UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARCUS BRYAN GRANDE
and MICHEL KOUADIO

Appeal No. 2007-0789
Application No. 09/810,063
Technology Center 3600

Decided: September 27, 2007

Before HUBERT C. LORIN, LINDA E. HORNER, and ANTON W. FETTING, *Administrative Patent Judges*.

LORIN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The appeal is from a decision of the Examiner rejecting claims 1-4, 6, 8-11, 13, 15-18, 21, 23, and 24.[1] 35 U.S.C. § 134 (2002). We have jurisdiction under 35 U.S.C. § 6(b) (2002).

[1] Claims 5, 7, 12, 14, 19, 20, and 22 have been cancelled.

The invention is directed to a method and system "for providing network usage pricing based on a user's service demands … [and] a means to track and record a user's priority demand Internet service and bill the user accordingly." (Specification 1:14-18). Servers provide different types of content from simple textual information to real-time audio and video. (Specification 2:22 – 3:1).

> In order to accommodate user's needs, a differentiated services Internet is being developed to prioritize packets of information that need to be delivered to the user on a faster basis. Packets include a header portion that determines, among other things, the destination of the packet (i.e., a server or client computer address). In a differentiated services Internet, the packets further include prioritization information detailing whether the packet is a high or low priority packet. High priority packets, such as those containing real-time teleconferencing information, are handled differently than lower priority packets. As the packets travel through the Internet from one computer to another, they pass through other computers including specialized devices called routers. Routers and other points along the Internet can be programmed to treat high priority packets differently in such a way that those packets travel through the Internet faster than their lower priority counterparts.

(Specification 3:6-23). The invention is to "provide users with a way to switch between high and normal prioritized usage of the Internet coupled with an effective billing system to bill users for their high priority usage." (Specification 4:28 - 5:1).

The claims are rejected as follows:

- Claims 1-4, 6, 8-11, 13, 15-18, 21, 23, and 24 under 35 U.S.C. § 103(a) as being unpatentable over Odlyzko (US 6,295,294 B1) in view of Saari (US 6,338,046 B1).

We AFFIRM but denominate the rejection as a new ground of rejection under 37 C.F.R. § 41.50(b).

The Brief[2] separately argues the following groups of claims:

- Claims 1-3, 6, 8-10, 13, and 15-17 (Br. 6-18);
- Claims 4, 11, and 18 (Br. 11-12); and,
- Claims 21, 23, and 24 (Br. 12-13).

Claims 1-3, 6, 8-10, 13, and 15-17

Pursuant to the rules, the Board selects representative claim 1 to decide the appeal with respect to the rejection of this group of claims, and claims 2-3, 6, 8-10, 13, and 15-17 will stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(vii) (2006). Claim 1 reads as follows:

> 1. A computer-implemented method of providing priority network service, said method comprising:
>
> determining, by a network service provider, that a user computer system has requested priority network service;
>
> writing, by the network service provider, a high priority header to one or more packets originating from the user computer system, in response to the determining;
>
> sending the one or more packets with the high priority header from the user computer system to a second computer system connected to a computer network;

[2] Our decision will make reference to Appellants' Appeal Brief ("Br.," filed Mar. 9, 2006), the Examiner's Answer ("Answer," mailed Jun. 2, 2006) and to the Reply Brief ("Reply Br.," filed Jul. 22, 2006).

receiving, by the user computer system, a response packet from the second computer system, wherein the response packet includes the high priority header, in response to the sending; and

calculating, by a billing computer system associated with the network service provider, a usage amount, wherein the usage amount includes an amount of time that the user computer system uses the priority network service.

A. Issue

The issue is whether Appellants have shown that the Examiner erred in rejecting the claims over the prior art on the ground that neither Odlyzko nor Saari nor a combination of the two teaches or suggests all the limitations of Appellants' claimed method, namely the second thru fifth steps.

B. Facts

The record supports the following findings of fact (FF) by a preponderance of the evidence.

Claim construction

1. The claimed method comprises five steps.

2. The first step involves a network service provider determining that a user computer has requested priority network service.

3. According to the second step, once that determination is made, the network service provider writes a high priority header to a packet originating from the user computer.

4. According to the third step, the packet with the written high priority header is sent from the user computer to a second computer connected to a network.

5. According to the fourth step, in response to the third step, the user computer receives a response packet from the second computer with the written high priority header.

6. The fifth step involves a billing computer associated with the network service provider which calculates a usage amount that includes an amount of time the user computer uses the priority network.

Scope and content of the prior art

Odlyzko

7. Odlyzko is directed to a method for regulating "traffic over a packet switched network in a way that fairly prioritizes the traffic without unfairly penalizing low priority traffic … ." (Odlyzko, col. 2, ll. 50-53).

8. The Examiner found:

> As for Claim 1, Odlyzko discloses a method for providing priority network service, comprising:
>
> determining, by a network service provider, that a user computer system has requested priority network service (col. 6, lines 45-46; col. 7, lines 16-21; Figs. 1-3);
>
> writing, by the network service provider, a high priority header to one or more packets originating from the user computer system, in response to the determining (see Fig. 3 for the header and precedence (85); col. 6, lines 38-42);
>
> sending the one or more packets with the high priority header from the user computer system to a second computer system connected to a computer network (said packets, for which said high priority headers are written, are transmitted over the network between users' terminals; Fig. 1, items 10, 50, 52 and 54);
>
> receiving, by the user computer system, a response packet from the second computer system, wherein the response packet includes the high

priority header, in response to the sending (said packets, for which said high priority headers are written, are transmitted over the network between users' terminals; Fig. 1, items 10, 50, 52 and 54);

calculating a usage amount, wherein the usage amount includes a number of packets routed over the network (col. 3, lines 4-8).

(Answer 3-4).

9. Appellants argued that Odlyzko does not disclose the second step of the claimed method. (Appeal Br. 7 and Reply Br. 1-2).

10. The Examiner relied upon Fig. 3, element 85, and col. 6, ll. 38-42 of Odlyzko as evidence that Odlyzko discloses the second step. We reproduce this disclosure below:

FIG. 3

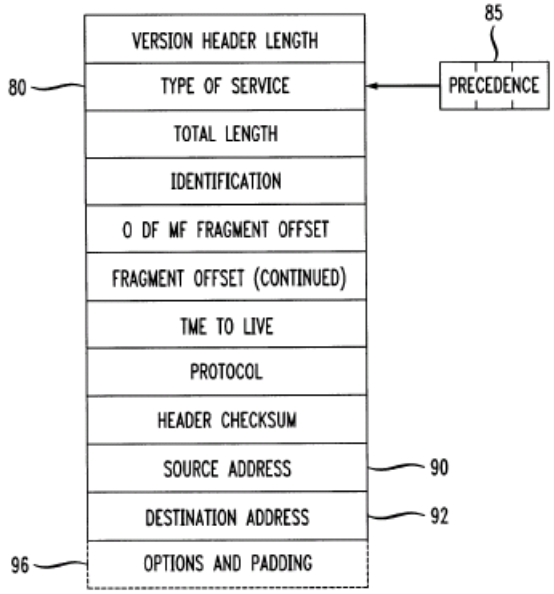

Fig. 3 of Odlyzko is a diagrammatic representation of an Internet Protocol data packet header. (See Odlyzko, col. 5, ll. 14-15.)

> A data packet is received by router 62' and transmitted across one of logical channels 71, 72, 73 or 74 in accordance with the channel selection. In an embodiment of the present invention, the channel selection may be indicated in the packet header as discussed below.

(Odlyzko, col. 6, ll. 38-42).

11. Appellants argued that "Odlyzko uses the three-bit precedence field to designate a particular logical channel. However, this three-bit field is not analogous to a 'high-priority header' as taught and claimed by Appellants. Odlyzko's three-bit precedence field is merely used to designate a particular channel, which may or may not be a high priority channel." (Appeal Br. 7).

12. Appellants further argued that "[t]he mere presence of a three-bit precedence field does not teach or suggest "writing, by the network service provider, a high priority header to one or more packets originating from the user computer system," in response to determining that a user computer system has requested priority network service … ." (Appeal Br. 7. See also Reply Br. 2).

13. In response to Appellants' argument regarding the second step, the Examiner further explained that "Odlyzko explicitly discloses said feature." (Answer 9).

> Specifically, Odlyzko teaches that upon receiving a preferential treatment (channel) request from a customer, a system designates/selects a channel for high priority traffic. Such channel selection is indicated in the packet header so that IP router will recognize the priority routing (preferential treatment). Fig. 3 in Odlyzko discloses an example of said packet header having information regarding type of service assigned to the data packet (Fig. 3; item 85; col. 6, lines 34-52).

(Answer 9).

14. The Examiner's further explanation relies further on col. 6, ll. 43-52, of

Odlyzko, which reads as follows:

> Referring to Fig. 3, an Internet Protocol Version 4 (IPV4) header format is illustrated. As shown, the IPV4 header includes a Type of Service 80 which is used to make type of service requests to IP routers. As shown, the Type of Service field includes a three bit Precedence field 85. The Precedence field is commonly unused and is therefore available for logical channel selection in the present invention. An IP router could evaluate the field in the same manner as other IP header fields are evaluated in order to determine which logical channel packet should be routed across.

15. Fig. 3 of Odlyzko shows a packet with a header comprising a field which can be used for indicating a type of service. According to the disclosure at col. 6, ll. 43-52 (see supra), three bit Precedence field 85 in the header is available for logical channel selection.

16. Odlyzko discloses that the user's type of service determines the channel selection and that users may select a high priority channel for high priority service.

> … [T]he user is presented with the option of selecting a channel from a plurality of channels over which to send packets. These channels are only logically separate and part of the same physical network. The primary difference between the channels is the price charged to the user. Traffic management is provided largely by the users through their selection of a channel over which their packets are sent and received. The channels with higher prices would attract less traffic and would thereby provide a higher quality of service. [Odlyzko, col. 2, l. 60 to col. 3, l. 2.]
>
> …
>
> … [A] user will select a logical channel for data communication in accordance with a subjectively perceived priority. For example, a user may select a low cost channel for regular electronic mail, unattended file transfers, etc., while selecting a higher cost channel for World Wide Web browsing or interactive network communications (e.g., chat). The user may select an even higher cost channel for urgent electronic mail or other higher priority traffic. [Odlyzko, col. 3, ll. 27-34.]

17. Odlyzko teaches that the "value of the Precedence field is advantageously set before the packet is transmitted, thereby providing predictable pricing … ." (Odlyzko, col. 6, ll. 60-62). Accordingly, Odlyzko teaches setting the Precedence field in the header to a channel (e.g., high priority channel) corresponding to user's type of service (e.g., high priority service) before transmitting the packet.

18. Odlyzko also discloses an embodiment whereby "channel selection is made by the user when the user establishes a connection with an Internet Service Provider. The user is presented with a range of usage rates associated with the logical channels and the user's network communications are communicated across the selected channel." (Odlyzko, col. 6, l. 65 – col. 7, l. 3).

19. Appellants dispute that the disclosure in Odlyzko that the Precedence field is advantageously set before the packet is transmitted (see FF 14 supra) suggests the second step of the claimed method.

> Odlyzko specifically states that "[t]he value of the Precedence field is advantageously set before the packet is transmitted, thereby providing predictable pricing and preventing ad-hoc arbitrage (i.e. selecting the channel at the router based on congestion metrics)" (Odlyzko, col. 6, lines 60-64). In other words, the Precedence field is used to "hard code" the channel on which a packet is transmitted. Regardless of network congestion, the packet in Odlyzko will always be transmitted via the channel that is coded into the Precedence field. This is in contrast to Appellants' invention, where a high priority header is written to a packet in order to ensure that the packet receives high priority treatment. The packet is treated as a high priority packet throughout its transmission and regardless of which channel or channels is used for transmission. It may very well be that a packet will get shifted from one channel to another, depending on network congestion, which is very different from Odlyzko, where a packet will remain "hard coded" to the same logical channel, regardless of network congestion.

(Reply Br. 2).

20. The claimed method does not limit the second step of writing a high priority header to a packet in order to ensure that the packet receives high priority treatment throughout its transmission and regardless of which channel or channels is used for transmission.

21. Appellants argued that Odlyzko does not disclose the third and fourth steps of the claimed method. (Appeal Br. 7-8).

22. The Examiner relied upon Fig. 1, elements 10, 50, 52 and 54, of Odlyzko as evidence that Odlyzko discloses the third and fourth steps. We reproduce this disclosure below:

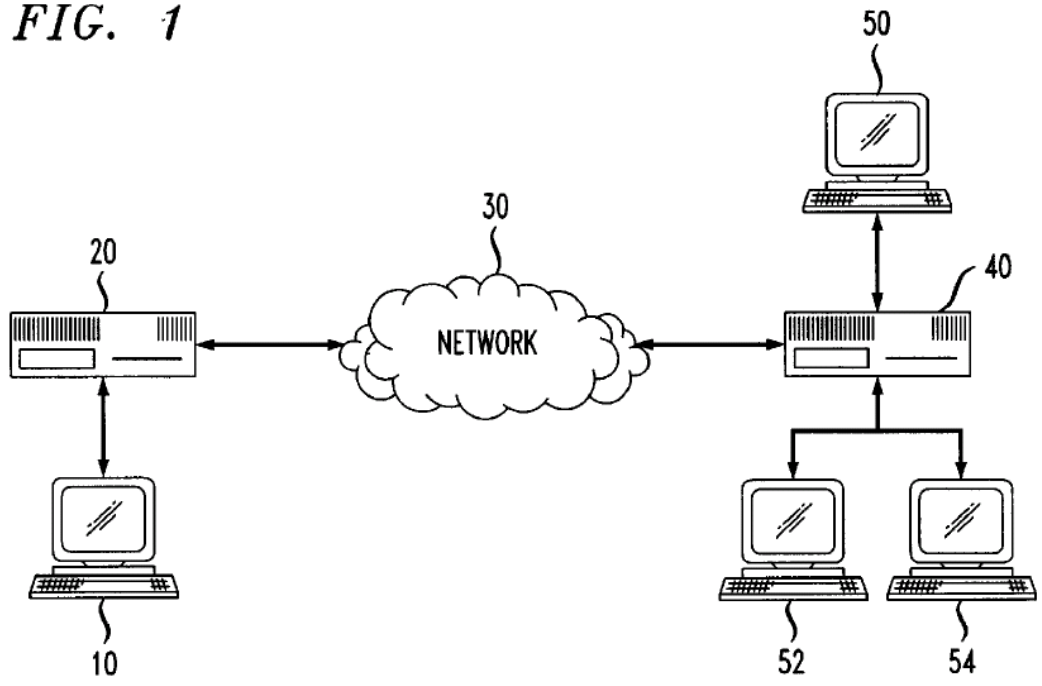

Fig. 1 of Odlyzko is a schematic diagram illustrating communications across a network. (See Odlyzko, col. 5, ll. 7-8).

23. Appellants argued that Odlyzko does not teach or suggest sending the packet with the high priority header to a second computer and the user computer receiving the packet with the high priority header in response to the sending.

> Because Odlyzko does not teach or suggest "high priority headers" as taught and claimed by Appellants, Appellants further submit that Odlyzko does not teach or suggest "sending the one or more packets with the high priority header from the user computer system to a second computer system connected to a computer network." Nor does Odlyzko teach or suggest "receiving, by the user computer system, a response packet from the second computer system, wherein the response packet includes the high priority header, in response to the sending." As discussed above, Odlyzko does discuss source and destination addresses in col. 6, line 65 through col. 7, line 7. However, this section of Odlyzko does not teach or suggest sending a packet with a high priority header to a second (i.e. destination) computer system, and then, in response to this sending, receiving a response packet, also with the high priority header, back at the user (i.e. sending) computer system. In Figure 1, Odlyzko also shows computers connected via a network. However, Odlyzko is not concerned with the sending of packets and the response packets that are sent back in response to the sending. Rather, Odlyzko is concerned with the various factors that are considered when determining which logical channel to select when sending packets. Although Odlyzko allows logical channels to be selected based on source and destination addresses, Odlyzko does not teach or suggest determining that a user computer system has requested priority network service, sending one or more packets with a high priority header in response to making this determination, and then, in response to this sending, receiving a response packet back from the second computer system that also includes the high priority header, as taught and claimed by Appellants.

(Appeal Br. 7-8).

24. Col. 6, l. 65 – col. 7, l. 7 of Odlyzko, to which Appellants refer, states:

> In an embodiment of the present invention, channel selection is made by the user when the user establishes a connection with an Internet Service Provider. The user is presented with a range of usage rates associated with the logical channels and the user's network communications are communicated across the selected channel. In this embodiment, the channel selection could be made on the basis of the user's address, using the source address field 90 for transmitted packets and the destination address field 92 for received packets. [See Fig. 3 for a reproduction of the header in FF 10, supra.]

25. In response to Appellants' argument regarding the third and fourth steps, the Examiner further "point[ed] out that Odlyzko teaches a plurality (a first, a second, a third …) of user's terminals connected to said network, between which said packets, including high priority headers, are transmitted (Fig. 1 items 10, 50, 52, and 54)." (Answer 10).

26. Odlyzko also teaches at col. 8, ll. 15-18 (i.e., Odlyzko claim 1): "… receiving packet data and an identifier of a logical channel from one of the plurality of network users; routing each packet across the respective identified logical channel … ."

27. Furthermore, Odlyzko teaches that "the user could specify a higher cost channel for FTP (File Transfer Protocol) data communications … ." (Odlyzko, col. 5, ll. 44-47). It is well known in the art that FTP is a protocol that, as with most communication protocols, includes a reply to acknowledge good or bad reception. See e.g., http://www.w3.org/Protocols/rfc959/8_PortNumber.html :

> 2.2. TERMINOLOGY
> …
> reply

> A reply is an acknowledgment (positive or negative) sent from server to user via the control connection in response to FTP commands. The general form of a reply is a completion code (including error codes) followed by a text string. The codes are for use by programs and the text is usually intended for human users.

28. Appellants argued that Odlyzko does not disclose the fifth step of the claimed method. (Appeal Br. 8 and Reply Br. 2-3).

29. The Examiner relied on col. 3, lines 4-8, of Odlyzko as evidence that Odlyzko discloses "means for calculating a usage amount, wherein the usage amount includes a number of packets routed over the network." (Answer 5). That passage from Odlyzko reads:

> The present invention is advantageously flexible in that either the sender or the receiver of information may be charged for transmission of a packet in a usage-sensitive priced packet switched network. Advantageously, charges may be incurred on the basis of packets sent or packets received.
>
> *Id.*

30. Odlyzko teaches a "usage-sensitive priced packet switched network" (FF 29) and thus shows as the Examiner indicated (FF 29) a "means for calculating a usage amount, wherein the usage amount includes a number of packets routed over the network."

31. Appellants argue that "while Odlyzko does discuss keeping track of costs on a per packet or per byte basis, the preferred method discussed by Odlyzko is to use "statistical sampling," rather than "rigorous traffic monitoring and accounting"

(col. 4, lines 45-67)." (Appeal Br. 8).

32. Col. 4, ll. 45-67, of Odlyzko reads:

> In order to ascertain incurred costs, it is also necessary to monitor the traffic across the data path and maintain appropriate records regarding communicated data. The specific monitoring would of course depend on the specific form of cost accounting implemented. In one embodiment of the present invention, costs could be incurred on a per packet basis. In an alternative embodiment of the present invention, costs incurred (and therefore measured) as discrete data elements are communicated, as in a per byte basis. In another alternative embodiment of the present invention, costs could be incurred by a combination of packets and discrete data elements, such as in a combination of a per-packet and per-byte bases. The data elements may be measured at the input or the output of the partitioned data path or, alternatively, at the edge of a data network including a mixture of partitioned and non-partitioned data paths. Advantageously, it is not necessary to perform detailed accounting in the core of the network, where switching and transmission speeds are of overriding importance. Moreover, statistical sampling is likely to provide an adequate level of detail for purposes of the present invention, allowing implementation without rigorous traffic monitoring and accounting.

33. According to Appellants, notwithstanding that Odlyzko teaches as known a "usage-sensitive priced packet switched network," because Odlyzko suggests in the passage at col. 4, ll. 45-67 to use statistical sampling rather than monitoring traffic "Odlyzko discourages, and even teaches away from, Appellants' calculating of a usage amount which includes the amount of time that the user computer system uses the priority network service." (Appeal Br. 8. See also Reply Br. 2-3).

Saari

34. Saari discloses a method and system for determining charges for usage of a

network connection.

35. The Examiner found that "Saari et al. teach a method for determining charges for usage of a network connection, wherein said usage is calculated based on connection time (col. 2, lines 17-20)." (Answer 4).

36. Col. 2, ll. 14-19, of Saari reads as follows:

> The node computes the cost of using the connection based on the billing and connection information copied from the billing cell. The connection usage computation may also take into account other factors, such as the connection time and the amount of data transferred over the connection.

37. Appellants argued that "[t]his section [i.e., col. 2, ll. 14-19] of Saari discloses calculating the cost of using a particular node by using information copied from a billing cell … . Although the cost for using the particular node may take into account the connection time for that particular node, this is not the same as calculating a usage amount that includes 'an amount of time that *the user computer system uses the priority network service*,' as taught and claimed by Appellants." (Appeal Br. 10). Appellants argued that Saari teaches away from the claimed system because Saari is directed to using a billing cell, which includes billing information used by the node to produce billing information, separate from a data cell containing the information that is transmitted over the connection and is thus different from the high priority header instantly claimed. (Appeal Br. 9-11 and Reply Br. 3).

38. Claim 1 places no limitation on the how the usage amount is to be calculated.

Differences between the Prior Art and the Claimed Invention

39. The Examiner found that Odlyzko discloses all the steps of the claimed method but "does not specifically teach that said calculated usage amount includes an amount of time that the user computer system uses the service." (Answer 5). The Examiner relies on Saari to show that determining charges for usage of a network connection calculated on the basis of connection time was known in the art. Accordingly, the Examiner takes the position that each limitation of the claim is disclosed in one of the cited references.

40. The difference between the prior art and the claimed invention is that the claim combines subject matter which is separately disclosed in the references.

The level of ordinary skill in the pertinent art.

41. Neither the Examiner nor Appellants has addressed the level of ordinary skill in the pertinent art of using optimization models to customize commercial operations. We will consider Odlyzko and Saari as representative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355, 59 USPQ2d 1795, 1797 (Fed. Cir. 2001) ("[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error 'where the prior art itself reflects an appropriate level and a need for testimony is not shown'").

Objective evidence of nonobviousness

42. Appellants presented no evidence of secondary considerations of non-

obviousness for our consideration.

Reasoning in support the legal conclusion of obviousness

43. In reaching a conclusion of obviousness, the Examiner made the following statement:

> It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the charging/accounting structure of Odlyzko to include calculating said usage based on connection time, as taught by Saari et al., because it would advantageously allow to implement a flexible and effective charging capability that accounts for the particular use of a network service connections and other resources by users of the network (Saari et al., col. 1, lines 62-67).

(Answer 4).

44. Appellants argued that "[n]either Odlyzko nor Saari nor a combination of the two teaches or suggests Appellants' independent claims." (Appeal Br. 11 and Reply Br. 3).

C. Principles of Law

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level

of ordinary skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). *See also KSR*, 127 S.Ct. at 1734, 82 USPQ2d at 1391 ("While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.") The Court in *Graham* further noted that evidence of secondary considerations "might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." 383 U.S. at 17-18, 148 USPQ at 467.

D. Analysis

We have carefully reviewed the record and find that Appellants have not persuasively argued that the Examiner erred in rejecting the claims over Odlyzko and Saari.

Appellants argue that neither Odlyzko nor Saari nor a combination of the two teaches or suggests all the limitation of Appellants' claimed method, namely the second thru fifth steps.

Appellants argue that Odlyzko does not disclose the second step because it does not teach (a) a high priority header (FF 11) and (b) writing the high priority header to one or more packets originating from the user computer system in response to determining that a user computer system has requested priority network service (FF 12 and 19).

We disagree that Odlyzko does not teach a high priority header. Odlyzko teaches a header (FF 10) which can be designated so as to indicate that the associated packet is intended for high priority service. The result of making an

indication in the header of the packet that the packet is intended for high priority service necessarily renders that header a high priority header. Appellants have argued that the three-bit Precedence field of the header that Odlyzko uses for indicating a channel preference is not analogous to the claimed high priority header. (FF 12). But Odlyzko discloses that, when a computer user selects a channel for high priority service, Odlyzko uses that three-bit Precedence field of the header to provide the indication that the packet associated with the header is for high priority service. (FF 13). The header is thus transformed into a high priority header. Furthermore, the claim does not preclude the header from being designated a high priority header through the use of a three-bit Precedence field in the header. The claim does not limit the choice of fields in the header that may provide the high priority indication.

Regarding whether Odlyzko teaches writing the high priority header to one or more packets originating from the user computer system in response to determining that a user computer system has requested priority network service, we find that this would have been obvious to one of ordinary skill in the art reading Odlyzko. Odlyzko teaches that the Precedence field is advantageously set before the packet is transmitted. (FF 17 and 19). To one of ordinary skill in the art, this suggests a provider making a high priority service indication in the header of the packet prior to transmitting the packet to the user computer. Odlyzko also teaches that a user is presented with an option to use a high priority channel which, once selected, provides that user with high priority service. (FF 16). To one of ordinary skill in the art, this suggests a user computer requesting high priority service and

the provider providing that user with the requested-for high priority service. Reading both of these disclosures, one of ordinary skill in the art would foresee only two options: the provider writing the high priority header *before* the user selects high priority service or *after* the high priority selection is made. To one of ordinary skill in the art, both options lead to the same predictable result, a high priority header is associated with the packet being transmitted to the user. Thus there is a reasonable expectation of success, irrespective of which option is taken, of solving the problem of packet traffic congestion in designating as high priority those packets selected for high priority service. Given this, it would have been obvious to one with ordinary skill in the art to choose to write the high priority header to the packet originating from the user computer system *after* determining that a user computer has requested high priority network service and before the high priority service packet is sent to the user computer.

> When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.

KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1742, 82 USPQ2d 1385, 1397 (2007).

We also observe that much of Appellants' argument with respect to whether Odlyzko teaches or suggests the second step of the claimed method deals with the fact that Odlyzko is concerned with channel selection. However, there is nothing in the claim that limits the step of writing a high priority heading so as to exclude using that indication as a means for selecting a high priority channel. (FF 20).

Appellants further argue that Odlyzko does not disclose the third and fourth steps. (FF 21). Specifically, Appellants have argued that Odlyzko does not teach or suggest sending the packet with the high priority header to a second computer and the user computer receiving the packet with the high priority header in response to the sending. As discussed earlier, Odlyzko discloses transmitting a packet with a high priority header. Odlyzko also discloses, as Appellants conceded (FF 23), sending a packet by way of a selected high priority service according to the source or destination address indicated in the header of the associated packet. (FF 24). This disclosure, too, suggests transmitting a packet with a high priority header because by giving the packet high priority service according to an address indicated in the header, Odlyzko necessarily sends the packet with a "high priority header." Regarding sending a packet with the high priority header to a second computer, we agree with the Examiner that Odlyzko shows this. (See FF 22 and 26). Packets selected for high priority service (and thus having a high priority header) are sent between the user's computer and various other computers on the network. Regarding the user computer receiving a response packet with the high priority header from the second computer in response to sending the packet with the high priority header to the second computer, we note that Odlyzko teaches the use of FTP as a high priority service. (FF 27). It is well known in the art that FTP is a protocol that, as with most communication protocols, includes a reply to acknowledge good or bad reception. (FF 27). Since the use of FTP is considered by Odlyzko to represent a high priority service, one of ordinary skill in the art would expect the reply to include a header consistent with that service, i.e., a high priority

service. Accordingly, given that Odlyzko discloses other computers communicating with users' computers as well as FTP as a high priority service for users' computers, Odlyzko suggests the claimed limitation of a user computer receiving a response packet with the high priority header from the second computer in response to sending the packet with the high priority header to the second computer.

Lastly, Appellants argue that Odlyzko does not disclose the fifth step of the claimed method. (FF 28). The fifth step simply describes calculating a usage amount according to the amount of time the user uses the high priority service. (FF 6 and 8). There is no dispute that Odlyzko teaches this. (FF 30 and 31). Appellants argue that Odlyzko teaches away from making that type of calculation of usage amount because it prefers to do statistical sampling. (FF 33). This is not a persuasive argument because a reference does not teach away from a conclusion of obviousness simply because it shows the claimed alternative to be inferior.[3] Here Appellants agree that Odlyzko in fact teaches the alternative claimed. Given that

[3] *Cf. In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994):

> Gurley's position appears to be that a reference that "teaches away" can not serve to create a *prima facie* case of obviousness. We agree that this is a useful general rule. However, such a rule can not be adopted in the abstract, for it may not be applicable in all factual circumstances. Although a reference that teaches away is a significant factor to be considered in determining unobviousness, the nature of the teaching is highly relevant, and must be weighed in substance. A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use.

Odlyzko teaches the fifth step of the claimed method, Saari need not be addressed since it, too, shows calculating a usage amount according to the amount of time a user uses a service was known in the art. (FF 36). Nevertheless, Appellants' argument that Saari uses a specific billing technique not contemplated by Appellants is not commensurate in scope with what is claimed. (FF 37 and 38).

Accordingly, we affirm the rejection of claim 1 over the cited references. However, our reasoning in concluding that the claimed method would have been obvious to one of ordinary skill in the art departs from that of the Examiner, especially in our reasoning leading to the conclusions that the second step of the claimed method would have been obvious to one of ordinary skill in the art over Odlyzko and that Odlyzko would have suggested, to one of ordinary skill in the art, the third and fourth steps claimed. Accordingly, though we affirm the rejection, we denominate the rejection as a new ground under 37 C.F.R. § 41.50(b).

E. Conclusion of Law

On the record before us, Appellants have failed to show that the Examiner erred in rejecting the claims over the prior art.

Claims 4, 11, and 18

Pursuant to the rules, the Board selects representative claim 4 to decide the appeal with respect to the rejection of this group of claims, and claims 11 and 18 will stand or fall with claim 4. 37 C.F.R. § 41.37(c)(1)(vii) (2006). Claim 4 reads as follows:

> 4. The computer-implemented method as described in claim 1 further comprising:
>
> receiving, by the network service provider, a request message from the user computer system, wherein the request message requests that the priority network service be discontinued; and
>
> writing, by the network service provider, a normal priority header to one or more packets originating from the user computer system, in response to receiving the request message.

A. Issue

The issue is whether Appellants have shown that the Examiner erred in rejecting the claims over the prior art on the ground that Odlyzko fails to teach or suggest all the limitations of claim 4.

B. Facts

The record supports the following findings of fact (FF) by a preponderance of the evidence.

1. We incorporate herein the findings of facts from the Facts section for claims 1-3, 6, 8-10, 13, and 15-17 above.

2. The Examiner found that:

> As for Claim 4, the modified method of Odlyzko further discloses the method including: receiving a request message from the user computer system, wherein the request message requests that the priority network service be stopped; and writing a normal priority header to one or more packets originating from the user computer system (see Fig. 3 for the precedence and type of service; when the users requests the lower priority service (from the menu), the precedence field MUST be designated with the different bits, col. 6, line 65 – col. 7, line 24 of Odlyzko).

(Answer 7).

3. Appellants argued that claim 4 specifically claims a user computer system requesting the priority network service be discontinued. Appellants argued that Fig. 3 and the passage the Examiner cited (i.e., col. 6, l. 65 – col. 7, l. 65, see supra) shows allowing a user to make an initial channel selection when first establishing a connection with an Internet Service Provider and that this is not the same as requesting that the service be discontinued. (Appeal Br. 11. See also Reply Br. 4).

4. Appellants also repeated the argument made with respect to the first step of claim 1, arguing that, similarly, Odlyzko does not teach or suggest writing a normal priority header in response to receiving a request to discontinue priority network service. (Appeal Br. 12).

5. Odlyzko discloses the capability of users to switch channels depending on the level of quality service desired for the cost and congestion level.

> Dividing the network into logical channels having graded costs will regulate traffic and limit congestion because users who perceive that the quality of service on a lower cost channel has degraded to an unacceptable level will, if they have the available resources, switch to a higher cost channel which, because of its higher cost, will have less traffic and hence less congestion. As each channel becomes unacceptably congested, the user will switch to progressively higher cost channels until the user achieves a subjectively acceptable balance of cost and perceived quality of services. Periods of congestion would lead to some users finding that they could not obtain an acceptable level of service at price they could afford. In that case, they would likely postpone or cancel the data transmission, lessening congestion.

(Odlyzko, col. 3, ll. 9-26).

6. Odlyzko discloses an embodiment whereby a default logical channel is

specified.

> In an alternative embodiment of the present invention, the user is not restricted to a single logical channel for all communications. Instead, each application communicating over the network is capable of specifying a logical channel. In this embodiment, the operating system or the network connection would have to select a default logical channel for applications that are not capable of selecting a logical channel or which the user has not configured for logical channel selection.

(Odlyzko, col. 7, ll. 8-16).

7. Service requests are often sent to Internet Service Providers.

8. Claim 4 does not define the term "normal" in the phrase "a normal priority header." The Specification provides no definition for the term. "Normal" is therefore given the plain meaning; i.e., the usual state (see *Webster's New World Dictionary* 925 (3rd Ed., 1988)(definition 2. for **normal**).

C. Principles of Law

We incorporate herein the Principles of Law set forth in the Principles of Law section for claims 1-3, 6, 8-10, 13, and 15-17 above.

D. Analysis

Odlyzko discloses the capability to switch channels depending on the level of quality service desired for the cost as well as the congestion level. (FF 5). One of ordinary skill in the art reading this disclosure would understand that Odlyzko encompasses switching from a channel for high priority service to another level of

service. In view of the fact that service requests are often sent to Internet Service Providers (FF 7), it would have been obvious over Odlyzko to send a request to an Internet Service provider to discontinue high priority channel in favor of another level of service.

Odlyzko discloses setting a default logic channel. (FF 6). The default logic channel represents the usual state or "normal" level of service. One of ordinary skill in the art would foresee a user who discontinues high priority service receiving thereafter the default or normal level of service. Given that Odlyzko discloses that the header may be used to identify the channel corresponding to the service desired, Odlyzko suggests writing a "normal" header to identify setting the "normal" default logic channel – as opposed to a high priority header to identify high priority service. Accordingly, it would have been obvious to one of ordinary skill in the art reading Odlyzko for the provider to write a "normal" priority header to a packet originating from a user computer in response to receiving a request message that priority network service be discontinued and providing, in its place, the expected default or "normal" service.

Accordingly, we affirm the rejection of claim 4 over the cited references. However, our reasoning in concluding that the claimed method would have been obvious to one of ordinary skill in the art departs from that of the Examiner. Accordingly, though we affirm the rejection of claim 4, we denominate the rejection as a new ground under 37 C.F.R. §41.50(b).

E. Conclusion of Law

On the record before us, Appellants have failed to show that the Examiner erred in rejecting the claims over the prior art.

Claim 21, 23, and 24

Pursuant to the rules, the Board selects representative claim 21 to decide the appeal with respect to the rejection of this group of claims, and claims 23 and 24 will stand or fall with claim 21. 37 C.F.R. § 41.37(c)(1)(vii) (2006). Claim 21 reads as follows:

> 21. The computer-implemented method as described in claim 4 wherein the amount of time the user computer system uses the priority network service is an elapsed time between the determining, by the network service provider, that the user computer system has requested priority network service and the receiving, by the network service provider, the request message from the user computer system requesting that priority network service be discontinued.

A. Issue

The issue is whether Appellants have shown that the Examiner erred in rejecting the claims over the prior art.

B. Facts

The record supports the following findings of fact (FF) by a preponderance of the evidence.

1. We incorporate herein the findings of facts from the Facts sections for claims 1-4, 6, 8-11, 13, and 15-18 above.

2. The Examiner found that

> Odlyzko in view of Saari et al. does not explicitly teach that [the] amount of time spent is an *elapsed time* between the determining that the user computer system has requested priority network service and receiving the request message from the user system requesting that priority network service be stopped. However, it is old and well known to *create a starting/ending time stamps* for measuring time of usage of accessing the network resources. [(]See, for example, Peterson et al. US 6,349,289; col. 3, line 58 – col. 4, line 3.)

(Answer 8-9).

3. Appellants argued that the evidence the Examiner provided to show it is old and well known to create a starting/ending time stamps for measuring time of usage of accessing the network resources, i.e., Peterson, shows

> keep[ing] track of the amount of time that a particular user is connected, via telephone, to a host computer … [but] does not teach or suggest calculating a usage amount, which includes an amount of time that the user computer system uses the priority network service, "wherein the amount of time the user computer system uses the priority network service is an elapsed time between the determining, by the network service provider, that the user computer system has requested priority network service and the receiving, by the network service provider, the request message from the user computer system requesting that priority network service be discontinued" as taught and claimed by Appellants.

(Appeal Br. 12-13 and Reply Br. 4-5).

4. Internet Service Providers often receive requests to discontinue service.

5. Internet Service Providers often charge online customers for the elapsed time spent online, between the time the Provider receives a request to initiate online service and receiving a request to discontinue online service.

C. Principles of Law

We incorporate herein the Principles of Law set forth in the Principles of Law sections for claims 1-4, 6, 8-11, 13, and 15-18 above.

D. Analysis

It is old and well known for an Internet Service Provider to charge online customers for the elapsed time spent online, between the time the Provider receives a request to initiate online service and receiving a request to discontinue online service. The difference here is that claim 21 applies this well known business practice to an online service that provides priority network service. Priority network service is well known in the field on online services (see Odlyzko). It would have been obvious to one of ordinary skill in the art to apply the same practice of charging customers for regular online service to charge customers for using a priority network service, i.e., on the basis of the elapsed time spent using the high priority service, between the time the Provider receives a request to initiate the service and receiving a request to discontinue that service.

We are not persuaded by Appellants' argument that one of ordinary skill would *not* look to keeping track of the amount of time that a particular user is connected to a host computer (irrespective of how the user is connected to the computer) as a way of charging customers who use a priority network service. Common sense dictates precisely the opposite; that a person of ordinary skill seeking a way to charge customers who use a priority network service *would* consider a method used to charge customers for online usage. "A person of

ordinary skill is also a person of ordinary creativity, not an automaton." *KSR*, 127 S.Ct. at 1742, 82 USPQ2d at 1397.

Accordingly, we affirm the rejection as to claim 21 over the cited references. Though we affirm this rejection of claim 21 for essentially the same reasons the Examiner has given, since it depends on claim 4, and our reasoning in concluding that the claimed method as described in claim 4 would have been obvious to one of ordinary skill in the art departs from that of the Examiner, we also denominate the rejection of claim 21 as a new ground under 37 C.F.R. § 41.50(b).

E. Conclusion of Law

On the record before us, Appellants have failed to show that the Examiner erred in rejecting the claims over the prior art.

DECISION

The decision of the Examiner rejecting claims 1-4, 6, 8-11, 13, 15-18, 21, 23, and 24 under 35 U.S.C. § 103(a) as being unpatentable over Odlyzko in view of Saari is affirmed but denominated as new grounds of rejection under 37 C.F.R. § 41.50(b).

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)). 37 C.F.R. § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 CFR § 41.50(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

- (1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner . . . .
- (2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record . . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2006).

AFFIRMED; 37 C.F.R. § 41.50(b)

hh

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