

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DISH NETWORK L.L.C.,
DISH TECHNOLOGIES L.L.C., and
SLING TV L.L.C.,

v.

SOUND VIEW INNOVATIONS, LLC,
Patent Owner.

IPR2020-01041
Patent 6,725,456 B1

Before DEBRA K. STEPHENS, DANIEL J. GALLIGAN, and
JOHN A. HUDALLA, *Administrative Patent Judges*.

STEPHENS, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

A. *Background and Procedural History*

DISH Network L.L.C., DISH Technologies L.L.C., and Sling TV L.L.C. (collectively, “Petitioner”) filed a petition for *inter partes* review (Paper 2 (“Pet.” or “Petition”)) challenging claim 13 of U.S. Patent

IPR2020-01041
Patent 6,725,456 B1

6,725,456 B1 (Ex. 1001 (“’456 Patent”)). Sound View Innovations, LLC (“Patent Owner”) timely filed a Preliminary Response (Paper 8 (“Prelim. Resp.”)). On the record before us, in our Decision to Institute, we determined Petitioner had established a reasonable likelihood that the relied upon references taught claim 13, the only challenged claim (Paper 13, “Dec.”). More specifically, based on our review of the record, we concluded that Petitioner was reasonably likely to prevail in demonstrating claim 13 is not patentable (*id.*). Thus, we instituted *inter partes* review of claim 13.

Patent Owner then filed a response (Paper 22 (“PO Resp.”); Petitioner filed a reply to Patent Owner’s response (Paper 28 (“Pet. Reply”); and Patent Owner filed a sur-reply (Paper 35 (“PO Sur-reply”)).

An Oral Hearing was held October 19, 2021, a transcript of which has been entered (Paper 40 (“Tr.”)).

B. Real Parties in Interest

Patent Owner states that Sound View Innovations, LLC and Sound View Innovation Holdings, LLC are the real-parties-in-interest (Paper 3, 1).

Petitioner states DISH Network L.L.C., DISH Technologies L.L.C., Sling TV L.L.C., Sling TV Holding L.L.C., DISH Network Corporation, and Cloudera, Inc. are the real parties-in-interest (Pet. xiii; Paper 6, 1).

C. Related Matters

As required by 37 C.F.R. § 42.8(b)(2), both parties identify various matters related to the ’456 Patent:

Ex parte reexamination Control No. 90/014,560 requested by Unified Patents, LLC (Notice of Intent to Issue *Ex Parte* Reexamination Certificate confirming patentability of claim 13 and terminating the reexamination, October 1, 2021) (Pet. xiii; Paper 3, 1–2; Paper 24, 1; Paper 36, 1);

Sound View Innovations, LLC v. DISH Network LLC et al., No. 1-19-cv-03707 (D. Colo.); and

Sound View Innovations, LLC v. Sling TV LLC, No. 1-19-cv-03709 (D. Colo).

Petitioner and Patent Owner set forth the following former proceedings involve the '456 Patent:

Sound View Innovations, LLC v. Walmart Inc. et al., No. 1-19-cv-00660 (D. Del.) (terminated Aug. 21, 2020);

Walmart Inc. et al. v. Sound View Innovations, LLC, IPR2020-00818 (PTAB) (terminated Aug. 25, 2020, Paper 9);

Sound View Innovations, LLC v. Delta Air Lines, Inc., No. 1-19-cv00659 (D. Del.) (terminated Nov. 18, 2020, Dkt. No. 166);

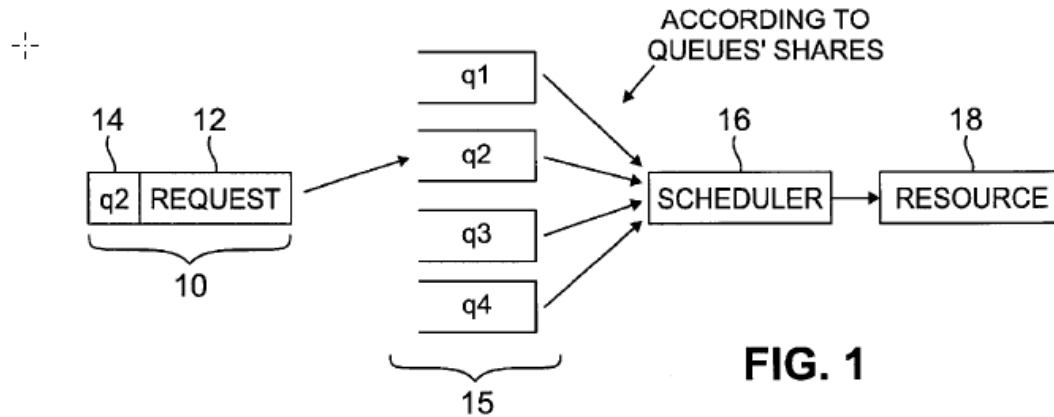
Cigna Corp. et al. v. Sound View Innovations, IPR2020-00924 (PTAB) (Paper 11) (terminated Nov. 24, 2020); and

Sound View Innovations, LLC v. Cigna Corp. et al., No. 1-19-cv-00964 (D. Del.) (terminated Nov. 18, 2020, Dkt. No. 166) (Pet. xiii; Paper 3, 1–2; Paper 24, 1–2).

D. The '456 Patent (Ex. 1001)

The '456 Patent, titled “Methods and Apparatus for Ensuring Quality of Service in an Operating System,” issued April 20, 2004 (Ex. 1001, codes (45), (54)). The '456 Patent describes “techniques for ensuring a desired quality of service (QoS) for an application running on an operating system” (Ex. 1001, 3:14–16, 4:25–26). In particular, the '456 Patent describes techniques to allocate and reserve computing resources, e.g., central processing unit (CPU), memory, and disk or network bandwidth between competing requests for those resources, in order to guarantee access to those resources (*see id.* at 1:14–20, 4:61–62).

The '456 Patent further discloses that Figure 1 “illustrates the manner in which requests are tagged with a queue identifier” (*id.* at 4:3–4):



As shown in Figure 1, “every request arriving at a given one of the . . . schedulers must specify a queue, and the given scheduler apportions resources to each queue based on the queue’s share of that resource” (Ex. 1001, 5:1–4). “The particular request 10 includes the request information 12 along with an identifier 14 of the particular queue to which the request will be directed” (*id.* at 5:4–7, Fig. 1). Figure 1 illustrates four different queues: q1, q2, q3, and q4 (*id.* at 5:7–8, Fig. 1). “A scheduler 16 submits the requests from the queues 15 to a resource 18 according to the queues’ shares of that resource” (*id.* at 5:8–10, Fig. 1).

E. Challenged Claim

Challenged claim 13 is independent and reproduced below.

13. A method of ensuring a particular quality of service for an application in a computer system, the method comprising the steps of:

utilizing an application programming interface of an operating system to establish one or more quality of service guarantees that correspond to a reference to an object; and

providing a particular quality of service to a request in accordance with the one or more quality of service guarantees that correspond to one or more object references used in the request;

wherein the quality of service guarantees comprise resource reservations, each specifying a portion of a resource set aside for exclusive use by one or more processes;

wherein the resource reservations are organized hierarchically such that each resource reservation r may have at most one parent and one or more siblings and children, and associated with r is a weight that specifies how r shares the resources of r 's parent with r 's siblings; and

wherein associated with each resource reservation r is a minimum amount of resources that r receives from its parent p , such that the minimum amount of resources associated with p is at least equal to the sum of the minimum amount of resources associated with each of p 's children

(Ex. 1001, 14:61–15:20).

F. References Relied Upon

Reference	Exhibit
Durand, US 6,338,072 B1, issued Jan. 8, 2002 (hereinafter, "Durand").	1006
Pawan Goyal et al., <i>A Hierarchical CPU Scheduler for Multimedia Operating Systems</i> , USENIX 2nd Symposium on Operating Systems Design and Implementation (1996) (hereinafter, "Goyal").	1007
Jon C. R. Bennett and Hui Zhang, <i>Hierarchical Packet Fair Queueing Algorithms</i> , IEEE/ACM Transactions on Networking (Vol. 5, No. 5 1997) (hereinafter, "Bennett").	1008

(Pet. 1).

Petitioner also relies on the Declaration and the Reply Declaration of Dr. Kevin Negus (Exs. 1002, 1090).

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