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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte AYODELE DAMOLA and KRISTER SVANBRO

Appeal 2019-001709
Application 14/356,926
Technology Center 2400

Before BRYAN F. MOORE, BETH Z. SHAW, and
CARL L. SILVERMAN, *Administrative Patent Judges*.

SHAW, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the
Examiner's decision to reject claims 1, 3, 4, 7–14, 16, 17, 19 and 21–28.

See Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as TELEFONAKTIEBOLAGET L M ERICSSON. Appeal Br. 2.

CLAIMED SUBJECT MATTER

The claims are directed to a devices and methods using network load data in mobile cloud accelerator context to optimize network usage by selectively deferring content delivery. Claims 19 and 26, reproduced below, are illustrative of the claimed subject matter:

19. A method performed by a network device, the method comprising:
 - receiving a request for a content delivery from a wireless client device in the network;
 - sending a query to a smart pipe controller as to whether to proceed with delivering the content depending on a network load;
 - receiving a response from the smart pipe controller as to whether to proceed with delivering the content depending on the network load;
 - determining whether to defer the request depending on the response received from the smart pipe controller;
 - sending a first message to the wireless client device if the request is not deferred, the first message including information enabling the content delivery; and
 - sending a second message to the client if the request is deferred, wherein the network device is a mobile edge server operating as a cache server.

26. A method, comprising:
 - storing, by a network device, pairs of domain names and Internet Protocol (IP) addresses;
 - receiving, by the network device from a user equipment, a request for content delivery that includes a domain name;
 - determining, by the network device, whether to defer the request depending on a network load at a time when the request is received;

sending, by the network device when it is determined that the request is not deferred, a first message to the user equipment to enable the content delivery, wherein the first message includes an IP address corresponding to the domain name,

sending, by the network device when it is determined that the request is deferred, a second message to be sent to the user equipment, wherein the second message does not include the IP address corresponding to the domain name.

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Engbersen	US 6,341,304	Jan. 22, 2002
Forbes	US 2006/0141962 A1	Jun. 29, 2006
Brooks	US 2008/0192820 A1	Aug. 14, 2008
Spatscheck	US 2011/0029596 A1	Feb. 3, 2011
Venugopal	US 2013/0031279 A1	Jan. 31, 2013

REJECTIONS

The Examiner withdraws the rejection of claims 1, 7–13, 16, and 26–28 rejected under 35 U.S.C. § 101 in the Answer. Ans. 3–4.

Claims 1, 8–13, and 26 are rejected under pre–AIA 35 U.S.C. § 103(a) as being unpatentable over Brooks, Spatscheck, and Forbes. Final Act. 12.

Claims 3, 4, 17, 19, 21, 23 and 25 are rejected under pre–AIA 35 U.S.C. § 103(a) as being unpatentable over Brooks, Spatscheck, and Engbersen.

Claims 16, 27, 28 are rejected under pre–AIA 35 U.S.C. § 103(a) as being unpatentable over Brooks, Spatscheck, Forbes, and Engbersen.

Claim 7 is rejected under pre–AIA 35 U.S.C. § 103(a) as being unpatentable over Brooks, Spatscheck, Forbes, and Venugopal.

Claims 14, 22, 24 are rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Brooks, Spatscheck, Engbersen, and Venugopal.

OPINION

Claims 1 and 26

Appellant argues claims 1, 8–13, and 26 together. *See* Appeal Br. 26. We select independent claim 26, a method claim, as representative. 37 C.F.R. § 41.37(c)(1)(iv).

First, Appellant argues Brooks’s reference to an IP address in paragraph 161 does not mention that the provision of the IP address is based on network load. Appeal Br. 27. Yet, the Examiner does not rely on Brooks alone to teach “sending, by the network device when it is determined that the request is not deferred, a first message to the user equipment to enable the content delivery, wherein the first message includes an IP address corresponding to the domain name,” as recited in claim 26. Rather, the Examiner finds that Forbes teaches “the first message includes an IP address corresponding to the domain name.” Final Act. 15 (citing Forbes ¶ 44).

Appellant acknowledges that Forbes discusses that an IP address can be provided identifying the server. Appeal Br. 28. Appellant argues that Forbes does not teach providing or not providing an IP address “depending upon network load as claimed.” *Id.* at 29, 30. We are not persuaded by this argument because the Examiner relies on Forbes to teach “the first message includes an IP address corresponding to the domain name.” The Examiner finds that Brookes teaches “sending, by the network device when it is determined that the request is not deferred, a first message to the user equipment to enable the content delivery.” Final Act. 13–14 (citing Brooks, Figs. 3–3c, ¶ 163); Ans. 5–6. We agree that Brooks teaches “sending, by the

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network device when it is determined that the request is not deferred, a first message [content] to the user equipment to enable the content delivery.”

Ans. 6 (citing Brooks, Figs. 3–Fig. 3c; ¶ 163).

Appellant also argues that “[b]ecause the mobile device already has an IP address in this disclosure, it would not be possible to control content delivery by not providing the IP address to the mobile device, whereas claims 1 and 26 recite that when content delivery is deferred, an IP address is not included in the message sent to the user equipment.” Appeal Br. 27. This general allegation is unsupported by the record. “An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness.” *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (citing *In re Wood*, 582 F.2d 638, 642 (CCPA 1978); *In re Lindner*, 457 F.2d 506, 508 (CCPA 1972) (“mere lawyers' arguments unsupported by factual evidence are insufficient to establish unexpected results”)).

We agree with the Examiner’s findings that Brooks teaches “sending, by the network device when it is determined that the request is deferred, a second message to be sent to the user equipment, wherein the second message does not include the IP address corresponding to the domain name,” because Brooks teaches that network capacity is not available to transmit the requested content and Brooks sends an estimated time for when the content will be available in steps 325 and 326 of Figure 3b. Ans. 5. If sufficient network capacity is available, Brooks teaches streaming delivery in step 322. *Id.*; *see also* Brooks, ¶ 163.

In the Reply Brief, Appellant argues that “network load,” recited in the claim, is “a much broader term than determining if bandwidth is limited for a specific download.” Reply Br. 2. We are not persuaded by this

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argument because Brooks does not merely teach “bandwidth,” but rather, teaches evaluating network capacity, giving bandwidth as an example: “the network system determines if capacity (e.g., bandwidth) is available.”

Brooks ¶ 163 (also discussing “network capacity determination”); ¶ 161 (“evaluation of network capacity”). Appellant does not address these teachings from Brooks.

Appellant additionally argues that the Examiner did not consider the claims as a whole, and that one skilled in the art would not have combined the references to arrive at the claimed invention. Appeal Br. 30–34. We are not persuaded by this argument because the Examiner’s proposed combination of the cited teachings of Brooks, Forbes, and Spatscheck is no more than a simple arrangement of old elements with each performing the same function it had been known to perform, yielding no more than one would expect from such an arrangement. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). The ordinarily skilled artisan, being “a person of ordinary creativity, not an automaton,” would be able to fit the teachings of the cited references together like pieces of a puzzle to predictably result in the claimed method and network device. *Id.* at 420–21. Because Appellant has not demonstrated that the Examiner’s proffered combination would have been “uniquely challenging or difficult for one of ordinary skill in the art,” we agree with the Examiner that the proposed modification would have been within the purview of the ordinarily skilled artisan. *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (citing *KSR*, 550 U.S. at 418).

Accordingly, we are not persuaded of error in the Examiner’s obviousness rejection of claim 26, or claims 1 and 8–13.

Appellant argues claims 17, 19, and 25 as a group. *See* Appeal Br. 37–42. Claim 19 recites, in part, “wherein the network device is a mobile edge server operating as a cache server.” The Examiner finds that Spatscheck’s cache server teaches this element. Ans. 11 (citing Spatscheck, Fig. 1, Fig. 2, Abstract, ¶¶ 17, 21, 44).

Appellant argues Spatscheck’s “cache server” does not teach the claimed “mobile edge server [operating as a cache server].” Appeal Br. 37–42. In particular, Appellant argues that based on the language of the claim, one skilled in the art would have understood that the term “mobile edge server” is a server that is part of a mobile network, because the term “server” is modified by “mobile” and is at the “edge” of the network, because the term “edge” modifies server. Appeal Br. 39. We are not persuaded that the claim is so limited because Appellant provides insufficient evidence proving that the Specification or claims limit “mobile edge server operating as a cache server” in a way that, under a broad but reasonable interpretation, is not encompassed by Spatscheck’s teaching of a cache server. As the Examiner explains, and we agree, paragraph 4 of the Specification

merely discloses that a Mobile Edge Server (MES) 122 may store content received from a content provider (CP) 140 and paragraph 0058 merely discloses that a client device may be a mobile edge server (MES) configured to store temporarily the content. Based on the descriptions provided in paragraphs 0004 and 0058, a mobile edge server is a device that stores content.

Ans. 10–11. We also note that the Specification describes content being stored in a cache server. For example, the Specification refers to an MCA (mobile cloud accelerator) MES (mobile exchange server) cache server 622, and in Figure 12, depicts the “MES” as element (i.e., cache server) 622. *See*

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Spec. ¶¶ 67, 80. Thus, we agree with the Examiner that Spatscheck’s teaching of a cache server teaches the claimed “mobile edge server operating as a cache server.” Spatscheck, Abstract (“a cache server for providing content”). The Examiner’s interpretation is consistent with the Specification’s description of the mobile edge server for the reasons discussed above and in the Answer. Ans. 10–11.

In the Appeal Brief, Appellant states that interpreting the “mobile edge router” being at the edge of a mobile network would mean that Spatscheck’s routers 204–214 “provider edge routers” are the claimed mobile edge routers. Appeal Br. 40. In the Reply Brief, Appellant argues that Spatscheck’s “provider edge routers,” however, do not store content and only route traffic, and therefore cannot be the mobile edge servers. Reply Br. 4. We are not persuaded by this argument because the Examiner explains, when referring to the provider edge routers in the Answer, under Appellant’s proposed interpretation,² i.e., if the mobile edge server is at the edge of a mobile network, the provider edge routers “are *also* mobile edge servers.” Ans. 11 (emphasis added).

Appellant also argues that Engbersen does not teach a “smart pipe controller.” Appeal Br. 38–39. Appellant argues that Engbersen, like Brooks, only considers “bandwidth” and that Engbersen therefore does not teach that its “bandwidth monitor” determines “whether to proceed with delivering content dependent on network load” and therefore does not teach

² “Based on the plain language of the claim, one skilled in the art would have understood that the term ‘mobile edge server’ is a server that is part of a mobile network, hence the term ‘server’ being modified by ‘mobile’ and one that is at the edge of the network, hence the term ‘edge’ modifying server.” Appeal Br. 39.

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the claimed smart pipe controller. Appeal Br. 38; Reply Br. 4. Yet, the Examiner does not rely on Engbersen alone to teach these elements, e.g., “network load,” because Brooks teaches determining “network capacity,” as discussed above with respect to claim 26. *See also* Final Act. 19, 24; Brooks Fig. 3b, ¶¶ 147, 161, 163. The Examiner explains, and we agree, that the term “smart pipe controller” is not explained in the Specification and paragraph 66 of the Specification merely states that “the processing unit 420 may further be configured to operate as a smart pipe controller within a mobile cloud accelerator.” Appellant provides insufficient evidence proving that the Specification or claims limit “smart pipe controller” in a way that, under a broad but reasonable interpretation, is not encompassed by Engbersen’s teachings.

Accordingly, we are not persuaded of error in the Examiner’s rejections of claims 17, 19, and 25.

Because Appellant does not present separate patentability arguments or reiterates substantially the same arguments as those previously discussed for patentability above, the remaining pending claims fall for the same reasons as claims 1, 17, 19, 25, and 26. *See* 37 C.F.R. § 41.37(c)(1)(iv).

CONCLUSION

The Examiner’s rejections are affirmed.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 8–13, 26	103	Brooks, Spatscheck, Forbes	1, 8–13, 26	
3, 4, 17, 19, 21, 23 and 25	103	Brooks, Spatscheck, Engbersen	3, 4, 17, 19, 21, 23 and 25	
16, 27, 28	103	Brooks, Spatscheck, Forbes, Engbersen	16, 27, 28	
7	103	Brooks, Spatscheck, Forbes, Venugopal	7	
14, 22, 24	103	Brooks, Spatscheck, Engbersen, Venugopal	14, 22, 24	
Overall Outcome:			1, 3, 4, 7–14, 16, 17, 19, 21–28	

TIME PERIOD FOR RESPONSE

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).

AFFIRMED