UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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RELOADED GAMES, INC.,
Petitioner,

v.

PARALLEL NETWORKS LLC,
Patent Owner.

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Case IPR2014-00139
Patent 7,730,262 B2

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Before KRISTEN L. DROESCH, BRIAN J. McNAMARA, and
HYUN J. JUNG, *Administrative Patent Judges.*

JUNG, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I.   INTRODUCTION

Reloaded Games, Inc. ("Petitioner") filed a corrected Petition (Paper 5, "Pet.") on November 20, 2013 requesting institution of an *inter partes* review of claims 1–27 of U.S. Patent No. 7,730,262 B2 ("the '262 patent") pursuant to 35 U.S.C. §§ 311–19. Parallel Networks LLC ("Patent Owner") filed a Preliminary Response. Paper 10. Based on these submissions, we instituted *inter partes* review of claims 1–27. Paper 16 ("Dec. on Inst.").

After institution, Patent Owner filed a Response (Paper 23, "PO Resp."), and Petitioner filed a Reply (Paper 24, "Reply"). Petitioner proffered the Declaration of Dr. Peter B. Danzig (Ex. 1002, "Danzig Declaration") with its Petition. Patent Owner does not rely upon any expert testimony, and no deposition transcript was filed for Dr. Danzig. No motions were filed by the parties.

A combined oral hearing in this proceeding and Case IPR2014-00136 was held on February 23, 2015, and a transcript of the hearing is included in the record (Paper 31, "Tr.").

We have jurisdiction under 35 U.S.C. § 6(c). This final written decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–27 of the '262 patent are unpatentable.

A. The '262 Patent (Ex. 1001)

The '262 patent is titled "Method and System for Dynamic Distributed Data Caching" and issued June 1, 2010. The '262 patent issued

from application 11/681,544, filed on March 2, 2007. Application

11/681,544 is a division of application 09/759,406, now U.S. Patent No.

7,188,145 B2, whose claims are challenged in Case IPR2014-00136.
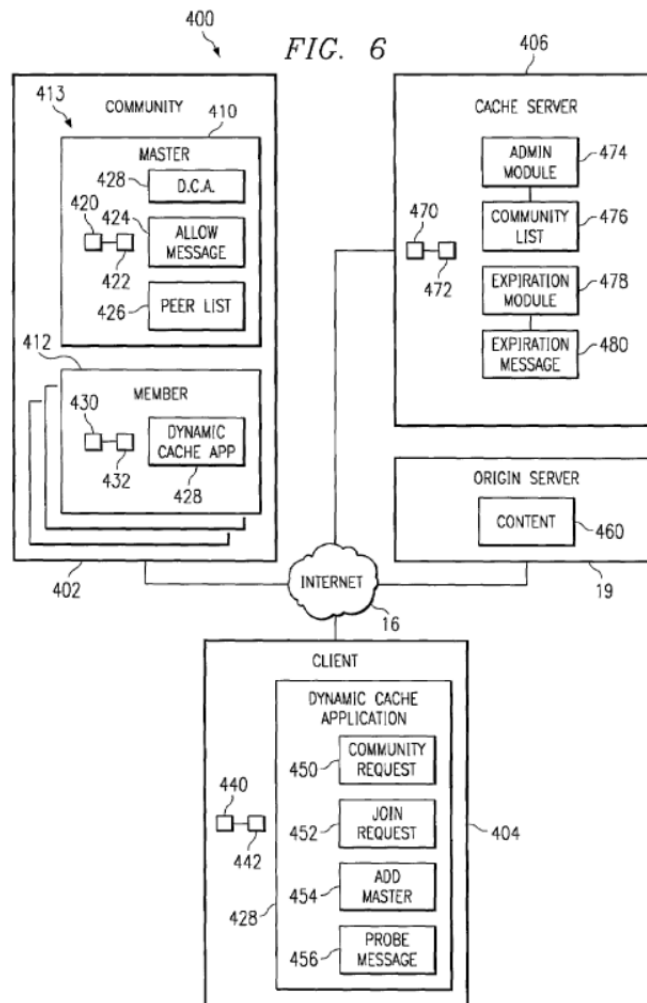
Figure 6 of the '262 patent is reproduced below.

Figure 6 depicts a block diagram illustrating a dynamic caching

system according to one embodiment. Ex. 1001, 4:56–57. Community 402

comprises one or more peers 413, and peers 413 further comprise master 410

and member 412. *Id*. at 17:45–48. Each peer 413 includes dynamic cache

application 428, which provides functionality to support distributed caching system 10. *Id*. at 17:53–54.

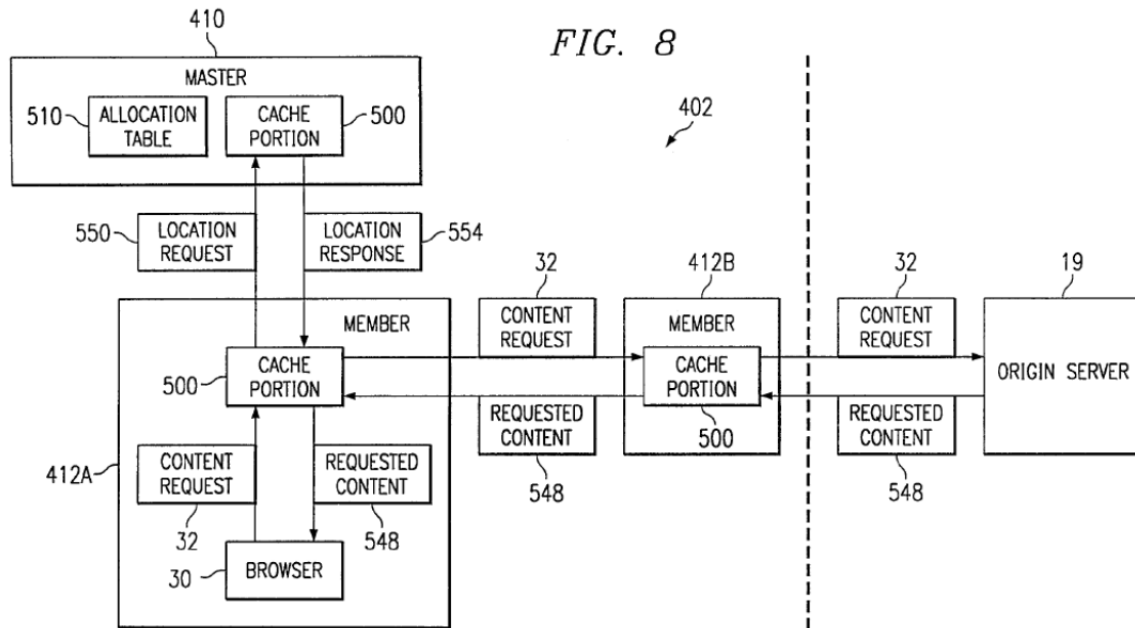Reproduced below is Figure 8.

FIG. 8

Figure 8 shows a flow diagram illustrating a method for retrieving and caching content within a cache community according to an embodiment. *Id.* at 4:62–64, 22:41–42. Browser 30 generates request 32 for content 548, and cache portion 500 of dynamic cache application 428 at member 412A receives request 32. *Id*. at 22:42–46. Cache portion 500 determines if requested content 548 is available at member 412A. *Id*. at 22:46–48. If requested content 548 is available at member 412A, then cache portion 500 returns requested content 548 to browser 30. *Id*. at 22:53–56. If not, cache portion 500 generates location request 550, which is communicated to cache portion 500 of master 410. *Id*. at 22:57–60. Cache portion 500 of master 410 examines allocation list 510 to determine which peer 413 would cache the requested content 548. *Id*. at 22:60–62. After determining, for example,

that member 412B has requested content 548, cache portion 500 of master

410 then generates location response 554, which is communicated to

member 412A. *Id*. at 22:63–23:2. After receiving location response 554,

cache portion 500 of member 412A forwards request 32 to peer 412B for the

requested content 548 in its cache. *Id*. at 22:66–23:2. Peer 412B determines

whether requested content 548 is available, and if so, peer 412B returns

requested content 548 to cache portion 500 of member 412A. *Id*. at 23:2–7.

If requested content 548 is not available at member 412B, then

member 412B forwards request 32 to origin server 19.

B. Illustrative Claim

The '262 patent has 27 claims, all of which are being challenged in

this proceeding. Claims 1, 10, and 19 are independent. Claim 1 is a method

claim; claim 10 is a computer readable storage medium claim; and claim 19

is a system claim. Claim 1 is illustrative and reproduced below.

> 1. A method for dynamic distributed data
> caching, comprising:
> generating a content request for requested
> content at a first peer in a cache community;
> determining a second peer associated with the
> requested content, the second peer being associated
> with the cache community; and
> retrieving, by the first peer, the requested
> content from the second peer;
> wherein determining the second peer includes:
> generating, by a cache portion associated with
> the first peer, a location request;
> communicating the location request to a master
> associated with the cache community; and
> receiving a location response from the master,
> the location response indicating the second peer.

C. The Asserted Grounds of Unpatentability

We instituted the instant *inter partes* review on the following grounds of unpatentability.

Reference[s]	Basis	Claims challenged
Chase[1]	§102	1, 5–10, 14–19, and 23–27
Chase and Scharber[2]	§103	2–4, 11–13, and 20–22

II.   ANALYSIS

A. Claim Construction

In an *inter partes* review, "[a] claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears." 37 C.F.R. § 42.100(b); *In re Cuozzo Speed Tech., LLC*, 778 F.3d 1271, 1279–83 (Fed. Cir. 2015). There is a "heavy presumption" that a claim term carries its ordinary and customary meaning. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002); *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). A patentee may rebut this presumption, however, by acting as his own lexicographer, providing a definition of the term in the specification with "reasonable clarity, deliberateness, and precision." *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). In the absence of such a definition, limitations are not to be read from the specification into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

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[1] U.S. Patent No. 5,944,780, iss. Aug. 31, 1999 (Ex. 1004).
[2] U.S. Patent No. 6,542,964 B1, iss. Apr. 1, 2003 (Ex. 1008).

1. *Previously Interpreted Terms*

In the Decision on Institution, we interpreted various claim terms of

the '262 patent as follows:

Term	Interpretation
"master"	"a peer that provides administrative support to other peers"
"means for generating a content request"	Function: "generating a content request" Structure: "a web browser or other Hypertext Transport Protocol (HTTP) client"
"means for determining a second peer associated with the requested content"	Function: "determining a second peer associated with the requested content" Structure: "one or more general purpose computers of a first peer operably connected to one or more general purpose computers of a master, with each general purpose computer being programmed to carry out an algorithm that examines an indication of which peer could cache the content"
"means for generating, by a cache portion associated with the first peer, a location request"	Function: "generating, by a cache portion associated with the first peer, a location request" Structure: "software, hardware, or software and hardware associated with the first peer operable to provide a data message that indicates a request for the second peer which would cache content requested by the content request"

Term	Interpretation
"means for communicating the location request to a master associated with the cache community"	Function: "communicating the location request to a master associated with the cache community" Structure: "an Internet connection that is always available"
"means for receiving a location response from the master, the location response indicating the second peer"	Function: "receiving a location response from the master, the location response indicating the second peer" Structure: "software, hardware, or software and hardware associated with the first peer operable to receive a data message, which indicates a second peer in the community which is responsible for caching the requested content"
"means for retrieving, by the first peer, the requested content from the second peer"	Function: "retrieving, by the first peer, the requested content from the second peer" Structure: "software, hardware, or software and hardware associated with the first peer operable to forward the request for content to the second peer, receive the requested content from the second peer, and provide the requested content to the browser for display to a user associated with the first peer"

See Dec. on Inst. 6–9.

2. *"Master"*

Patent Owner's sole challenge to our constructions is our interpretation of "master." PO Resp. 3–15.

In its Preliminary Response, Patent Owner argued that "master"

should be construed as "a device that determines membership of a cache community." Prelim. Resp. 5. We determined that the broadest reasonable interpretation of "master" in view of the Specification of the '262 patent is "a peer that provides administrative support to other peers." Dec. on Inst. 7 (citing Ex. 1001, 17:45–50, 53–54, 18:6–7, 34–41).

In its Response, Patent Owner disagrees with our construction of "master" and argues that "master" should be construed as "a peer that determines whether to allow a client to join the cache community." PO Resp. 3, 15. Patent Owner argues that there is "considerable support in the specification for the master's role in determining whether to admit (and thus also whether to deny) a client membership in the cache community." *Id.* at 3. Patent Owner asserts that "almost every mention in the specification of the master relates to its role of controlling admission to the cache community." *Id.* at 4. Patent Owner also states that "administrative tasks are also described as being within the purview of the master, but clearly the proper functioning of the cache community and its ability to dynamically adjust to changes in the cache community are dependent on the master's ability to control admission." *Id.* Patent Owner argues that none of the embodiments described in the Specification is "inconsistent with the master functioning in this role" and the Specification does not "describe a different way of allowing or denying clients admission to the cache community." *Id.* at 5. By referring sequentially to each of the Figures of the '262 patent and its associated description, Patent Owner argues where the Specification describes or does not describe the "master." *Id.* at 5–14.

In particular, Patent Owner cites the Specification for stating that a

"master node comprises a cache module 26 on a particular client 12 which is responsible for supervising the addition and departure of clients from community 100." PO Resp. 6 (citing Ex. 1001, 13:32–35). Patent Owner argues that the "Specification with reference to Figure 6 includes much discussion about the role of the master 410 as the peer 413 that determines admittance or denial of clients to the community 402." *Id.* at 9 (citing Ex. 1001, 20:22–21:10). Patent Owner also argues that determining where requested content 460 is located and generating location response 554 is a "role of the master" that "is administrative in nature, and while important to ensuring sharing of cached content, is not the master's primary role of determining whether to allow a client to join the cache community." *Id.* at 10–11 (citing Ex. 1001, 22:58–60, 63–65, Fig. 8). Patent Owner, however, argues that "the Specification details a specific role for the master in determining whether to admit clients to the community 402." *Id.* at 12–13 (citing Ex. 1001, 24:45–25:7, Fig. 10).

Patent Owner, thus, asserts that "the disclosure of the master's role at determining whether to allow clients to join the cache community is prevalent throughout the '262 Patent" and "makes clear that this is the master's primary role" because "[t]his role is described in more detail than any other," "[n]o other role of the master is described in as much detail," and is "critical to the dynamic (i.e., changing) nature of the cache community." PO Resp. 14 (citing Ex. 1001, Figs. 6, 9, 10). Patent Owner also argues that "[w]hile certain other tasks are attributed to the master, these are more properly characterized as 'administrative support' tasks and do not rise to the level of the master's primary role, which is to determine whether clients are

allowed to join the cache community." *Id.* at 15.

Patent Owner also asserts that "the task of providing administrative support to other peers was not meant to be a 'catch all' category for the various tasks accomplished by the master, which is implied by the construction adopted in the Board's Decision" because the "Specification, after listing several tasks attributable to the master . . . states that 'master 410 is *further responsible* for providing administrative support to community 402." PO Resp. 15 (citing Ex. 1001, 18:6–11, 40–41). Patent Owner argues that the "Specification clearly contemplates an administrative support role independent of the other tasks that were enumerated," and that "the amount of control that the master exercises in determining admission of clients to the cache community is not indicative of mere administrative support." *Id.*

Petitioner replies that the "claims of the '262 patent expressly recite what functions a 'master' must be capable of performing" and "[i]mporting the PO's proposed limitation into the construction of 'master' would be wholly improper under any standard of claim construction." Reply 3 (citing *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282, 1288 (Fed. Cir. 2009)). Petitioner argues that "PO's narrow construction of 'master' . . . excludes an expressly described embodiment," "PO's construction is in direct conflict with the only embodiment in the '262 patent specification relating to the subject matter," and the "master's purported 'primary role' is of no relevance to the broadest reasonable interpretation of the claims." *Id.* at 4. Petitioner also argues that "[i]t is wholly untenable to suggest . . . that an embodiment expressly described in the specification . . . is not within the broadest reasonable interpretation." *Id.* at 5 (citing *Verizon Servs. Corp. v.*

Vonage Holdings Corp., 530 F.3d 1295, 1305 (Fed. Cir. 2007)).

Although the Specification of the '262 patent describes the master as determining whether to allow a client to join a cache community, such descriptions are in the context of one embodiment. Ex. 1001, 13:13–35 ("in one embodiment, community 100 may be formed by dynamically seeking out other active instances of cache module 26. . . . Each community 100 includes a master node . . . A master node . . . is responsible for supervising the addition and departure of clients from community 100."), 17:37–18:9 ("FIG. 6 is a block diagram illustrating a dynamic caching system 400 comprising one embodiment of system 10. System 400 comprises a cache community 402 . . . Community 402 comprises one or more peers 413 . . . Peers 413 further comprise a master 410 and a member 413 . . . Master 410 is operable to generate an allow message 424 . . . Allow message 424 comprises a data message sent to client 404 to inform client 404 that client 404 is being allowed to join community 402."). Also, claims 1, 10, and 19 do not require explicitly that the "master" determine whether to allow a client to join a cache community. These claims, instead, require communicating a location request to a master associated with the cache community and receiving a location response from the master. *See* Tr. 33:10–19. We decline to import into the claims a limitation based on specific embodiments in the Specification. *See, e.g.*, *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) ("[A] particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment."). In particular, we decline to read the exemplary disclosure of adding or allowing

a client to community 100 or community 402 into the broadest reasonable interpretation of the claim term "master." *See, e.g.*, *SuperGuide Corp.*, 358 F.3d at 875 ("Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim.").

Patent Owner also acknowledges that neither the Specification of the '262 patent nor its prosecution history provides a definition of "master" with "reasonable clarity, deliberateness, and precision." *See* Tr. 32:9–19. We also do not find a clear, deliberate, and precise definition of "master" in our review of the Specification of the '262 patent. In the absence of such a definition, construing "master" as "a peer that determines whether to allow a client to join the cache community" would be reading limitations from the Specification into the claims. *See In re Van Geuns*, 988 F.3d at 1184. The various portions of the Specification cited by Patent Owner to support the proposed claim construction of master as a peer that determines whether to allow a client to join the cache community does not persuade us to modify our construction of "master" to include this additional feature that is not recited by the claims.

Patent Owner also cites a dictionary definition of the term "master" and argues that the definition "includes an element of control" to support its contention that "the primary task of the master is to control which clients are permitted to join the cache community." PO Resp. 4 (citing AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 1077 (4th ed., 2000)). However, we are not persuaded that the asserted element of control must refer to the master's determination whether to allow a client to join the cache

community, instead of communicating a location request to a master and receiving a location response from the master, as required by the claims.

Furthermore, Patent Owner argues that "[p]roviding *administrative support* to other peers or the cache community is not indicative of control." PO Resp. 4. Patent Owner describes the master's various other tasks as administrative in nature and not the master's primary role or lacking some level of control. *See id.* at 10–11 (citing Ex. 1001, 22:58–60, 63–65), 13–14 (citing Ex. 1001, 25:8–10, 16–17, 28–31, 34–35, 38–39, 46–48). Distinguishing between the primary role and administrative tasks does not preclude the master from having control in carrying out these other tasks described by Patent Owner, such as generating a location response, sending a member status request, updating a peer list, sending an update peer list message, and selecting a new master, as described by the Specification of the '262 patent. Moreover, Patent Owner's distinction on the level of control that the master has in its other tasks does not advance its argument that "master" must be interpreted as determining whether to allow a client to join a cache community. *See id.* Thus, Patent Owner's cited dictionary definition does not persuade us to modify our construction of "master."

Patent Owner's further arguments that construing "master" without a connotation of control would read it out of the claims does not persuade us to modify our construction of "master." The claims require communicating a location request to a master and receiving a location response from the master. Thus, the claims identify a role for the master, and our construction of "master" does not affect its claimed role such that "master" is read out of the claims. Also, as described above, Patent Owner's arguments regarding

the master's asserted primary role and administrative tasks do not persuade us that the element of control is present only in the master's asserted primary role of determining whether a client is allowed to join a cache community, and not in its claimed role.

Patent Owner's arguments that the "ability to dynamically adjust to changes in the cache community are dependent on the master's ability to control admission" and the master's allowing a client to join the cache community is "critical to the dynamic (i.e., changing) nature of the cache community," also do not persuade us to change our construction of "master." *See* PO Resp. 4, 14. Patent Owner describes other tasks performed by the master. *See id.* at 6–15. Based on our review of the Specification of the '262 patent, we find that these descriptions indicate that these other tasks of the master also contribute to the dynamic nature of the cache community. *See, e.g.* PO Resp. 13–14 (addressing the departure or removal of members and selecting a new master) (citing Ex. 1001, 25:8–10, 28–31, 34–35, 46–48).

Based on our review of the Specification of the '262 patent, we are not persuaded by Patent Owner's arguments that the master's determination of whether to admit a client "is not simply one of many 'administrative support' tasks" and that providing administrative support to other peers was not meant to be a "catch all" category for various tasks accomplished by the master. *See* PO Resp. 3–4, 15. Based on our review of the Specification of the '262 patent, we also do not agree with Patent Owner's argument that the '262 patent "clearly contemplates an administrative support role independent of the other tasks that were enumerated." *See id.*

Column 18, lines 34–41 of the '262 patent states that:

Community 402 is comprised of a master 410 and zero or more members 412. Members 412 and master 410 operate to support the caching of content within community 402. More specifically, both master 410 and members 402 provide for a distributed caching system within community 402. In addition to the functionality provided by members 412, master 410 is further responsible for providing administrative support to community 402.

Thus, the '262 patent describes that both master 410 and members 412 provide a distributed caching system within community 402, but that master 410 is distinguishable from members 412 in that master 410 provides administrative support to community 402 comprised of itself and members 412. The '262 patent does not further distinguish providing administrative support from allowing a client into the cache community. Even in view of the earlier description of master 410 generating allow message 424 (Ex. 1001, 18:6–11), the '262 patent does not distinguish unambiguously admitting a client into the cache community from providing administrative support to the cache community such that our construction of "master" must be narrowed, as argued by Patent Owner.

Accordingly, in view of the foregoing, Patent Owner's arguments do not persuade us to modify our construction of "master." Thus, based on our findings from the Specification of the '262 patent as described above and on the complete record before us, we determine that the broadest reasonable construction of "master" in view of the specification as it would be interpreted by one of ordinary skill in the art is "a peer that provides administrative support to other peers."

B. Asserted Ground under 35 U.S.C. § 102

Petitioner argues that Chase anticipates claims 1, 5–10, 14–19, and 23–27. Pet. 9–21.

1. Chase (Ex. 1004)

Chase describes "a system having the benefits of central caching without the bottleneck caused by a central cache server." Ex. 1004, 2:41–43. Reproduced below is Figure 1 of Chase.
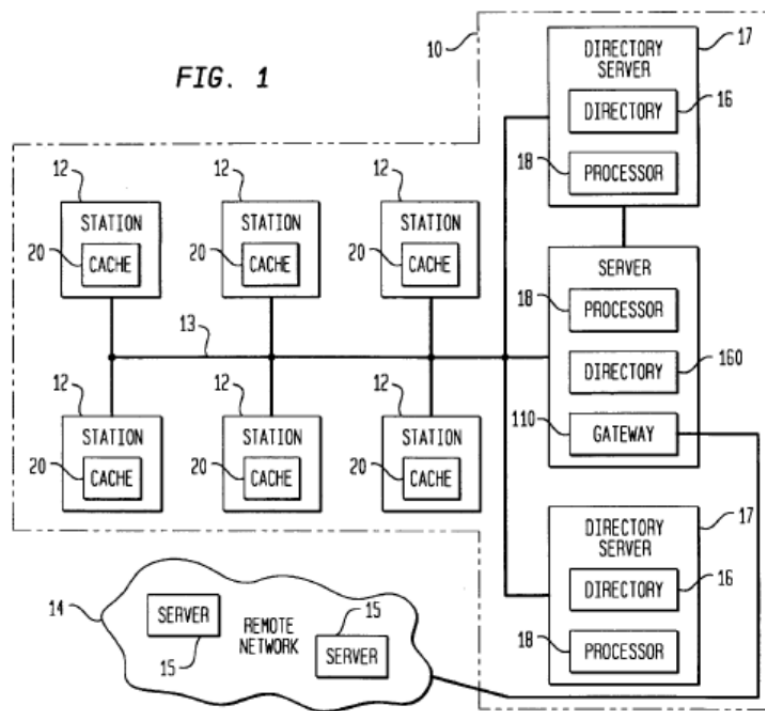

Figure 1 depicts a schematic diagram of a computer system according to an embodiment. *Id.* at 3:4–5. Local area network 10 includes server 11 (shown without a reference designator between directory servers 17) connected by communication channel 13 to user stations 12. *Id*. at 5:33–35. Local area network 10 is connected to remote network 14, such as the Internet, which includes remote servers 15. *Id*. at 5:37–43. Each user

station 12 includes cache 20, which receives copies of data retrieved by stations 12 from remote server 15. *Id.* at 5:47–48, 54–59. If a user of station 12 requests data from remote network 14, cache 20 is examined to see if the data are already in cache 20. *Id.* at 5:59–61. If not, before attempting to retrieve the data from remote network 14, central cache directory 16 of directory server 17 or central cache directory 160 of server 11 is queried. *Id.* at 5:62–65, 6:4–5. If directory 16 or 160 contains an entry corresponding to the requested data, requesting station 12 requests the data from station 12 indicated by the directory entry. *Id.* at 6:21–24. If directory 16 or 160 does not contain an entry corresponding to the requested data, requesting station 12 is informed and then requests data from remote network 14. *Id.* at 6:6–9.

2. Analysis

a. Claims 1 and 5–9

Petitioner argues that Chase discloses a method for a dynamic distributed data caching, because it describes a computer network system where caches at individual systems are available to other stations. Pet. 10 (citing Ex. 1004, Abstract, 2:44–52, 4:33–53, 5:37–43, Fig. 1). Petitioner further argues that Chase describes "generating a content request for requested content at a first peer in a cache community," because Chase discloses client software, such as a browser, at one of many stations 12 in a local area network requesting data that may be satisfied by a local cache. *Id.* at 11–12 (citing Ex. 1004, 6:64–7:5, Figs. 1, 3 (steps 34–35)). Petitioner also argues that Chase describes "determining a second peer associated with the requested content, the second peer being associated with the cache community," because Figures 3 and 4 of Chase and their associated

description disclose directory server 17 being queried to determine if it has

an entry corresponding to the requested data, and test 47 that can return the

address of station 12 that has the requested data to querying station 12. *Id.* at

12–14 (citing Ex. 1004, 6:58–7:22, 7:62–8:35, Fig. 3 (steps 300, 301), Fig. 4

(steps 41, 42, 47–48)). Petitioner further argues that Chase states that "[t]he

querying station 12 can then go and retrieve the object from the station 12"

and, thus, discloses "retrieving, by the first peer, the requested content from

the second peer." *Id.* at 14–15 (citing Ex. 1004, 7:19–22, 57–58, 8:35–36,

Fig. 3 (steps 303, 306, 307)). Petitioner also contends that Chase describes a

cache query unit at a first user station that queries the central cache directory

for a location of a cached data, and so discloses "wherein determining the

second peer includes: generating, by a cache portion associated with the first

peer, a location request." *Id.* at 15 (citing Ex. 1004, 2:55–50, 6:58–7:17,

Fig. 3 (step 300)). For the limitation "communicating the location request to

a master associated with the cache community," Petitioner argues that Chase

discloses a query message and directory server 17 is queried to determine if

it has an entry corresponding to the requested data. *Id.* at 15–16 (citing

Ex. 1004, 6:58–7:17, 7:62–8:19, Fig. 3 (step 300)). Finally, for the

limitation "receiving a location response from the master, the location

response indicating the second peer," Petitioner argues that Chase discloses

that directory server 11 or 17 returns a "HIT" message to querying station 12

with the address of station 12 that has the requested object. *Id.* at 16–17

(citing Ex. 1004, 6:58–7:18, 7:62–8:35, Fig. 3 (step 301), Fig. 4 (step 48)).

Dependent claim 5 recites "wherein the cache portion includes a

software application," and Petitioner contends Chase describes software

processes to implement its disclosure. *Id*. at 17 (citing Ex. 1004, 6:54–59). For dependent claim 6, which recites the further step of "forwarding the content response to the second peer," Petitioner argues that Chase discloses "the request would be routed to the local station that has cached the data." *Id*. (citing Ex. 1004, 4:6–17). Dependent claim 7 recites "wherein the content request includes a hypertext transport protocol request," and Petitioner argues that Chase describes requested data as transmitted in units of "pages," which are formatted using Hypertext Transfer Protocol. *Id*. at 17–18 (citing Ex. 1004, 1:10–19, 3:21–47). In relation to dependent claim 8, which recites "wherein the content includes a web page," Petitioner argues Chase describes a user being able to retrieve pages. *Id*. at 18 (citing Ex. 1004, 3:21–23, 31–35). For dependent claim 9, which recites "wherein the first and second peers respectively include a member of the cache community," Petitioner asserts that Chase discloses stations 12 of local area network 10. *Id*. at 18–19 (citing Ex. 1004, 3:31–35, 5:33–37).

Asserting that a "master" is a peer that determines whether to allow a client to join the cache community, Patent Owner responds that "Chase does not describe the use of a master that determines whether a client is allowed to join a cache community." PO Resp. 16. Patent Owner argues that "there is no determination in Chase of whether to allow a station into local area network 10 or to list a station in directory server 17." *Id.* at 17. In particular, Patent Owner argues that Petitioner's asserted "master," directory server 17 of Chase, "is merely a server that houses a directory." *Id.* at 16 (citing Pet. 15; Ex. 1004, 5:62–65). Patent Owner also argues that "all stations 12 are added to directory server 17 as soon as they establish

communication with the network." *Id.* at 16–17 (citing Ex. 1004, 4:63–66, 6:59–67, 7:67–8:9). On the foregoing bases, Patent Owner, thus, concludes that "Chase cannot be read to disclose the elements of claim 1, including 'communicating the location request to a master associated with the cache community; and receiving a location response from the master, the location response indicating the second peer." *Id.* at 17–18. Patent Owner states that Chase "fails to anticipate claims 5–9 for at least the same reasons that Chase fails to anticipate claim 1." *Id.* at 18.

In view of our construction of "master," Patent Owner's argument that Chase does not describe a master that determines whether a client is allowed to join a cache community is not persuasive. Therefore, we are persuaded, by a preponderance of the evidence, that claims 1 and 5–9 are anticipated by Chase.

b. Claims 10 and 14–18

For independent claim 10, which recites a "computer readable storage medium including code for dynamic distributed data caching, the code operable to" carry out steps similar to the steps of claim 1, Petitioner relies on Chase as applied to claim 1. Pet. 19. Petitioner additionally argues that Chase describes that "[s]tations 12 and servers 11, 17 are . . . computers . . . which preferably run[] software processes to implement the present invention." *Id*. (citing Ex. 1004, 6:54–59). For dependent claims 14–18, Petitioner relies on its arguments for corresponding limitations in claims 5–9. *Id*.

Patent Owner argues that "Chase does not disclose 'code . . . operable to . . . communicate the location request to a master associated with the

cache community; and receive a location response from the master'. . . [f]or at least the reasons discussed above with respect to claim 1." PO Resp. 18. Patent Owner, thus, concludes that "Chase fails to anticipate claims 14–18 for at least the same reasons that Chase fails to anticipate claim 10." *Id.*

As discussed above for claims 1 and 5–9, Patent Owner's arguments based on its construction of "master" are not persuasive. Thus, we are persuaded, by a preponderance of the evidence, that claims 10 and 14–18 are anticipated by Chase.

c. Claims 19 and 23–27

Independent claim 19 recites a "system for dynamic distributed data caching comprising" means-plus-function limitations with functions similar to the steps of claim 1. Petitioner argues that Chase discloses each of the functions and corresponding structures. Pet. 19–21 (citing Ex. 1004, 1:15–16, 3:20–25, 4:6–17, 4:27–29, 5:33–37, 6:21–24, 6:54–7:57, 7:64–8:36, Figs. 3–4); *see also* Dec. on Inst. 12–15 (analyzing Petitioner's arguments regarding claims 19, 23–27). For dependent claims 23–27, Petitioner relies on its arguments for corresponding limitations in claims 5–9. Pet. 21.

Patent Owner does not dispute Petitioner's contentions that Chase describes the majority of the limitations of claims 19 and 23–27. Instead, Patent Owner's arguments focus on whether Chase describes a "master." Specifically, Patent Owner argues that the "directory server 17 of Chase to which Petitioner refers, however, is not a master for at least the reasons discussed above with respect to claim 1," and "therefore does not anticipate claim 19." PO Resp. 19. Patent Owner concludes that "Chase therefore fails to anticipate claims 23–27 for at least the same reasons that Chase fails

to anticipate claim 19." *Id.*

For the reasons discussed for claims 1 and 5–9, we are persuaded, by a preponderance of the evidence, that claims 19 and 23–27 are anticipated by Chase.

C. Asserted Ground under 35 U.S.C. § 103

Petitioner argues that claims 2–4, 11–13, and 20–22 would have been obvious over Chase and Scharber. Pet. 50–54. We discuss Chase above.

1. Scharber (Ex. 1008)

Scharber describes a scheme for caching Internet content at one or more locations. Ex. 1008, 1:7–9. Reproduced below is Figure 2 of Scharber.
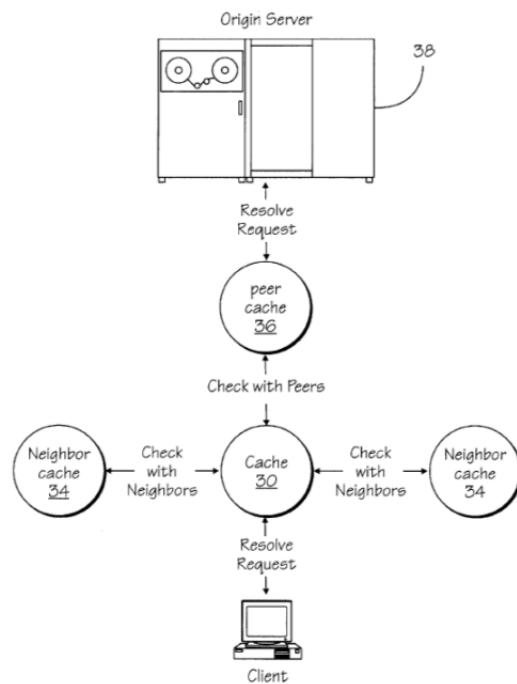

FIG. 2
(Prior Art)

Figure 2 depicts an example of a cache hierarchy. *Id.* at 6:41.
Referring to Figure 2, Scharber describes that "when a cache 30 receives a request for content from a client 32, the cache 30 first determines whether it

has a copy of the requested content." *Id.* at 4:29–32. If cache 30 does not have the requested content, "cache 30 sends a request to its neighbor cache(s) 34 and then, if necessary, to its peer cache 36." *Id.* at 4:32–36. Scharber further describes that "[e]ach neighbor cache 34 (i.e., those at the same level of the hierarchy as cache 30) sends a response indicating whether it has the requested information." *Id.* at 4:37–39. If none of neighbor caches 34 have the requested information, cache 30 forwards the request to peer cache 36. *Id.* at 4:46–48. If peer cache 36 does not have the requested information, peer cache 36 retrieves the content from origin server 38 and sends it to cache 30. *Id.* at 4:48–51.

2. Analysis

a. Claims 2–4

Claim 2 recites the "method of claim 1, further comprising: retrieving, by the second peer, the requested content from an origin server when the requested content is unavailable at the second peer; and storing the requested content at the second peer."

Petitioner contends that "Chase . . . seeks to reduce network loads through distributed caching of data at user stations in a network," and "Scharber elaborates on this concept and teaches that if a peer cache (i.e., indicated user station) does not have the content requested by another cache (requesting user station), it can obtain it directly from the origin server, store it locally, and return it to a requesting cache." Pet. 51 (citing Ex. 1004, Abstract, 2:44–63, 5:25–29, 6:58–7:27; Ex. 1008, 4:46–51). In particular, Petitioner argues Scharber teaches or suggests the retrieving step of claim 2, because Scharber describes peer cache 36 retrieving content from origin server 38 when peer cache 36 does not have the requested content. *Id.* at 52

(citing Ex. 1008, 4:48–51). Petitioner also argues that Scharber teaches or suggests the storing step, because Scharber describes that peer cache 36 has a copy responsive to the requested content but that copy may be stale, and because the copy responsive to the requested content is stale, the copy has been stored. *Id.* at 52–53 (citing Ex. 1008, 4:48–50).

Regarding claim 3, which recites "wherein the requested content is unavailable when the requested content has been expired," Petitioner argues Scharber discloses that peer cache 36 responds to a request by retrieving the content from origin server 38 if the cached copy is stale. Pet. 53 (citing Ex. 1008, 4:48–51). For claim 4, which recites "wherein the requested content is unavailable when the requested content is not stored at the second peer," Petitioner argues Scharber discloses that peer cache 36 retrieves content from origin server 38 if it does not have a cached copy. *Id.* at 53–54 (citing Ex. 1008, 4:37–42, 48–51).

Petitioner further contends that a "person having ordinary skill in the art would have recognized that the distributed caching scheme described in Chase for requesting and obtaining data could have been combined with Scharber for actions to be taken if the peer cache does not have the requested content." Pet. 51. Petitioner cites the Danzig Declaration as support that "a skilled artisan would have recognized that such a modification would similarly reduce the amount of time it takes to obtain content and also decrease traffic." *Id.* (citing Ex. 1002 ¶¶ 12, 16).

Patent Owner argues that Chase and Scharber fail to disclose "communicating the location request to a *master* associated with the cache community" and "receiving a location response from the *master*, the location

response indicating the second peer," as recited by claim 1. PO Resp. 20. Specifically, Patent Owner argues that "Scharber also fails to disclose a master as recited by claim 1" because "there is no discussion of a master that is responsible for determining whether a client may join a cache community," and the query optimizer of Scharber "is not described as being a master that is responsible for determining whether to admit clients into the group of cache servers." *Id.* at 19–20.

In view of our construction of "master," the reasons discussed above for claim 1, and because Petitioner relies on Chase for disclosing the recited master of claim 1, Patent Owner's arguments are not persuasive.

Patent Owner also argues that "one of ordinary skill in the art would not have been motivated to combine the teachings of Chase and Scharber in the manner recited by claim 2 . . . because the proposed combination is both unnecessary and would negatively impact the performance of Chase." PO Resp. 25. In particular, Patent Owner asserts that "Chase has no need to consult a second peer device (i.e., a local station 12) that is already known before-hand not to have the available requested content," and "Chase knows that the second peer device does not have the requested content available." *Id.* at 26–27. Patent Owner, thus, argues that "there is no need to artificially insert the second peer device for the purpose of retrieving content requested by a first peer device," and "no need or benefit is achieved for combining . . . Chase with . . . Scharber, . . . when Chase teaches that it is already known that the second peer does not have the requested content" and "would result in a decline in the performance of the resulting cache system." *Id.*

Petitioner replies that Chase expressly teaches that "content

previously identified with another station may no longer be available" and "expressly contemplates that another station may not have the content that the directory said it possessed." Reply 8–9 (citing Ex. 1004, 6:21–31). Petitioner argues that Chase teaches or suggests "informing the first peer device that it no longer has the requested content, whereupon the first device retrieves the content itself." *Id.* at 9 (citing Ex. 1004, 6:41–53). Petitioner also argues that Scharber teaches or suggests the alternative of "having the second peer device retrieve and return the requested content to the first peer device if the second peer device no longer has the content or the content is stale." *Id.* (citing Ex. 1008, 4:46–51). Petitioner further argues that modification of Chase with Scharber is desirable "in order to reduce delay in obtaining content." *Id.* (citing Ex. 1002 ¶¶ 13, 16).

Patent Owner does not provide evidence to support its attorney argument that the combination of Chase and Scharber would result in a decline in performance. For example, Chase and Scharber do not indicate whether performance would decline if peer cache 36 of Scharber (Petitioner's asserted second peer) obtains content from origin server 38 rather than station 12 of Chase (Petitioner's asserted first peer), as argued by Patent Owner. However, Petitioner provides reasoning and evidence for its position by citing the Danzig Declaration. Pet. 51–52 (citing Ex. 1002 ¶¶ 12, 16). The Danzig Declaration opines that the skilled artisan would have been motivated to combine Chase and Scharber to decrease latency. Ex. 1002 ¶ 16. Thus, on the complete record before us, we are not persuaded by Patent Owner's argument that the combination of Chase and Scharber is unnecessary and negatively impacts performance.

In view of the foregoing, we are persuaded, by a preponderance of the evidence, that claims 2–4 are unpatentable over Chase and Scharber.

b. *Claims 11–13 and 20–22*

Petitioner relies on its arguments for claims 2–4 in its assertions that Chase and Scharber disclose similar limitations recited by claims 11–13 and 20–22. Pet. 54.

Patent Owner argues that Chase and Scharber do not teach or suggest a master or "code . . . operable to . . . communicate the location request to a master associated with the cache community . . . or to . . . receive a location response from the master, the location response indicating the second peer," as recited by independent claim 10 for the reasons asserted for claim 1. PO Resp. 22–23. Patent Owner also argues that claims 11–13 "depend from claim 10" and "are not rendered obvious under § 103(a) over Chase in view of Scharber for at least the same reasons as their independent base claim." *Id.* at 23.

Patent Owner also argues that Chase and Scharber fail to teach or suggest at least "a system for dynamic distributed data caching comprising: . . . means for determining a second peer, . . . wherein the means for determining the second peer includes: . . . means for communicating the location request to a master associated with the cache community; and means for receiving a location response from the master, the location response indicating the second peer," as recited by independent claim 19 for the reasons asserted for claim 1. PO Resp. 23. Patent Owner further argues that claims 20–22 "depend from claim 19" and "are therefore not obvious under § 103(a) over Chase in view of Scharber for at least the same reasons

as their independent base claim." *Id.* at 23–24.

For the reasons discussed above addressing claims 2–4, Patent Owner's arguments are not persuasive. Thus, we are persuaded, by a preponderance of the evidence, that claims 11–13 and 20–22 are unpatentable over Chase and Scharber.

III.　CONCLUSION

Petitioner has demonstrated, by a preponderance of the evidence, that, under 35 U.S.C. § 102, claims 1, 5–10, 14–19, and 23–27 of the '262 patent are anticipated by Chase and that, under 35 U.S.C. § 103, claims 2–4, 11–13, and 20–22 of the '262 patent are unpatentable over Chase and Scharber.

IV.　ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–27 of the '262 patent have been shown to be unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, the parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirement of 37 C.F.R. § 90.2.

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