Submissions after the next Office action, which is intended to be a final action, will be governed by the requirements of 37 CFR 1.116, after final rejection and 37 CFR 41.33 after appeal, which will be strictly enforced.

Extensions of Time

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extension of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

Amendments

Patent owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c).

Conclusion

All correspondence relating to this *ex parte* reexamination proceeding should be directed:

Electronically: Registered users may submit via Patent Center at <https://patentcenter.uspto.gov/>.

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For electronic transmissions, 37 CFR 1.8(a)(1)(i)(C) and (ii) states that correspondence (except for a request for reexamination and a corrected or replacement request for reexamination) will be considered timely filed if (a) it is transmitted via the USPTO patent electronic filing system in accordance with 37 CFR 1.6(a)(4), and (b) includes a certificate of transmission for each piece of correspondence stating the date of transmission, which is prior to the expiration of the set period of time in the Office action.

Any inquiry concerning this communication should be
directed to Eron Sorrell at telephone number 571-272-4160.

Signed:

/ERON J SORRELL/
Primary Examiner, Art Unit 3992

Conferees: /JOSEPH R POKRZYWA/
 Primary Examiner, Art Unit 3992

/MICHAEL FUELLING/
Supervisory Patent Examiner, Art Unit 3992