UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ERIC VAN HENSBERGEN and
RAMAKRISHNAN RAJAMONY

Appeal 2007-0941
Application 10/165,068
Technology Center 2100

Decided: May 22, 2007

Before KENNETH W. HAIRSTON, JAY P. LUCAS, and
ST. JOHN COURTENAY III, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-23.

THE INVENTION

The disclosed invention is directed to a connection routing method and system in an intelligent network controller. The network controller may

be an intelligent peripheral installed within a server or may be a network processor (NP) coupled to a server. The method and system forward connections by determining whether or not a particular connection should be handled by another node. In response to determining that the particular connection should be handled by another node, the network controller forwards the connection by performing header mangling within the network controller. The packet destination addresses are modified to reflect the address of the other node and the source address is modified to reflect a node of the network controller. Responses received from the other node are modified to indicate a response from the original destination node, thus making the connection forwarding transparent to external switches and other devices (Specification 4).

Representative claim 1 is illustrative:

1. A method for forwarding connections at a server, comprising:

receiving a packet at a network controller of said server, wherein said packet is destined for an original destination node of said server and was provided by an originating source;

within said network controller, selecting an alternate destination node for said packet;

modifying a destination address and an origin address of said packet within said network controller to produce a modified packet containing a destination address of said alternate destination node and an origin address of a response node of said network controller; and

transmitting said modified packet from said network controller to said alternate destination node.

THE REFERENCES

The Examiner relies upon the following references as evidence of anticipation and unpatentability:

Gbadegesin	US 6,779,035 B1	Aug. 17, 2004 (filed Mar. 6, 2000)
Bommareddy	US 6,880,089 B1	Apr. 12, 2005 (filed Mar. 31, 2000)

THE REJECTIONS

The following rejections are on appeal before us:

1. Claims 1, 7-10, 15-17, and 20-22 under 35 U.S.C. § 102(e) as being anticipated by Gbadegesin.
2. Claims 2-6, 11-14, 18, 19, and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Gbadegesin in view of Bommareddy.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the Brief and the Answer for the respective details thereof.

OPINION

Only those arguments actually made by Appellants have been considered in this decision. It is our view, after consideration of the record before us, that the evidence relied upon supports the Examiner's rejection of claims 1, 2, 6-10, 14-17, and 19-21, but does not support the Examiner's rejection of claims 3-5, 11-13, 18, 22, and 23. Accordingly, we affirm-in-part.

Claims 1, 7-10, 15-17, 20, and 21

We consider first the Examiner's rejection of claims 1, 7-10, 15-17, 20, and 21 as being anticipated by Gbadegesin. Since Appellants' arguments with respect to this rejection have treated these claims as a single group which stands or falls together, we will select independent claim 1 as the representative claim for this rejection because we find it is the broadest independent claim in this group. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2004).

Appellants argue that Gbadegesin does not disclose performing packet modification within a network controller of a server nor the selection of an alternate destination node by the network controller. More particularly, Appellants argue that Gbadegesin's packet modification is performed by kernel-mode translation module 106 (Fig. 9) under the direction of user-mode application 104, where translation module 106 and application 104 both execute within the same processing system (e.g., personal computer 20, Fig. 1). Appellants further argue that Gbadegesin describes kernel-mode translation module 106 as a Windows 2000 driver registered as a Windows Firewall driver (co1. 6, line 64, *et seq*.). Appellants point out that no mention is made of a processor and program instructions within Gbadegesin's network interface 53 for performing gNAT [i.e., generalized Network Address Translation] within network interface 53 itself. Appellants note that even in the more generalized multi-server embodiment of Fig. 11, the gNAT function is performed by server load balancing application 134 executing within server 140 (col. 9, ll. 44-49). (Br. 7-9).

The Examiner disagrees. The Examiner argues that Appellants have mistakenly concluded that Gbadegesin's packet modification is only

performed within personal computer 20 (fig. 1). The Examiner further argues that Appellants have mistakenly drawn the conclusion that network interface 53 of Gbadegesin is the only network controller disclosed. The Examiner points out that the term "network controller" is not so limited considering the breadth of Appellants' Specification that discloses: "the network controller may be an intelligent peripheral installed within a server or may be a network processor (NP) coupled to a server" (Specification 4:5-7). The Examiner concludes that Appellants have mischaracterized Gbadegesin's fig. 11 by stating that the gNAT function is performed by *server* 140 (emphasis added). In contrast, the Examiner notes that gNAT 140 is a *gateway* machine, and is not a server, such as servers S_1-S_4 (fig. 11, col. 10, ll. 5-6). The Examiner concludes that the gNAT (kernel-mode translation module), is not located at the server or client, but at the gateway (e.g. network controller) coupled between the servers and the clients, as shown in fig. 11 (Answer 15-17).

In rejecting claims under 35 U.S.C. § 102, a single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation. *Perricone v. Medicis Pharmaceutical Corp.*, 432 F.3d 1368, 1375-76, 77 USPQ2d 1321, 1325-26 (Fed. Cir. 2005) (citing *Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1565, 24 USPQ2d 1321, 1326 (Fed. Cir. 1992)). Anticipation of a patent claim requires a finding that the claim at issue "reads on" a prior art reference. *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1346, 51 USPQ2d 1943, 1945 (Fed. Cir. 1999) ("In other words, if granting patent protection on the disputed claim would allow the patentee to

exclude the public from practicing the prior art, then that claim is anticipated, regardless of whether it also covers subject matter not in the prior art.") (internal citations omitted).

We begin our analysis by construing the claim term "network controller" by applying the broadest reasonable interpretation consistent with the Specification. *See In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000) ("during examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification."). As pointed out by the Examiner, the Specification broadly discloses "the network controller may be an intelligent peripheral installed within a server *or may be a network processor (NP) coupled to a server*" (Specification 4:5-7, emphasis added). When we look to the Specification for *context*, we particularly note that the breadth of the recited term "network controller" encompasses "*a network processor (NP) coupled to a server"* (*id.*). Therefore, we conclude that the Examiner has properly construed the language of the claim in accordance with the broadest reasonable interpretation consistent with the Specification.

Furthermore, we find the plain language of the claim does not require the network controller to be integral to the server. In contrast, the recited language merely requires "receiving a packet at a network controller *of said server"* (claim 1, emphasis added). Therefore, we find the evidence supports the Examiner's position that the argued language of the claim broadly but reasonably reads on gateway machine 140 that functions as a network controller by modifying packets (i.e., selecting an alternate destination node) for the purpose of performing dynamic redirection to

servers to maintain load balancing (col. 10, ll. 5-7). Because we find that Gbadegesin discloses all that is claimed, we will sustain the Examiner's rejection of representative claim 1 as being anticipated by Gbadegesin.

Pursuant to 37 C.F.R. § 41.37(c)(1)(vii), we have decided the appeal with respect to the claims 7-10, 15-17, 20, and 21 on the basis of the selected claim alone. Therefore, we will sustain the Examiner's rejection of these claims as being anticipated by Gbadegesin for the same reasons discussed *supra* with respect to representative claim 1.

Independent claim 22

We consider next the Examiner's rejection of independent claim 22 as being anticipated by Gbadegesin.

Appellants argue that Gbadegesin does not disclose transferring a database of alternate destinations for packet data to a network controller of a server (Br. 9-11).

The Examiner disagrees. The Examiner argues it is well known in the art that a Network Address Translator (NAT) includes a table that stores network addresses for mapping and translating packet addresses. The Examiner further asserts that a NAT is inherently known to contain a network address table for mapping and redirecting destinations. Thus, the Examiner reads the recited "database" on Gbadegesin's gNAT, as shown in figs. 8-11 (Answer 18-19).

We will reverse the Examiner's rejection of independent claim 22 for essentially the same reasons argued by Appellants. While we agree with the Examiner that Gbadegesin's gNAT *likely* references a network address table for the purpose of performing redirection, we note that our reviewing court

has found: "[i]nherency … may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1951 (Fed. Cir. 1999) (internal citations omitted). We further find the Examiner has failed to point to a specific disclosure in Gbadegesin where program instructions *transfer a database to the network controller*, as required by the language of claim 22. Thus, we find the Examiner has failed to establish a prima facie case of anticipation for independent claim 22.

Claim 23

We consider next the Examiner's rejection of dependent claim 23 as being unpatentable over the teachings of Gbadegesin in view of Bommareddy.

We note that we have reversed the Examiner's rejection of independent claim 22 as being anticipated by Gbadegesin *supra*. Because dependent claim 23 contains all the limitations of independent claim 22, we will also reverse the Examiner's rejection of claim 23.

Claims 2, 6, 14, and 19

We consider next the Examiner's rejection of dependent claims 2, 6, 14, and 19 as being unpatentable over the teachings of Gbadegesin in view of Bommareddy.

Appellants argue that the combination of Gbadegesin and Bommareddy does not disclose or suggest performing packet modification for connection forwarding within a network controller of a server as recited in independent Claims 1, 9, and 17 (Br. 11-12).

We note that we have found *supra* that Gbadegesin performs packet modification for connection forwarding within a network controller of a server, as claimed (*see* discussion of claim 1 *supra*). Therefore, we will sustain the Examiner's rejection of dependent claims 2, 6, 14, and 19 as being unpatentable over the teachings of Gbadegesin in view of Bommareddy for the same reasons discussed *supra* with respect to independent claim 1.

Claims 3-5, 11-13, and 18

Lastly, we consider the Examiner's rejection of dependent claims 3-5, 11-13, and 18 as being unpatentable over the teachings of Gbadegesin in view of Bommareddy.

Appellants essentially restate the argument that the cited prior art does not disclose transferring (or building) a database, as claimed (Br. 11-15).

The Examiner disagrees. The Examiner broadly corresponds the recited "database" to Gbadegesin's gNAT, as shown in figs. 8-11. The Examiner again argues it is well known in the art that a Network Address Translator (NAT) includes a table that stores network addresses for mapping and translating packet addresses. The Examiner further asserts that a NAT is inherently known to contain a network address table for mapping and redirecting destinations. In particular, we note that the Examiner fails to address the Bommareddy reference in response to Appellants' arguments (Answer 18-19), even though the Examiner relies on Bommareddy in the rejection. For example, the Examiner relies on Bommareddy for allegedly teaching program instructions for building within the network controller a

database of alternate destinations for packet data (co1.7, lines 40-42, co1.8, lines 37-45, col.15, lines 48-49) (Answer 9 and 13).

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). "[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability." *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Furthermore, "'there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness' . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 82 USPQ2d 1385, 1396 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)).

After carefully reviewing the multiple portions of Bommareddy cited by the Examiner in the rejection, we only find the teaching of a "back-end database server 816" interconnected to clustered servers 812 (fig. 8, col. 15, ll. 48-49). After reviewing the Examiner's rejections of claims 3-5, 11-13, and 18, we find the Examiner has failed to adequately set forth in the record exactly how Bommareddy's backend database server meets the limitations of the claims. We further find the Examiner's proffered motivation

involving Bommareddy's switches and routers has little or no nexus to Bommareddy's database server. Therefore, we agree with Appellants that the cited combination of Gbadegesin and Bommareddy does not fairly teach or suggest building a database within a server of alternate destinations for packet data (claims 3-5). We agree with Appellants that the cited combination of Gbadegesin and Bommareddy does not fairly teach or suggest building within a network controller a database of alternate destinations for packet data (claims 11 and 18). We further agree with Appellants that the cited combination of Gbadegesin and Bommareddy does not fairly teach or suggest transferring a database to a network controller (claims 12 and 13) (*see* discussion of claim 22 *supra*). Accordingly, we will reverse the Examiner's rejection of dependent claims 3-5, 11-13, and 18.

DECISION

We sustain the Examiner's rejection of claims 1, 2, 6-10, 14-17, and 19-21, but we reverse the Examiner's rejection of claims 3-5, 11-13, 18, 22, and 23. Therefore, the decision of the Examiner rejecting claims 1-23 is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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