

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES R. MCBREEN and LANCE A. BALUT

Appeal 2007-3028
Application 09/570,872¹
Technology Center 2600

Decided: June 10, 2008

Before KENNETH W. HAIRSTON, JOHN A. JEFFERY,
and MARC S. HOFF, *Administrative Patent Judges*.

HOFF, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134 from a Final Rejection of claims 1-25. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

¹ Application filed May 15, 2000. The real party in interest is Unisys Corporation.

Appellants' invention relates to a video on demand (VOD) system that separates the tasks of supplying video to subscribers from the tasks associated with managing the subscriber interface. One hardware and software subsystem (the video server) is dedicated to retrieving and transmitting streams of video information. A second hardware and software subsystem (the transaction server) handles virtually all other functions, including interface with subscribers, digitized video data storage, and subscriber accounting (Spec. 8).

Claims 1 and 16 are exemplary:

1. In a video on demand system for supplying video data to a set top subscriber box, the improvement comprising:
 - a. A multimedia application server having a first hardware and software architecture optimized to provide a low cost approach to a wide and highly expandable variety of functions;
 - b. A temporary memory into which said multimedia application server spools selected video programming data;
 - c. A plurality of video processors each having a second hardware and software architecture optimized to handle high input/output rates which is different from said first hardware architecture responsively coupled to said temporary memory wherein one of said plurality of video processors is assigned by said multimedia application server to stream said selected video programming data to said set top subscriber box; and
 - d. A message for communicating from said set top subscriber box to said multimedia application server.

16. A method of communicating between a set top subscriber box and a multimedia application server comprising:

- a. Defining the length of a message;
- b. Embedding the defined length into the message;
- c. Defining a sequence number to uniquely identify said message within a series of messages;
- d. Embedding the sequence number into the message; and
- e. Transferring the message from said set top subscriber box to said multimedia application server.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Safadi	US 5,847,751	Dec. 8, 1998
LaJoie	US 5,850,218	Dec. 15, 1998
Kenner	US 5,956,716	Sep. 21, 1999
Wang	US 6,212,657 B1	Apr. 3, 2001
Boyer	US 2003/0066085 A1	Apr. 3, 2003

Microsoft Press Computer Dictionary, Microsoft Press (3d ed. 1997), pp. 431, 511, 512.

SearchNetworking.com, available at <http://searchnetworking.techtarget.com>, Sep. 2001, pp. 1-2.

Andrew S. Tanenbaum, *Computer Networks*, Prentice Hall (3d ed. Apr. 1999), pp. 413-416, 526-529.

Claim 11 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Wang.

Claims 16-20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by LaJoie.

Claims 1-10, 12-15, and 21-25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang.

Appellants argue, *inter alia*, that Wang and LaJoie fail to teach all the elements of the claims alleged to be anticipated; that the Examiner's use of the Tanenbaum reference amounts to a new ground of rejection; and that it would not have been obvious to replace Wang's client (101) with the set top subscriber box claimed, due to said set top subscriber box's alleged lack of programmability (Br. 16, 23, 29).

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the Appeal Brief (filed November 27, 2006) and the Examiner's Answer (mailed January 18, 2007) for their respective details.

ISSUE

There are three principal issues in the appeal before us.

The first issue is whether the Examiner erred in holding that Wang's client 101 constitutes an equivalent to the "communicating means" recited in claim 11.

The second issue is whether the Examiner erred in citing Tanenbaum to show details of the known TCP/IP protocol that were omitted from LaJoie and Wang.

The third issue is whether the Examiner erred in holding that it would have been obvious to modify Wang to include a known set top subscriber box such as that recited.

FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

The Invention

1. According to Appellants, they have invented a video on demand (VOD) system that separates the tasks of supplying video to subscribers from the tasks associated with managing the subscriber interface. One hardware and software subsystem (the video server) is dedicated to retrieving and transmitting streams of video information. A second hardware and software subsystem (the transaction server) handles virtually all other functions, including interface with subscribers, digitized video data storage, and subscriber accounting (Spec. 8).

2. Appellants' Specification discloses that the "transaction server may be utilized [i.e., by the set top subscriber box 32] to interface with the Internet" (Spec. 24:9). Appellants' Specification further discloses that the set top subscriber box parses message fields as well as function code (Spec. 28-29).

Wang

3. Wang teaches a modular and expandable video server system that uses conventional low cost components to deliver multiple video streams in real time (col. 3, ll. 13-15).

4. Wang discloses a streaming type of video server, where delivery module (DM) 120 streams data from storing means to the client for display (col. 8, ll. 43-44, 50-60). Each DM has twelve "video processors" (in Wang's terminology) (col. 8, ll. 13-19).

5. Wang's central control module (CCM 110) comprises a Sun SOLARIS multi-threading operating system (Wang col. 6, ll. 42-52; col. 6, l. 66 – col. 7, l. 14).

6. The path of data transmission from storage module 130 to delivery module 120 is different from the path of control and command requests between client 101 and central control module 110 (Wang, Fig. 1A and col. 6, ll. 8-11).

7. Wang teaches means for processing subscriber transactions (col. 8, ll. 20-30).

LaJoie

8. LaJoie teaches a full service television system capable of delivering services such as World Wide Web browsing, Internet E-Mail, and online services (col. 2, ll. 8-11). The service provider of the full service television system (i.e. the head-end) provides these services to the subscriber (col. 2, ll. 29-40).

Tanenbaum

9. Tanenbaum, as cited by the Examiner, teaches details of the network layer in the Internet and the transport layer, specifically the IP Protocol (section 5.5.1) and the TCP Segment Header (section 6.4.3) (Tanenbaum 413-416, 526-529).

10. Tanenbaum teaches the 'TCP Header Length' field, which "tells how many 32-bit words are contained in the TCP header" (Tanenbaum 526). This 'defined length' of a message is embedded into a message by being part of a TCP segment header (Tanenbaum 526; Fig. 6-24).

11. Tanenbaum teaches function codes (e.g., flags RST, FIN, PSH) (Tanenbaum 527).

12. Tanenbaum teaches an identification field that allows the receiver of a message to determine which datagram a packet belongs to (Tanenbaum 414).

13. Tanenbaum teaches an IP datagram comprising a source address field and a destination address field (Tanenbaum 415).

14. Tanenbaum teaches a protocol version number embedded into the version field of an IP datagram (Tanenbaum 413).

15. Tanenbaum teaches an “Acknowledgement number” within the TCP Segment Header (Tanenbaum 526). The acknowledgement number “specifies the next byte expected, not the last byte correctly received” (*Id.*).

PRINCIPLES OF LAW

Anticipation is established when a single prior art reference discloses expressly or under the principles of inherency each and every limitation of the claimed invention. *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1347 (Fed. Cir. 1999); *In re Paulsen*, 30 F.3d 1475, 1478-79 (Fed. Cir. 1994).

“To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” *Cont’l Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991) “This modest flexibility in the rule that ‘anticipation’ requires that every element of the claims appear in a single reference accommodates situations in which the common knowledge of technologists is not recorded

in the reference; that is, where technological facts are known to those in the field of the invention, albeit not known to judges.” *Cont’l Can*, 948 F.2d at 1268.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a prima facie case of obviousness. *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR Int’l. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the Appellants. *Piasecki*, 745 F.2d at 1472. Thus, the Examiner must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the Examiner’s conclusion.

“[W]hen a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR Int’l v. Teleflex Inc.*, 127 S. Ct. at 1740 (quoting *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282 (1976)).

ANALYSIS

Claim 11

Appellants argue that client 101 of Wang is not equivalent to Appellants’ claimed communicating means (Br. 16); that video processors 121 of Wang do not correspond to the claimed “streaming means” because

the video processors are merely conventional MPEG decoders which cannot perform the claimed streaming function (Br. 18); that the architecture of Wang's video processor CPU is not different from the hardware architecture of the claimed "managing means" (Br. 20); and that the Examiner improperly read Wang's client 101 onto both the claimed "displaying means" and the claimed "communicating means" (Br. 20).

We disagree that client 101 is not equivalent to Appellants' claimed "communicating means," which in Appellants' preferred embodiment is a set-top subscriber box. We do not agree with Appellants' characterization of their set top subscriber box as "rather 'dumb.'" We note that Appellants' Specification discloses that the "transaction server may be utilized [i.e., by the set top subscriber box 32] to interface with the Internet" (FF 2). Appellants' Specification further discloses that the set top subscriber box parses message fields as well as function code (FF 2). We agree with the Examiner's position that these functions are inconsistent with a set top subscriber box that is a dumb device having limited or no programmability, and consistent with a set top subscriber box that is a computer-based system (Ans. 17-18). Because we find that Appellants' set top subscriber box performs functions that would require a computer-based system, we concur with the Examiner's finding that Wang's client 101 is functionally equivalent to Appellants' claimed communicating means.

With respect to the claimed "streaming means ... for streaming said vide program ... via one of a plurality of video processors," the Examiner relies on Wang's plurality of Delivery Modules (120) to meet this element (illustrated at Wang Fig. 1A). Wang discloses a streaming type of video

server, where DM 120 streams data from storing means to the client for display (Ans. 14; FF 4).

With respect to the claimed “managing means” and “streaming means” having distinct hardware architectures, the Examiner has cited two processors having distinct hardware architectures. Wang’s CCM 110 corresponds to the claimed managing means, and comprises a Sun SOLARIS multi-threading operating system (which DM 120 lacks), and Wang’s Delivery Module 120 corresponds to the claimed streaming means and comprises so-called “video processors” 121 which CCM 110 lacks (Ans. 18; FF 4, 5).

We are not persuaded by Appellants’ argument that the Examiner improperly read client 101 of Wang onto two distinct claim elements. In fact, the Examiner equated Wang’s client 101 with the claimed “communicating means” and the video monitor *associated with* client 101 with the claimed “displaying means” (Wang, col. 7, ll. 38-39).

Because we find that Wang teaches all of the elements of the invention recited in claim 11, we find no error in the Examiner’s rejection of claim 11 under 35 U.S.C. § 102.

Claim 16

Appellants argue that LaJoie does not teach defining the length of a message; embedding that defined length into the message; defining a sequence number to uniquely identify a message; or embedding that sequence number into the message (Br. 23-24). Appellants’ arguments flow from their position that LaJoie contains “no suggestion that TCP is used” in communication between set top terminal 6 and head end 2 (Br. 24). Appellants further argue that the Examiner’s use of the Tanenbaum

reference to show details of the TCP/IP protocol amounts to a new ground of rejection² (Br. 25).

We find Appellants' position unpersuasive. We agree with the Examiner that LaJoie teaches that "the service provider of the full service television system (i.e. the head-end) provides services" such as web browsing and internet e-mail to the subscriber (Ans. 15; FF 8). We further agree with the Examiner that the World Wide Web "(inherently) runs on top of the TCP/IP protocol, hence when providing World Wide Web browsing services, the communication between the set top box and the service provider comprises the use of TCP/IP messages" (Ans. 15).

The Examiner cites the Tanenbaum textbook to illustrate the content of TCP/IP messages and the fields used therein. The Examiner may refer to extrinsic evidence, such as Tanenbaum, when the cited reference (in this case, LaJoie) is silent about an asserted inherent characteristic (i.e. the details of the TCP/IP protocol). *See Cont'l Can, supra*. We agree with the Examiner that Tanenbaum teaches the 'TCP Header Length' field, which "tells how many 32-bit words are contained in the TCP header" (FF 10). This 'defined length' of a message is embedded into a message by being part of a TCP segment header (FF 10).

Because we agree with the Examiner that (a) LaJoie teaches communication between a set-top box and a multimedia application server, including transferring a message from the set-top box to the multimedia application server; (b) LaJoie teaches that such communication inherently

² We remind Appellants that a patent applicant's proper recourse, should he or she feel that an improper new ground of rejection has been entered, is via petition rather than appeal. See MPEP 1207.03(IV).

uses the known TCP/IP protocol; (c) Tanenbaum teaches details of said known TCP/IP protocol; and (d) the details taught in Tanenbaum meet the limitations of (1) defining the length of a message and embedding that length in the message and (2) defining a sequence number and embedding that sequence number in a message, we do not find error in the Examiner's rejection of claim 16 under 35 U.S.C. § 102.

Claim 17

Appellants argue that LaJoie does not teach embedding a function code into a message (Br. 26), and that the Examiner's reference to Tanenbaum is legally irrelevant because Tanenbaum is a reference not related to the grounds of final rejection (*Id.*).

We have discussed Tanenbaum's availability as extrinsic evidence within the analysis of claim 16, *supra*. We agree with the Examiner that Tanenbaum teaches function codes (e.g., flags RST, FIN, PSH)(Ans. 16; FF 11). Because we find that Tanenbaum teaches the further limitations of dependent claim 17, then, we find no error in the Examiner's rejection of claim 17 under 35 U.S.C. § 102.

Claim 18

Appellants argue that LaJoie does not teach embedding a packet type into a message (Br. 27).

We have discussed Tanenbaum's availability as extrinsic evidence within the analysis of claim 16, *supra*. We agree with the Examiner that Tanenbaum teaches an identification field that allows the receiver of a message to determine which datagram a packet belongs to, therefore comprising a packet type field (Ans. 16; FF 12).

Because we find that Tanenbaum teaches the further limitations of dependent claim 18, then, we find no error in the Examiner's rejection of claim 18 under 35 U.S.C. § 102.

Claim 19

Appellants argue that LaJoie does not teach embedding a device address into a message (Br. 27-28), and that the Examiner's use of Tanenbaum constitutes a new ground of rejection.

We have discussed Tanenbaum's availability as extrinsic evidence within the analysis of claim 16, *supra*. We agree with the Examiner that Tanenbaum teaches an IP datagram comprising a source address field and a destination address field; thus, the device address is embedded in the IP header, as required by the claim (Ans. 17; FF 13).

Because we find that Tanenbaum teaches the further limitations of dependent claim 19, then, we find no error in the Examiner's rejection of claim 19 under 35 U.S.C. § 102.

Claim 20

Appellants argue that LaJoie does not teach embedding a version into a message (Br. 28).

We have discussed Tanenbaum's availability as extrinsic evidence within the analysis of claim 16, *supra*. We agree with the Examiner that Tanenbaum teaches a protocol version number embedded into the version field of an IP datagram (FF 14).

Because we find that Tanenbaum teaches the further limitations of dependent claim 20, then, we find no error in the Examiner's rejection of claim 20 under 35 U.S.C. § 102.

Claim 1

Appellants argue that Wang does not teach or suggest the claimed “set top subscriber box,” because Wang’s video client 101 is a computer, whereas Appellants define their subscriber box as a “rather ‘dumb’ device having limited or no programmability” (Br. 29; *see* Spec. 11, Wang col. 6, ll. 1-3). Appellants further argue that the Examiner’s reference to techtarget.com does not qualify as prior art (Br. 31). Appellants further argue that the video processors 121 of Wang cannot meet the claimed “plurality of video processors,” because Wang’s video processors are “simple MPEG decoders and thus could not possibly accomplish the claimed ‘streaming’ functions” (Br. 33). Finally, Appellants argue that Wang’s CPU 125 has an identical architecture to that of CPU 112, whereas claim 1 requires that the video processors’ architecture be different from the architecture of the multimedia application server (Br. 33).

We disagree with Appellants’ characterization of their set top subscriber box as “rather ‘dumb.’” We note that Appellants’ Specification discloses that the “transaction server may be utilized [i.e., by the set top subscriber box 32] to interface with the Internet” (FF 2). Appellants’ Specification further discloses that the set top subscriber box parses message fields as well as function code (FF 2). We agree with the Examiner’s position that these functions are inconsistent with a set top subscriber box that is a dumb device having limited or no programmability, and consistent with a set top subscriber box that is a computer-based system (Ans. 17-18). Because we find that Appellants’ set top subscriber box performs functions that would require a computer-based system, we are not persuaded by Appellants’ argument that the person having ordinary skill in the art would

not have been motivated to replace client 101 of Wang with the disclosed set top subscriber box, and we concur in the Examiner's conclusion that it would have been obvious to modify Wang to use a set top subscriber box as its client device "in order to facilitate the user of a CATV system for making VOD requests" (Ans. 11, 14).

With respect to the claimed "plurality of video processors ... assigned ... to stream said selected video programming data," the Examiner relies on Wang's plurality of Delivery Modules (120) to meet this element (illustrated at Wang Fig. 1A). Wang discloses a streaming type of video server, where DM 120 streams data from storing means to the client for display (Ans. 14; FF 4).

With respect to the claimed multimedia application server and video processor having distinct hardware architectures, the Examiner has cited two processors having distinct hardware architectures. Wang's CCM 110 corresponds to the claimed multimedia application server, and comprises a Sun SOLARIS multi-threading operating system (which DM 120 lacks), and Wang's Delivery Module 120 corresponds to the claimed video processor and comprises so-called "video processors" 121 (in Wang's terminology) which CCM 110 lacks (Ans. 18; FF 4, 5).

Therefore, because we agree with the Examiner that Wang teaches all elements of claim 1 except for a set top subscriber box as the client device, and because we agree with the Examiner's reasoning that it would have been obvious to modify Wang to include such a set top subscriber box, we find no error in the Examiner's rejection of claim 1 under 35 U.S.C. § 103.

Claim 6

Appellants make the same arguments for independent claim 6 as for independent claim 1, except that Appellants allege that Wang does not teach a plurality of video *servers* rather than processors, for the analogous reason that Wang's video processors 121 are alleged to be unable to stream video, as is claimed (Br. 34).

We are not persuaded by Appellants' position for the reasons expressed *supra* with regard to claim 1, with the modification that the Examiner equates Wang's plurality of Delivery Modules 120 with the plurality of video servers recited in claim 6. We find no error in the Examiner's rejection of claim 6 under 35 U.S.C. § 103.

Claim 21

Appellants make the same arguments for independent claim 21 as for independent claim 1. Appellants further assert that Wang does not teach the claimed "**separate administrative message path** responsively coupled to said set top subscriber box and said multimedia application server" (Br. 36; emphasis in original).

We have explained *supra* why we find the arguments made with respect to claim 1 to be unpersuasive. We agree with the Examiner that Appellants do not define, in the Specification or claims, exactly what the "*separate administrative path*" constitutes or what it is separate *from*." As the Examiner indicates, the path of data transmission from storage module 130 to delivery module 120 in Wang is different from the path of control and command requests between client 101 and central control module 110. As a result, the latter path may be construed as a separate administrative path

between the set top subscriber box and multimedia application server (*see* Ans. 18; FF 6).

We therefore find no error in the Examiner's rejection of claim 21 under 35 U.S.C. § 103.

Claim 2

Appellants argue that the Examiner, by making allegedly legally irrelevant findings, has failed to establish a prima facie case of obviousness (Br. 38-40). We treat Appellants' position to be that (a) because Appellants characterize their set-top box as a 'rather dumb,' non-computerized device, it would not have been obvious for its set-top box to communicate over the internet, and (b) Wang does not teach or fairly suggest including a sequence number which identifies the message within a series of messages.

In the discussion of claim 1, *supra*, we found that Appellants' set top subscriber box is in fact tasked with functions requiring a computer, and therefore concluded that it would have been obvious to the skilled artisan to replace Wang's (computerized) client 101 with a set top subscriber box. As a result of that finding, we agree with the Examiner that it was well known at the time of the invention for (computerized) set top terminals to communicate with video servers over the internet (Ans. 11). In affirming the rejection of claim 16, *supra*, we found that within the TCP/IP protocol used for internet communications it is known to include a sequence number in a message.

Taking those two findings together, we agree with the Examiner that it would have been obvious to the skilled artisan to modify Wang by allowing the set top box to communicate with the video server over the internet, using

messages having sequence numbers (Ans. 11). We find no error in the Examiner's rejection of claim 2 under 35 U.S.C. § 103.

Claims 3-5

Appellants argue that because the Examiner made erroneous and legally irrelevant findings, the Examiner has failed to establish the obviousness of claims 3-5 (Br. 40-41). We treat Appellants' position to be that Wang does not teach or fairly suggest that the message comprises a function code (claim 3), that the message may have a variable length (claim 4), or that the message has a field defining said variable length (claim 5).

Each of claims 3-5 depends from claims 1 and 2, so we incorporate our analysis of those claims *supra* into the treatment of these claims. Further, we found *supra* in the discussion of claim 17 that Tanenbaum taught the presence of function codes, such as recited in claim 3, within the known TCP/IP protocol; we found *supra* in the discussion of claim 16 that Tanenbaum taught the presence of variable length messages, having a field defining said variable length, such as recited in claims 4 and 5, respectively, within the known TCP/IP protocol (see Ans. 12).

Taking those findings together, we concur in the Examiner's conclusion that Wang, modified as the Examiner proposes, renders obvious the invention of claims 3-5. We find no error in the Examiner's rejection of claims 3-5 under 35 U.S.C. § 103.

Claim 7

Appellants argue that the Examiner, by making allegedly legally irrelevant findings, has failed to establish a prima facie case of obviousness (Br. 41-43). We treat Appellants' position to be that Wang does not teach or

fairly suggest including a sequence number which identifies the message within a series of messages.

We affirm the rejection of claim 6, from which claim 7 depends, and the rejection of dependent claim 2, which is very nearly identical to claim 7. For the reasons expressed *supra* with regard to claims 2 and 6, respectively, we find no error in the Examiner's rejection of claim 7 under 35 U.S.C. § 103.

Claims 8-10

Appellants argue that because the Examiner made erroneous and legally irrelevant findings, the Examiner has failed to establish the obviousness of claims 8-10 (Br. 44-45). We treat Appellants' position to be that Wang does not teach or fairly suggest that the message comprises a plurality of predefined fields (claim 8), that the predefined fields further comprise a field identifying a length of the message (claim 9), or that the fields further comprise a function code field (claim 10).

We affirm the rejection of claims 6 and 7, from which these claims depend. Further, in affirming the rejections of claims 16 and 17, *supra*, we found that Tanenbaum taught the presence of function codes and of variable length messages (having a field defining said variable length) within the known TCP/IP protocol (see Ans. 12). We agree with the Examiner that Tanenbaum's IP datagram comprises a plurality of predefined (header) fields, as is recited in claim 8 (Ans. 12; Tanenbaum 413).

As a result of these findings, we agree with the Examiner that Wang, modified as the Examiner proposes, renders obvious the invention of claims 8-10. We find no error in the Examiner's rejection of claims 8-10 under 35 U.S.C. § 103.

Claim 12

Appellants argue that because the Examiner made legally irrelevant, internally inconsistent, and clearly erroneous findings, the Examiner has failed to establish the obviousness of claim 12 (Br. 45-47). We treat Appellants' position to be that Wang does not teach or fairly suggest that the communicating means further comprises a variable length message.

Claim 12 depends from claim 11, the rejection of which we affirm *supra*. In the discussion of claim 1, *supra*, we found that Appellants' set top subscriber box is in fact tasked with functions requiring a computer, and therefore concluded that it would have been obvious to the skilled artisan to replace Wang's (computerized) client 101 with a set top subscriber box. As a result of that finding, we agree with the Examiner that it was well known at the time of the invention for (computerized) set top terminals to communicate with video servers over the internet (Ans. 11). In affirming the rejection of claim 16, *supra*, we found that variable length messages, including a field specifying said variable length, are known within the TCP/IP protocol used for internet communications.

Taking those two findings together, we agree with the Examiner that it would have been obvious to the skilled artisan to modify Wang by allowing the set top box to communicate with the video server over the internet, employing variable length messages (Ans. 11). We find no error in the Examiner's rejection of claim 2 under 35 U.S.C. § 103.

Claims 13-15

Appellants argue that because the Examiner made erroneous and legally irrelevant findings, the Examiner has failed to establish the obviousness of claims 13-15 (Br. 47-49). We treat Appellants' position to

be that Wang does not teach or fairly suggest that the communicating means further comprises means for establishing a sequence of the variable length message (claim 13), that the managing means further comprises means for processing subscriber transactions (claim 14), or that the communicating means further comprises a subscriber identifying field (claim 15).

Each of claims 13-15 depends from claims 11 and 12, whose rejections we affirm *supra*. We have further found, within the analysis of claim 16 *supra*, that Tanenbaum shows the details of the known TCP/IP protocol, including establishing a sequence of a variable length message. We agree with the Examiner that Wang teaches means for processing subscriber transactions (FF 7, teaching at minimum the ability to service a subscriber's selection of a video to receive). Within the analysis of claim 19, *supra*, we found that Tanenbaum teaches that source address and destination address are present within the TCP/IP protocol, meeting claim 15's limitation of "a subscriber identifying field."

Taking these findings together, we agree with the Examiner that Wang, modified as the Examiner proposes, renders obvious the invention of claims 13-15. We find no error in the Examiner's rejection of claims 13-15 under 35 U.S.C. § 103.

Claim 22

Appellants argue that because the Examiner made legally irrelevant, internally inconsistent, and clearly erroneous findings, the Examiner has failed to establish the obviousness of claim 22 (Br. 49-51). We treat Appellants' position to be that Wang does not teach or fairly suggest a message length field within the message indicating a length for said message.

Claim 22 depends from claim 21, whose rejection we affirm *supra*. In affirming the rejection of claim 16, *supra*, we found that Tanenbaum teaches that message length fields are known in the TCP/IP protocol. Because we agree with the Examiner that it was well known at the time of the invention for set top terminals to communicate with video servers over the internet (Ans. 11; *see* discussion of claim 2, *supra*), we conclude that it would have been obvious to modify Wang as proposed by the Examiner to arrive at the invention recited in claim 22. We find no error in the Examiner's rejection of claim 22 under 35 U.S.C. § 103.

Claim 23

Appellants argue that the Examiner, by making allegedly legally irrelevant findings, has failed to establish a prima facie case of obviousness (Br. 51). We treat Appellants' position to be that Wang does not teach or fairly suggest including a message sequence number which identifies the message within a series of messages.

Claim 23 depends from claims 21 and 22, which we affirm *supra*. We have further found, within the analysis of claim 16 *supra*, that Tanenbaum shows the details of the known TCP/IP protocol, including a message sequence number.

Taking these findings together, we agree with the Examiner that Wang, modified as the Examiner proposes, renders obvious the invention of claim 23. We find no error in the Examiner's rejection of claim 23 under 35 U.S.C. § 103.

Claims 24 and 25

Appellants argue that the Examiner's statements that TCP/IP comprises a response message generated in response to receipt of a message

and transferred via said separate administrative path (claim 24), and that Wang teaches a message requesting selection of and correspond[ing] to a video program (claim 25), are unsupported in the record (Br. 52-53), and thus that claims 24 and 25 are not obvious over Wang.

The Examiner states that “TCP protocol provides for a reliable communication over an unreliable connection by transmitting an acknowledgement for receipt of a TCP message (embedded in an IP datagram)” (Ans. 13). The Examiner, however, does not cite to any source in support of that statement. The Tanenbaum textbook cited by the Examiner teaches an “Acknowledgement number” within the TCP Segment Header (FF 15), but Tanenbaum states that the acknowledgement number “specifies the next byte expected, not the last byte correctly received” (FF 15). As a result, we agree with Appellants that the Examiner’s statement is unsupported in the record, and we find error in the Examiner’s rejection of claims 24 and 25 under 35 U.S.C. § 103.

CONCLUSION OF LAW

We conclude that Appellants have not shown that the Examiner erred in rejecting claims 1-23, and that the Appellants have shown that the Examiner erred in rejecting claims 24 and 25. Claims 1-23 are not patentable. On the record before us, claims 24 and 25 have not been shown to be unpatentable.

DECISION

The Examiner’s rejection of claims 1-23 is affirmed. The Examiner’s rejection of claims 24 and 25 is reversed.

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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

KIS

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