

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ACTIVISION BLIZZARD, INC.,
ELECTRONIC ARTS INC.,
TAKE-TWO INTERACTIVE SOFTWARE, INC.,
2K SPORTS, INC., and
ROCKSTAR GAMES, INC.,
Petitioner,

v.

ACCELERATION BAY, LLC,
Patent Owner.

Case IPR2016-00726
Patent 6,910,069 B1

Before SALLY C. MEDLEY, LYNNE E. PETTIGREW, and
WILLIAM M. FINK, *Administrative Patent Judges*.

MEDLEY, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Activision Blizzard, Inc., Electronic Arts Inc., Take-Two Interactive Software, Inc., 2K Sports, Inc., and Rockstar Games, Inc. (collectively, “Petitioner”) filed a Petition for *inter partes* review of claims 1–17 of U.S. Patent No. 6,910,069 B1 (Ex. 1101, “the ’069 patent”). Paper 2 (“Pet.”). Acceleration Bay, LLC (“Patent Owner”) filed a Preliminary Response. Paper 9 (“Prelim. Resp.”). Institution of an *inter partes* review is authorized by statute when “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a); *see* 37 C.F.R. § 42.108. Upon consideration of the Petition and Preliminary Response, we conclude the information presented does not show there is a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of any of claims 1–17 of the ’069 patent.

A. Related Matters

Petitioner identifies the following pending judicial matters as relating to the ’069 patent: *Activision Blizzard, Inc. v. Acceleration Bay LLC*, Case No. 3:16-cv-03375 (N.D. Cal., filed June 16, 2016); *Electronic Arts Inc. v. Acceleration Bay LLC*, Case No. 3:16-cv-03378 (N. D. Cal., filed June 16, 2016); *Take-Two Interactive Software, Inc. v. Acceleration Bay LLC*, Case No. 3:16-cv-03377 (N.D. Cal., filed June 16, 2016); *Acceleration Bay LLC v. Activision Blizzard, Inc.*, Case No. 1:16-cv-00453 (D. Del., filed June 17, 2016); *Acceleration Bay LLC v. Electronic Arts Inc.*, Case No. 1:16-cv-00454 (D. Del., filed June 17, 2016); *Acceleration Bay LLC v. Take-Two*

IPR2016-00726
Patent 6,910,069 B1

Interactive Software, Inc., Case No. 1:16-cv-00455 (D. Del., filed June 17, 2016). Paper 10, 2–3.

Petitioner and Patent Owner also identify numerous other petitions for *inter partes* review filed by Petitioner challenging claims of patents related to the '069 patent:

IPR2015-01951 IPR2015-01953	U.S. Patent No. 6,714,966 B1
IPR2015-01964 IPR2015-01996 IPR2016-00727	U.S. Patent No. 6,829,634 B1
IPR2015-01970 IPR2015-01972	U.S. Patent No. 6,701,344 B1
IPR2016-00747	U.S. Patent No. 6,732,147 B1
IPR2016-00724	U.S. Patent No. 6,920,497 B1

Pet. 2; Paper 8, 1.

B. The '069 Patent

The '069 patent relates to a “broadcast technique in which a broadcast channel overlays a point-to-point communications network.” Ex. 1101, 4:3–5. The communication network consists of a graph of point-to-point connections between host computers or nodes. *Id.* at 4:23–26. Figure 1 of the '069 patent is reproduced below:

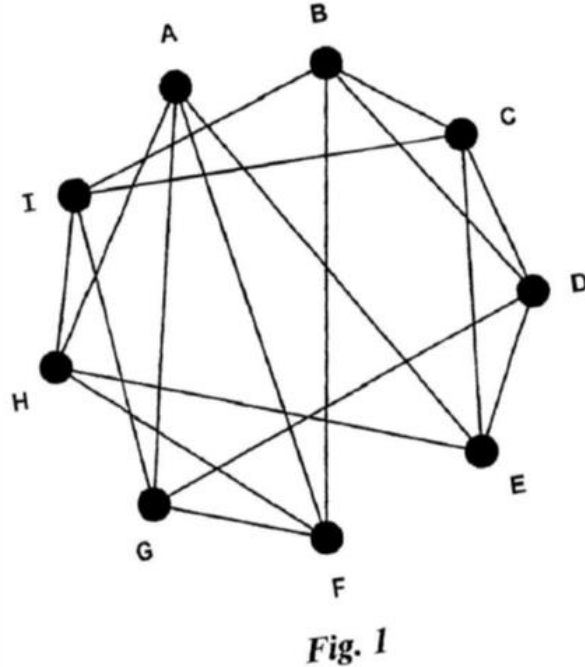


Figure 1 illustrates a broadcast channel represented by a “4-regular and 4-connected” graph. *Id.* at 4:50–51. The graph of Figure 1 is “4-regular” because each node is connected to exactly four other nodes (e.g., node A is connected to nodes E, F, G, and H). *Id.* at 4:40–41, 4:51–55. To connect to the broadcast channel, a seeking computer locates a computer that is connected to the broadcast channel and then establishes a connection with a number of computers connected to the broadcast channel. *Id.* at Abstract.

Figures 3A and 3B of the '069 patent are reproduced below.

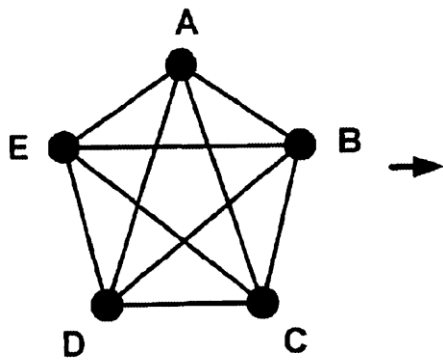


Fig. 3A

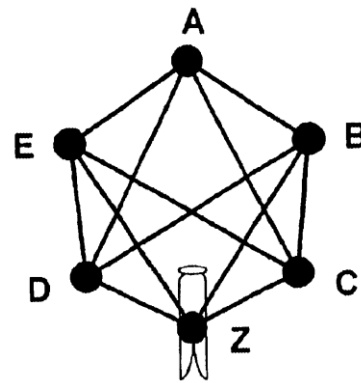


Fig. 3B

Figures 3A and 3B illustrates a process of connecting a new computer Z to the broadcast channel. *Id.* at 2:51–52. Figure 3A illustrates the broadcast channel of a 4-regular graph, where each of the computers is already connected to four computers. *Id.* at 5:55–57. Some of the connections between computers need to be broken so that the seeking computer can connect to four computers. In one embodiment, two pairs of computers that are connected to each other are identified. *Id.* at 5:57–61. Each of these pairs breaks the connection between them, and then each of the four computers (two from each pair) connects to the seeking computer. *Id.* at 5:61–64. The above figures show this concept, illustrating seeking computer Z connecting to the broadcast channel. Computers B and E and computers C and D are the two identified pairs of computers that are identified as neighbors for new computer Z. *Id.* at 5:67–6:2. The connection between each of these pairs is broken, and a connection between computer Z and each of computers B, C, D, and E is established. *Id.* at 6:2–6:5.

C. Illustrative Claim

Petitioner challenges claims 1–17. Independent claims 1 and 14 are illustrative of the claimed subject matter:

1. A computer-based, non-routing table based, non-switch based method for adding a participant to a network of participants, each participant being connected to three or more other participants, the method comprising:

identifying a pair of participants of the network that are connected wherein a seeking participant contacts a fully connected portal computer, which in turn sends an edge connection request to a number of randomly selected neighboring participants to which the seeking participant is to connect;

disconnecting the participants of the identified pair from each other; and

connecting each participant of the identified pair of participants to the seeking participant.

Id. at 28:48–62.

14. A computer-based, non-switch based method for adding nodes to a graph that is m -regular and m -connected to maintain the graph as m -regular, where m is four or greater, the method comprising:

identifying p pairs of nodes of the graph that are connected, where p is one half of m , wherein a seeking node contacts a fully connected portal node, which in turn sends an edge connection request to a number of randomly selected neighboring nodes to which the seeking node is to connect;

disconnecting the nodes of each identified pair from each other; and

connecting each node of the identified pair of nodes to the seeking node.

Id. at 30:3–16.

D. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–17 are unpatentable based on the following grounds (Pet. 3):

Reference(s)	Basis	Challenged Claims
Obraczka, ¹ Denes, ² and Shoubridge ³	§ 103(a)	1–3, 7–9, and 11–17
Obraczka, Denes, Shoubridge, and Valiant ⁴	§ 103(a)	4–6, 9, and 10

II. DISCUSSION

A. Claim Construction

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b). Consistent with the broadest reasonable construction, claim terms are presumed to have their ordinary and customary meaning as understood by a person of ordinary skill in the art in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

¹ Katia Obraczka, *Massively Replicating Services In Wide-Area Internetworks* (Ph.D. Thesis, University of Southern California) (Dec. 1994) (Ex. 1010) (“Obraczka”).

² Tamás Dénes, *The “Evolution” of Regular Graphs of Even Order by their Verticies*, MATEMATIKAI LAPOK 365–377 (27th ed. 1976–1979) (Ex. 1016) and certified English translation of Ex. 1016 (Ex. 1017) (“Denes”).

³ Peter J. Shoubridge & Arek Dadej, *Hybrid Routing in Dynamic Networks*, 3 IEEE INT’L CONF. ON COMMS. CONF. REC. 1381–86 (Montreal 1997) (Ex. 1020) (“Shoubridge”).

⁴ L.G. Valiant, *Optimality of a Two-Phase Strategy for Routing in Interconnection Networks*, IEEE Transactions on Computers (Sept. 1983) (Ex. 1027) (“Valiant”).

“m-regular”

Petitioner proposes the term “m-regular,” recited in at least independent claim 14, means “each node is connected to exactly m other nodes.” Pet. 13 (citing Ex. 1101, 4:40–50, 14:51–15:6). Patent Owner does not offer a construction of this term. Prelim. Resp. 3–4. For purposes of this Decision, we agree Petitioner’s proposed construction accords with the broadest reasonable construction consistent with the Specification, which, for example, describes a graph in which each node is connected to four other nodes as a 4-regular graph. Ex. 1101, 4:40–50.

“m-connected”

Petitioner proposes the term “m-connected,” recited in at least independent claim 14, means “dividing the network into two or more separate parts would require the removal of at least m nodes.” Pet. 13 (citing Ex. 1101, 4:40–50). Patent Owner does not offer a construction of this term. Prelim. Resp. 3–4. The portion of the Specification cited by Petitioner describes the 4-connected graph as having the property that it would take the failure of at least 4 nodes to divide the graph into disjoint subgraphs. Ex. 1101, 4:40–50. Consequently, we agree for purposes of this Decision that Petitioner’s proposed construction accords with the broadest reasonable construction consistent with the Specification.

“non-routing table based”

Petitioner proposes the term “non-routing table based,” recited in at least claim 1, means “does not use routing tables to carry out the steps of the claim.” Pet. 14. Patent Owner does not offer a construction of this term. Prelim. Resp. 3–4. We agree for purposes of this Decision that Petitioner’s

proposed construction accords with the broadest reasonable construction consistent with the Specification.

“non-switch based method for adding a participant”

Petitioner proposes the term “non-switch based method for adding a participant,” recited in at least independent claims 1 and 14, means “a method that does not use a common switch to connect all nodes in the network.” Pet. 14. Patent Owner does not offer a construction of this term. Prelim. Resp. 3–4. We agree for purposes of this Decision that Petitioner’s proposed construction accords with the broadest reasonable construction consistent with the Specification.

B. Asserted Obviousness over Obraczka, Denes, and Shoubridge

Petitioner contends that independent claims 1 and 14 are unpatentable under 35 U.S.C. § 103(a) as obvious over Obraczka, Denes, and Shoubridge, and the remaining challenged claims that depend from claims 1 and 14 would have been obvious on the same basis or further in view of Valiant. Pet. 23–59. Relying on the testimony of Dr. David R. Karger, Petitioner explains how the combined prior art allegedly teaches or suggests all of the claim limitations. *Id.* (citing Ex. 1003).

Summary of Obraczka

Obraczka describes techniques for massive replication of data in wide-area internetworks. Ex. 1010, 1. Obraczka describes an architecture that builds a logical update flooding topology over which replicas propagate updates to other replicas in their group. *Id.* at xiv. A replica in a group is designated as the group master and is responsible for computing logical update topologies for the group. *Id.* at 20. Obraczka also describes a master

that is responsible for supervising group membership. *Id.* at 91. Obraczka further describes that “[a] process that wants to join the group sends a request to the master, who may accept or reject it.” *Id.* Obraczka describes the topology computation problem as a graph theory problem. *Id.* at 36. Obraczka utilizes graph theory operations and principles to achieve the goal of building a logical update topology that is k-connected for resilience, uses the physical network efficiently, and restricts update propagation delays. *Id.*

Summary of Denes

Denes is a graph theory technical paper that describes adding or removing a node from a graph. Ex. 1017, 365. Denes discloses an operation called ET ($ET: \Gamma_{n,k} \rightarrow \Gamma_n$; where $E' = E \setminus \{(p_1p_2), (p_3p_4), \dots, (p_{k-1}p_k)\} \cup \{(pp_1), (pp_2), \dots, (pp_k)\}$). *Id.* Denes discloses that the new graph (E') is the result of the disconnection of $k/2$ connected neighbor pairs ($\{(p_1p_2), (p_3p_4), \dots, (p_{k-1}p_k)\}$) which are then connected (noted by operation $\cup$) to a new node p ($\{(pp_1), (pp_2), \dots, (pp_k)\}$). *Id.*

Summary of Shoubridge

Shoubridge describes techniques for routing messages to all the participants in a communications network. Ex. 1005, 2.⁵ Specifically, Shoubridge models a communication network as a graph in which “[e]ach node functions as a source of user traffic entering the network where traffic can be destined to all other nodes within the network.” *Id.* at 3. In a specific example (not depicted in a figure), Shoubridge describes a “64 node network with connectivity of degree 4” modeled as a “large regular graph forming a manhattan grid network that has been wrapped around itself as a torus.” *Id.*

⁵ We refer to exhibit pagination, rather than the original document pagination.

Shoubridge describes a routing protocol called “constrained flooding, the most efficient way to flood an entire network.” *Id.* In constrained flooding, a packet received at a node is rebroadcast on all links except the link it was received on, and packets are numbered such that if “packets revisit a node with the same sequence number, they are discarded.” *Id.* Shoubridge describes simulations using both constrained flooding and minimum hop algorithms that use routing tables. *Id.* Ultimately, a hybrid routing model is proposed in which constrained flooding is used if routing tables are unable to provide a next node entry for forwarding user traffic, but minimum hop is used if a valid next node entry exists. *Id.* at 4.

Analysis

Based on the record before us, we determine that there is not a reasonable likelihood that Petitioner will prevail in showing that any of claims 1–17 are unpatentable on the grounds asserted.

Claim 1 recites “wherein a seeking participant contacts a fully connected portal computer, which in turn sends an edge connection request to a number of randomly selected neighboring participants.” Claim 14 has similar language, except instead of claiming “participant(s)” and “computer,” claim 14 recites “node(s).” Petitioner’s showing with respect to claim 1 is substantially the same as it is for claim 14. Pet. 23–31, 40–49. Consequently, claim 1 is representative for purposes of discussion.

Petitioner relies on Obraczka alone for the claim 1 phrase “wherein a seeking participant contacts a fully connected portal computer, which in turn sends an edge connection request to a number of randomly selected neighboring participants.” *Id.* at 26–27. Per the claim chart, Petitioner cites to numerous places in Obraczka describing a group master and a master. *Id.*

Petitioner contends that a person of ordinary skill in the art “would understand that the group master is fully connected because it is connected to the preexisting k-connected group.” *Id.* at 28 (citing Ex. 1010, 20; Ex. 1003 ¶ 276). Thus, we understand that Petitioner relies on the “group master” of Obraczka to meet the claimed “fully connected portal computer.” Per claim 1, the seeking participant *contacts* the fully connected portal computer.

Patent Owner argues that Petitioner has not demonstrated sufficiently that a seeking participant contacts the group master as alleged. Prelim. Resp. 15. In essence, Patent Owner argues that Petitioner conflates the descriptions in Obraczka regarding the “master” with the descriptions in Obraczka regarding the “group master” as if they are one and the same, without explaining why they are treated as one and the same. *Id.* 17–19. This argument is persuasive.

Petitioner relies on Obraczka for the claimed portal computer, directing attention to descriptions from pages 15, 20, 37, 43, and 91 of the 140 page document. Pet. 26–27. Petitioner, however, does not explain why those disjunctive descriptions may be treated as related to each other as if one embodiment, or if not one embodiment why a person having ordinary skill in the art would have combined the different embodiments. Importantly, some of the descriptions Petitioner relies on refer to “group master” while other passages refer to a “master.” Facially, they are not the same, and Petitioner does not explain sufficiently why they should be treated as the same.

Regarding the group master, Obraczka describes that a replica in a group is designated as the group master and is responsible for computing

logical update topologies for the group. Ex. 1010, 20. Obraczka further describes that replicas may join a group; that to join a group a new replica copies a neighbor's database, and floods its existence to the rest of the group; and that when a new member joins the group, a topology calculation is spawned which includes the new replica. *Id.* Missing from this description is that the new replica or member contacts the group master as asserted. Accordingly, Petitioner has not shown that a "seeking participant contacts" the group master, which Petitioner alleges is the claimed portal computer.

Claim 1 further requires that the fully connected portal computer "sends an edge connection request to a number of randomly selected neighboring participants" to which the seeking computer is to connect. Petitioner asserts that it "would be obvious to have the master communicating the connection request (i.e., the "edge connection request" of the claim) to the affected nodes, i.e., p₁, p₂, p₃, and p₄ [of Denes]." Pet. 29. Petitioner further asserts that because the Obraczka group master is responsible for computing logical update topologies for the group, a person having ordinary skill in the art would have been motivated to use the group master for the communications. *Id.* (citing Ex. 1003 ¶ 278). In paragraph 278 of his declaration, Dr. Karger largely echoes Petitioner's argument made in connection with the claimed feature, and further concludes that it would not have been possible to implement the Denes connection method without communicating a request. The argument, and supporting testimony, are conclusory. Petitioner has not shown that the group master sends an edge request as claimed, nor has Petitioner sufficiently explained why it would have been obvious to do so. For example, Obraczka describes that:

Replicas may join or leave a replication group at any time. To join a group, a new replica copies a neighbor's database, and floods its existence to the rest of the group. When a new member joins the group, a topology calculation is spawned. The resulting topology includes the new replica and is distributed to the group.

Ex. 1010, 20.

From the above, a new topology is calculated and distributed to the group after a new replica is added, without sending an edge connection request in the first instance to connect the new replica. We are persuaded by Patent Owner's arguments that Obraczka's group master uses a strategy of generating a new topology and informing the other networked computers of the change after a new replica is added, as opposed to what is claimed.

Prelim. Resp. 14–15.

Moreover, Petitioner has not sufficiently explained why a person having ordinary skill in the art would have modified the group master of Obraczka, which does not send a request to neighboring participants, to include a request to neighboring participants. Although Dr. Karger testifies that it would not have been possible to implement the Denes connection method without sending a connection request, he does not explain sufficiently why that is so, or why one of ordinary skill in the art would have used the group master from Obraczka to make such a request to implement the Denes connection method.

Still further, the disputed phrase requires that the edge connection request be sent to a “number of randomly selected” neighboring participants to which the seeking participant is to connect. Petitioner asserts that a person having ordinary skill in the art “would further understand that the methods of Obraczka and Denes readily teach choosing the neighboring

participants in a random manner.” Pet. 29 (citing Ex. 1003 ¶¶ 279–282).⁶ Choosing neighboring participants in a random manner to connect to, however, is not the same as sending a request to a number of randomly selected neighboring participants. In essence, Petitioner’s argument and supporting evidence are not commensurate in scope with the claim language of sending an “edge connection request to a number of randomly selected neighboring participants.”

For all of the above reasons, we are not persuaded that Petitioner has established a reasonable likelihood that Petitioner would prevail in its challenge to independent claims 1 or 14, or dependent claims 2–13 and 15–17.

III. CONCLUSION

For the foregoing reasons, we determine that there is not a reasonable likelihood that Petitioner would prevail in showing that claims 1–17 of the ’069 patent are unpatentable.

IV. ORDER

For the foregoing reasons, it is

ORDERED that the Petition is denied as to all challenged claims, and no trial is instituted.

⁶ This assertion appears to be inconsistent with Petitioner’s earlier argument that it “would be obvious to have the master communicating the connection request (i.e., the “edge connection request” of the claim) to the affected nodes, i.e., p₁, p₂, p₃, and p₄ [of Denes].” Pet. 29. Petitioner fails to reconcile that the alleged connection request to the affected nodes apparently would be in order “i.e., p₁, p₂, p₃, and p₄” and not random.

IPR2016-00726
Patent 6,910,069 B1

FOR PETITIONER:

Michael M. Murray
Andrew R. Sommer
Michael A. Tomasulo
Gregg Duffey
WINSTON & STRAWN LLP
asommer@winston.com
mmurray@winston.com
mtomasulo@winston.com
gduffey@winston.com

FOR PATENT OWNER:

James Hannah
Michael Lee
Shannon Hedvat
KRAMER LEVIN NAFTALIS & FRANKEL LLP
jhannah@kramerlevin.com
mhlee@kramerlevin.com
shedvat@kramerlevin.com