

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte ERIC BOUILLET, DEBASIS MITRA, and
KAJAMALAI GOPALASWAMY RAMAKRISHNAN

Appeal No. 2004-2127
Application No. 09/441,693

ON BRIEF

Before McQUADE, KRATZ, and BARRY, *Administrative Patent Judges*.
BARRY, *Administrative Patent Judge*.

DECISION ON APPEAL

A patent examiner rejected claims 2 and 3. The appellants appeal therefrom under 35 U.S.C. § 134(a). We reverse.

BACKGROUND

The invention at issue on appeal concerns routing and billing in a packet-oriented network. A Service-Level Agreement ("SLA") between a provider of network services and a customer (i.e., a "subscriber") specifies a minimum quality of service for handling

his "calls."¹ For example, the SLA may specify the bandwidth that must be available to the customer. A Virtual Private Network is defined when the SLA specifies the bandwidth to be made available in each of a set of "streams"² identified with a customer. (Spec. at 1.)

In a packet-oriented network, incoming calls compete for the same network resources, e.g., the same bandwidth. Calls of different service classes, whether belonging to the same customer or to different customers, also contend for the same resources. In such an environment, the appellants opine that "it is difficult to consistently provide each customer with the service quality it demands in each class of service, while also profitably operating the network." (*Id.*)

Accordingly, the appellants' invention computes billing revenues where incremental revenues for a given stream depend on whether a network service provider is deemed "compliant" with an associated SLA. To be deemed compliant, the service

¹A "call" is a communicative transaction or subdivision thereof commonly referred to as a call, connection, or flow. (Spec. at 1.)

² A "stream" is a pair of nodes σ constituting a source and destination of calls in association with a particular class of service s . Service classes may include voice, data, e-mail, file transfers, web browsing, and video. (*Id.*)

provider "must carry at least a contracted fraction of offered load (i.e., of offered stream bandwidth) when the offered load lies within a contracted limit, but need only carry a specified load when the offered load exceeds the contracted limit." (*Id.* at 3.) A revenue penalty is exacted for bandwidth lost while the service provider is non-compliant. (*Id.*)

A further understanding of the invention can be achieved by reading the following claim.

2. A method for computing billing for at least one class of service provided by carrying offered bandwidth between source nodes and destination nodes of a communication network, each source-destination node pair σ in association with a service class s to be referred to as a stream (s, σ) , the method comprising:

(a) with respect to at least one stream (s, σ) , determining for each of two or more consecutive time windows whether the network is compliant or non-compliant;

(b) for each of said time windows, accruing a positive revenue increment for each unit of offered bandwidth that is carried; and

(c) for each of said time windows, accruing a negative revenue increment for each unit of offered bandwidth that is lost while the network is noncompliant, wherein:

(A) for measured values of the offered stream bandwidth that do not violate a contracted maximum limit, the network is compliant if a measured ratio of carried-to-offered stream bandwidth is at least a contracted value thereof, but otherwise the network is non-compliant; and

(B) for measured values of the offered stream bandwidth that violate the contracted maximum limit, the network is compliant if a

measured value of carried stream bandwidth is at least a contracted value thereof, but otherwise the network is non-compliant.

Claims 2 and 3 stand rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,719,854 ("Choudhury"); U.S. Patent No. 5,838,920 ("Rosborough"); and U.S. Patent No. 5,848,139 ("Grover").

OPINION

Rather than reiterate the positions of the examiner or the appellants *in toto*, we focus on the point of contention therebetween. Admitting that "Choudhury/Rosborough do not disclose loss of revenue due to packet loss," (Examiner's Answer at 4), the examiner notes that "Grover, however, does disclose calculating revenue optimization, and ' . . . lost revenue from traffic displacement should be accounted for wherein some degree of displacement would occur. . . .' (Column 10, lines 25-34)." (*Id.*) He then alleges, "[o]ne of ordinary skill in any transaction-related art would consider a refund, or a credit, or a reduction of debits due to non-receipt of goods or services one of the unwritten, and accordingly obvious, rules of the road." (*Id.* at 6.) The appellants argue that the claimed "negative revenue increment is not a refund. Instead, it is a penalty — essentially a fine paid out-of-pocket by the service provider to the customer." (Reply Br. at 2.) They further argue "that none of the cited references, either singly or in combination, teach or suggest those features of Applicants' claims 2 and 3 that relate to

conditionally decrementing a revenue figure for lost units of traffic, wherein the condition depends on network state." (Appeal Br. at 6.)

In addressing the point of contention, the Board conducts a two-step analysis. First, we construe the claims at issue to determine their scope. Second, we determine whether the construed claims would have been obvious.

1. CLAIM CONSTRUCTION

"Analysis begins with a key legal question — *what is the invention claimed?*" *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987). In answering the question, "[t]he Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art." *In re Lowry*, 32 F.3d 1579, 1582, 32 USPQ2d 1021, 1034 (Fed. Cir. 1994) (citing *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 403-04 (Fed. Cir. 1983)).

Here, claim 2 recites in pertinent part the following limitations: "determining for each of two or more consecutive time windows whether the network is compliant or non-compliant . . . and . . . for each of said time windows, accruing a negative revenue increment for each unit of offered bandwidth that is lost while the network is noncompliant. . . ." Claim 3 recites similar limitations. Considering these limitations,

claims 2 and 3 require determining, for each of at least two consecutive time windows, whether a network complies with an SLA and, for each of the windows, accruing a negative revenue increment for each unit of offered bandwidth lost while the network is non-compliant.

2. OBVIOUSNESS DETERMINATION

Having determined what subject matter is being claimed, the next inquiry is whether the subject matter would have been obvious. "In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness." *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993) (citing *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992)). "A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)).

Here, Grover "relates to control and pricing of telecommunication traffic." Col. 1, ll. 5-6. Generally, "idle time in the network is sold to subscribers willing to place delay-tolerant calls." (Appeal Br. at 5.) The passage of the reference quoted by the examiner

explains that "[i]n calculating revenue optimization, lost revenue from traffic displacement should be accounted for wherein some degree of displacement would occur from the foreground tariff-calling service to the background delay-tolerant service mode." Col. 10, ll. 24-28. We are unpersuaded that the lost revenue, however, results from bandwidth lost while a network is non-compliant with an SLA. Instead, we agree with the appellants that the lost revenue results from "the shifting of traffic load from foreground traffic (which is more expensive to the subscriber and thus generates more revenue for the network) to cheaper background traffic." (Appeal Br. at 5.) We further agree with them, moreover, that such a loss of revenue from displacement of traffic to the less expensive background service "neither teaches nor suggests any pricing structure containing a negative revenue increment." (*Id.*)

"With respect to core factual findings in a determination of patentability," *In re Zurko*, 258 F.3d 1379, 1386, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001), "deficiencies of the cited references cannot be remedied by . . . general conclusions about what is 'basic knowledge' or 'common sense' to one of ordinary skill in the art." *Id.* at 1285, 59 USPQ2d at 1697. Here, as aforementioned, the examiner alleges that "[o]ne of ordinary skill in any transaction-related art would consider a refund, or a credit, or a reduction of debits due to non-receipt of goods or services one of the unwritten, and accordingly obvious, rules of the road." (Examiner's Answer at 6.) Because such "rules

of the road" are admittedly unwritten, however, the examiner's conclusion of obviousness is not based on any evidence in the record but rather on what may be basic knowledge or common sense to one of ordinary skill in the art. Absent a teaching or suggestion of determining, for each of at least two consecutive time windows, whether a network complies with an SLA and, for each of the windows, accruing a negative revenue increment for each unit of offered bandwidth lost while the network is noncompliant, we are unpersuaded of a *prima facie* case of obviousness. Therefore, we reverse the obviousness rejection of claims 2 and 3.

CONCLUSION

In summary, the rejection of claims 2 and 3 under § 103(a) is reversed.

REVERSED

JOHN P. McQUADE
Administrative Patent Judge

PETER F. KRATZ
Administrative Patent Judge

LANCE LEONARD BARRY
Administrative Patent Judge

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