

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

I.M.L. SLU,
Petitioner,

v.

WAG ACQUISITION, LLC,
Patent Owner.

Case IPR2016-01657
Patent 8,185,611 B2

Before TREVOR M. JEFFERSON, BRIAN J. McNAMARA, and
PATRICK BOUCHER, *Administrative Patent Judges*.

JEFFERSON, *Administrative Patent Judge*.

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

I. INTRODUCTION

I.M.L. SLU (“Petitioner”) filed a Petition, Paper 2 (“Pet.”), to institute an *inter partes* review of claims 1–18 (the “challenged claims”) of U.S. Patent No. 8,185,611 B2 (Ex. 1001, “the ’611 patent”). 35 U.S.C. § 311. WAG Acquisition, LLC (“Patent Owner”) timely filed a Preliminary Response, Paper 8 (“Prelim. Resp.”), contending that the Petition should be denied as to all challenged claims. We have jurisdiction under 37 C.F.R. § 42.4(a) and 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted unless the information presented in the Petition “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.” Having considered the arguments and the associated evidence presented in the Petition and the Preliminary Response, for the reasons described below, we do not institute *inter partes* review of claims 1–18 of the ’611 patent.

A. Related Proceedings

The parties state that WAG has asserted the ’611 patent in the following pending litigations: *WAG Acquisition, LLC v. Webpower, Inc.*, Case No. 2-15-cv-03581 (D.N.J.), *WAG Acquisition, LLC v. GameLink Int’l Ltd.*, Case No. 2-15-cv-03416 (D.N.J.), *WAG Acquisition, LLC v. FriendFinder Networks, Inc.*, Case No. 2-14-cv-03456 (D.N.J.), *WAG Acquisition, LLC v. Gattyan Group S.à r.l.*, Case No. 2-14-cv-02832 (D.N.J.), *WAG Acquisition, LLC v. Flying Crocodile, Inc.*, Case No. 2-14-cv-02674 (D.N.J.), *WAG Acquisition, LLC v. Sobonito Investments. Ltd.*, Case No. 2-14-cv-01661 (D.N.J.). Pet. 1–4; Paper 5. The ’611 patent was the subject of petitions filed by different parties in IPR2015-01035 and

IPR2016-01162. Pet. 3; Paper 5. The '611 patent is also pending rehearing in IPR2015-01035. Pet. 2; Paper 5. The '611 patent is a parent of U.S. Patent No. 8,364,839 (the "'839 patent") that was the subject of petitions in IPR2015-01036 and IPR2016-01239, and pending IPR2016-01658. Pet. 4; Paper 5.

B. The '611 Patent

The '611 patent discloses "systems and methods for delivering streaming media, such as audio and video, on the Internet." Ex. 1001, 1:30–33. The '611 patent states that "[t]here is a need for improved systems and methods for delivering streaming content over the Internet . . . , which facilitate continuous transmission of streaming content, respond on demand without objectionable buffering delay, and perform without disruption or dropouts." *Id.* at 3:23–28. The '611 patent addresses these objectives by "(a) sending initial streaming media elements to the user system at a sending rate more rapid than the playback rate, to fill the playback buffer; and (b) after the user buffer has been filled, sending further streaming media data elements to the user system at about the playback rate." *Id.* at 3:37–42. Figure 1, below, illustrates one embodiment of the elements of the '611 patent streaming media buffering system. *Id.* at 4:1–3.

Fig. 1

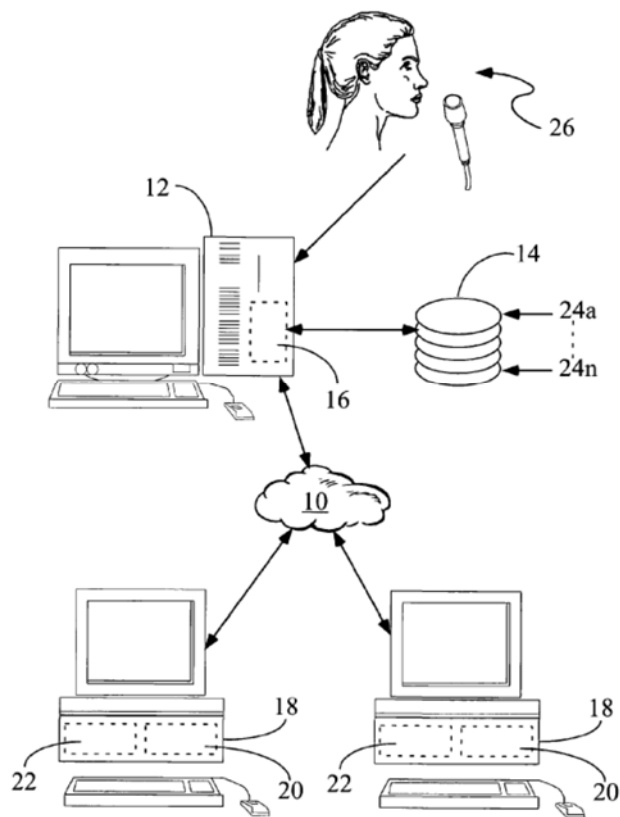


Figure 1 shows that server 12 has server buffer 14, a conventional computer storage mechanism, for storing data elements for transmission, and buffer manager 16. *Id.* at 6:12–20. Data elements may be from live source 26, or a stored file on sever 12. *Id.* The '611 patent discloses that [t]here are a large number of ways of managing server buffer 14 . . . to implement the systems and methods described in [the] specification.” *Id.* at 6:59–61.

A. Illustrative Claim

Claim 1 is illustrative of the claims at issue and is reproduced below:

1. A method for distributing streaming media via a data communications medium such as the Internet to at least one user system of at least one user, the streaming

media comprising a plurality of sequential media data elements for a digitally encoded audio or video program, the user system being assumed to have a user buffer for receiving media data and facilities to play back the streaming media at a playback rate for viewing or listening by said at least one user, said method comprising: sending initial streaming media elements to the user system at an initial sending rate more rapid than the playback rate, to fill the user buffer; and configuring the initial streaming media elements so that the amount of said initial elements, and said initial sending rate, are sufficient for the user system to begin playing back the streaming media while the user buffer continues to fill;

and after the user buffer has been filled, sending further streaming media data elements to the user system at about the playback rate; and wherein the media data elements is sent at a rate that matches the constant fill rate of a server buffer, and is received at the same rate by the user computer if there are no interruptions in the transmission of media data between the server and the user's computer.

Ex. 1001, 15:58–16:9.

B. Asserted Grounds of Unpatentability

The information presented in the Petition sets forth proposed grounds of unpatentability for claims 1–18 of the '611 patent as follows (Pet. 5–6):

References	Basis	Claims Challenged
Chen, ¹ Chen FH ² , and Willebeek ³	35 U.S.C. § 103(a)	1–18
Chen, Chen FH, Willebeek, and Lin ⁴	35 U.S.C. § 103(a)	1–18
Chen, Chen FH, Willebeek, and Zheng ⁵	35 U.S.C. § 103(a)	1–18

II. ANALYSIS

A. Claim Interpretation

We interpret claims of an unexpired patent using the broadest reasonable construction in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b); *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1278 (Fed. Cir. 2015) *cert. granted sub nom. Cuozzo Speed Techs. LLC v. Lee*, 136 S. Ct. 890 (mem.) (2016). In applying a broadest reasonable construction, claim terms generally are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth in the specification with reasonable clarity,

¹ U.S. Patent 5,822,524, issued October 13, 1998 (Ex. 1002, “Chen”).

² File History of U.S. Application 505,488 (Ex. 1003, “Chen FH”).

³ M. H. Willebeek-LeMair, et al, *Bamba-Audio and Video Streaming Over the Internet*, IBM J. RES. DEVELOP., Vol. 42, No. 2 (1998) (Ex. 1004, “Willebeek”).

⁴ U.S. Patent No. 6,405,256, filed Mar. 31, 1999, issued Jun. 11, 2002 (Ex. 1005, “Lin”).

⁵ Bing Zheng & Mohammed Atiquzzaman, *Multimedia Over High Speed Networks: Reducing Network Requirements with Fast Buffer Fillup*, 779–784 IEEE GLOBECOM 1988 (1998) (Ex. 1009, “Zheng”).

deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

In prior proceedings for the '611 patent, we adopted the following claim constructions in our decision denying institution: “playback rate” (claims 1, 3, 8, 9, 14, and 5) was construed as “a rate at which the data is encoded for playback to a user”; “at about playback rate” (claims 1, 8, and 14) was construed as “at approximately the rate at which the media will be played out”; “configuring the initial streaming media elements so that the amount of said initial elements, and said initial sending rate, are sufficient for the user system to begin playing back the streaming media while the user buffer continues to fill” (1, 3-5, 8, 9, 12, and 14-16) was construed as “sufficient data is sent such that the player can start playback while the buffer continues to fill”; “constant fill rate of a server buffer” (claims 1, 3-5, 8, 9, 12, and 14-16) was construed as “the constant rate at which media data elements are transferred to the server buffer”; and “matches the constant fill rate of a server buffer” (claims 1, 3-5, 8, 9, 12, and 14-16) was construed as at any given time during uninterrupted transmission, the data rate out of the server matches the data rate into its buffer.” *Duodecad IT Services Luxembourg S.a.r.l. v. WAG Acquisition, LLC*, IPR2015-01035 at 6-10 (PTAB Oct. 23, 2015) (Paper 8).

Petitioner argues that the '611 patent claims are invalid under the prior constructions in IPR2015-01035 or the ordinary and customary meaning of the terms. Pet. 28-29. For purposes of this Decision, we adopt the constructions determined in IPR2015-01035.

B. 35 U.S.C. § 325(d) Issues

Patent Owner contends that we should decline to institute under 35 U.S.C. § 325(d) because the arguments presented in the Petition are substantially similar to those advanced in the petitions we declined to institute in *WebPower, Inc. v. WAG Acquisition, LLC*, Case IPR2016-01162 (“*WebPower-1162*”) (Paper 7), which challenged the ’611 patent claims based on Chen, Chen FH, and Zheng, and the petition in *Duodecad IT Services Luxembourg S.a.r.l. v. WAG Acquisition, LLC*, IPR2015-01035 (“*Duodecad-1035*”) (Paper 8), which challenged the ’611 patent claims based on Chen and Chen FH. Prelim. Resp. 2. Petitioner argues that we should not exercise such discretion because the petitioners are different, Petitioner will be harmed by a statutory bar, and because the grounds advanced by Petitioner rely on Chen in combination with different prior art. Pet. 6–8. Petitioner’s arguments are persuasive. Although Patent Owner argues that Petitioner could have filed its Petition earlier, we do not penalize Petitioner for filing within the time allotted under 35 U.S.C. § 315(b).⁶ In addition, only some of the grounds in the Petition and in *WebPower-11162* overlap. Although our analysis in *WebPower-1162* and *Duodecad-1035* provides guidance on some issues in this proceeding, we decline to exercise our discretion to deny institution under 35 U.S.C. § 325(d).

⁶ We acknowledge Patent Owner’s pending motion for additional discovery (Paper 7) may lead to evidence of privity with another real party-in-interest that could impose a statutory bar remains outstanding.

C. Overview of the References

1. Chen (Ex. 1002)

Chen describes a system for the “just-in-time” retrieval of multimedia files over a computer network. Ex. 1002, [54]. Figure 1 of Chen is reproduced below.

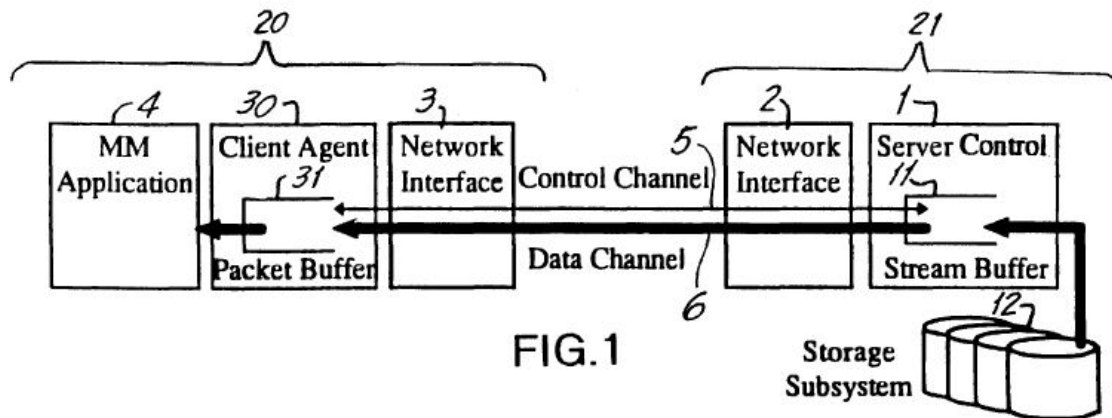


Figure 1 is a schematic illustration showing client machine 20 receiving data streamed from server machine 21 over a network. Data packets are loaded into a “server control stream buffer” 1 for streaming over data channel 6. Streamed packets are accumulated in “client agent packet buffer” 31 for playback. *Id.* at 4:21, 4:65–5:44, Figure 1.

Chen describes “normal,” “rush,” and “pause” transmission modes for streaming from a server to a user. *Id.* at 6:1–15 (emphasis omitted). It describes a “water mark” model for buffering streaming content. *Id.* at 6:16–54 (emphasis omitted). The server buffer is like a water bucket having high and low “water marks.” *Id.* Water exits the bucket through a spout similar to data exiting a packet buffer as its content is delivered to a user. *Id.* When water in the bucket is at a level between the water marks,

transmission occurs in the normal mode. *Id.* The normal mode carries out frame level pacing, i.e., transmission at the playback rate. *Id.* at 10:3–4. When the amount of data falls below the low mark, the transmission mode changes to “rush.” *Id.* at 6:42–47 (emphasis omitted). In rush mode, frame level pacing is ignored and data is transmitted as fast as possible. *Id.* at claims 18, 29; Figure 6.

2. *Chen FH (Ex. 1003)*

Chen FH shows that during prosecution of the application eventually issuing as Chen, patent applicant submitted a Declaration in accordance with 37 C.F.R. § 1.131 for the purpose of predating (“swearing behind”) a cited reference. Ex. 1003, 77–79. That Declaration references a “Quick Video Server” (“QVS Sever”) exhibit document alleged to describe a commercial embodiment of Chen. *Id.* at 77. The Declaration includes a claim chart mapping the technical documents provided for the QVS server to the then-pending claims. *Id.* at 112–119. Chen FH describes a protocol used by the QVS server and is reproduced below.

QVS Client Server Protocol

1. MMIO Procedure

Player	Client Agent (CA)	Server Control (SC)	Comments
Open File →	Relay the command	Admissible? • Server B/W? • File permission?	If ACK, • Establish Qs • Read data from disk and rush them to CA
return code ←	← ACK or NACK	← ACK or NACK	
Close File →	Relay the command	Consistency check?	• Take down Qs • Update control blocks
return code ←	← ACK or NACK	← ACK or NACK	
Read →	• If data in Q_{CA} , reply with the data and the return code • Otherwise, wait for the data and then reply		
return code ←			
Seek →	(Refer to the QVS Seek Processing description)		
return code ←			
Write	Not supported initially		

2. Client Server Pacing

- Server Control (SC) transmits data in three modes:
 - Rush mode: transmit data as fast as possible, subject to the Round-Robin sharing with other active streams
 - Normal mode: transmit data according to time and player's playout rate
 - Pause model: temporarily halt the transmission
- Client Agent (CA) determines the appropriate mode based on its buffer status. It changes mode when its buffer size crosses certain thresholds as follows:

Client Agent Q_{CA} Size	Mode Change
Crossing γ_{RN} from below	Switch from RUSH to NORMAL
Crossing γ_{NP} from below	Switch from NORMAL to PAUSE
Crossing γ_{PN} from above	Switch from PAUSE to NORMAL
Crossing γ_{NR} from above	Switch from NORMAL to RUSH

The values of the thresholds, i.e., γ_{RN} , γ_{NP} , γ_{PN} , and γ_{NR} are critical to the performance of the system. The traditional way of setting these values are based on

Id. at 86. The QVS Server Protocol describes “PAUSE,” “NORMAL,” and “RUSH” transmission modes. *Id.* Rush mode is described as “transmit data as fast as possible, subject to the Round-Robin sharing with other active streams.” *Id.*

3. Willebeek (Ex. 1004)

According to Petitioner, Willebeek was published in the IBM Journal of Research and Development, Volume 42, No. 2, in March 1998. Pet. 21; *see* Ex. 1004, 269. Willebeek describes a method of displaying streamed digital video data, including live video, on a client computer using buffers as the client and server. Ex. 1004, 269, FIGURE 6. Willebeek Figure 6 is reproduced below.

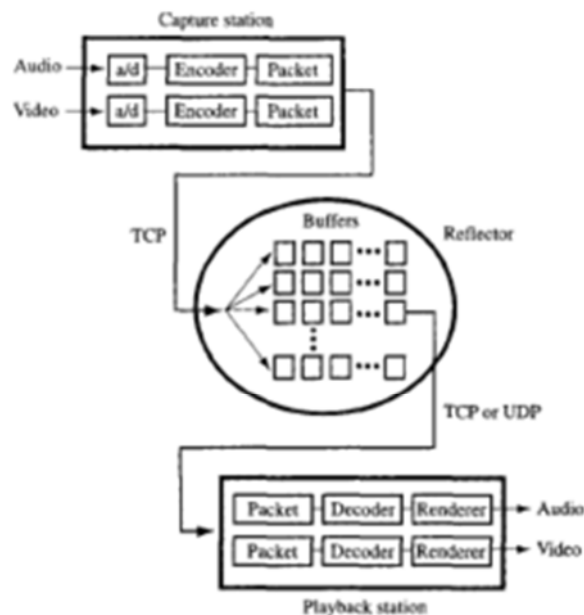


Figure 6

Live Bamba system block diagram.

Willebeek Figure 6 is a schematic diagram of a “Live Bamba system” showing a circular buffer queue containing the most recent several seconds of a live transmission.

When a new user requests live video, the server produces a new copy of the circular buffer and that copy is used as that user’s server buffer. *Id.*;

see also Figures 6–7.

Willebeek discloses a method of displaying streamed digital video data, including live video, on a client computer using buffers at the client and server. Ex. 1004, 269, 277–278, Fig. 6. Willebeek states that “[a]udio and video streaming enables clients to select and receive audio and video content from servers across the network and to begin hearing and seeing the content as soon as the first few bytes of the stream arrive at the client.” *Id.*, 269. Willebeek further states that “[i]f the network conditions are suitable (sufficient sustained bandwidth is available), [the Bamba audio/video file], streaming across the network, is played at the client immediately. Otherwise, the file is played once uninterrupted playback can be ensured.” *Id.* at 270.

4. Lin (Ex. 1005)

Lin discloses a “data streaming transmission method and system . . . having a network server connected to client device through a communication network with one or more of caching servers.” Ex. 1005, Abstract. The network server has a data streaming application and uses a series of connections between caching servers, each with a data streaming arrangement, to form a path between the source network and client device. *Id.* The caching servers can absorb network congestion in its downstream connection by utilizing an expandable buffer for storing additional segments of the streamed data and varying the transmission data rate in the downstream connection. *Id.*

5. Zheng (Ex. 1009)

Zheng discloses a Fast Buffer Fillup scheme to provide Video on Demand (“VoD”) over an ATM network that uses Available Bit Rate

service. Ex. 1009, 779 (Abstract, Introduction). Zheng discloses that “[a] VoD system consists of a video source/server, a client including the video decoder/display, and the network over which the video is to be transmitted.” *Id.* Figure 1 below shows a VoD system.

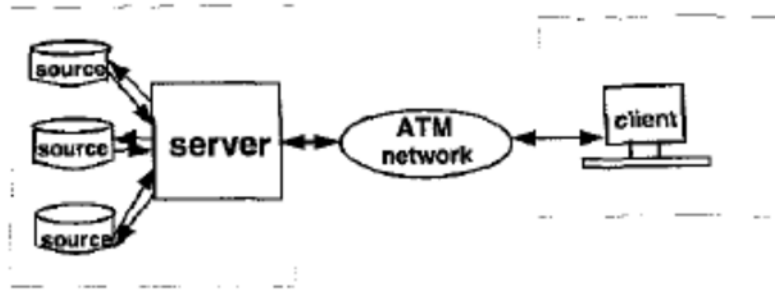


Figure 1: A video on demand system using the ATM network.

Figure 1 shows a VoD system that connects a client with a video display connected to video source/server. *Id.* at 779–780. Video is stored in MPEG-2 compressed format. *Id.* at 780. “There are buffers at the client and the server to smooth out fluctuations in the instantaneous data rate of the compressed video and the available bandwidth from the network.” *Id.*

Zheng describes that when Fast Buffer Fillup is used to start playing a video immediately when a Playback mode is selected, maximum negotiated bandwidth is used to fill a client buffer to the minimum point needed to start to display video. *Id.* at 780 (Sections 2.3 and 2.5). After the buffer is filled to a minimum point, the server buffer continues to fill the client buffer at the average video playback rate. *Id.* Zheng further described optimizing the client and server buffer sizes to avoid overflow/underflow at the server buffer. *Id.* at 782 (Section 3.3).

D. Obviousness based on Chen, Chen FH, and Willebeek

Petitioner argues that Chen, Chen FH, and Willebeek render claims 1–18 of the '611 patent unpatentable as obvious. Pet. 29–61. Petitioner provides citations to the evidence and Declaration of Dr. Gareth Loy (Ex. 1006) in support of their contentions. *Id.*

In *WebPower-1162* and *Duodecad-1035*, we determined that Chen and Chen FH together and in combination with Zheng or Lin fail to teach the “wherein the media data elements is sent at a rate that matches the constant fill rate of a server buffer, and is received at the same rate by the user computer if there are no interruptions” limitation that is common to the challenged claims of the '611 patent. *WebPower-1162*, slip op. at 14–17 (PTAB Dec. 12, 2016) (Paper 7); *Duodecad-1035*, slip op. at 12–17 (PTAB Oct. 23, 2015) (Paper 8).

In the present Petition, Petitioner asserts that Willebeek teaches a constant rate stream that is used to fill a server buffer (the Willebeek Reflector) which discloses the “matches the constant fill rate” limitation. Pet. 37–38 (citing Ex. 1006 ¶¶ 113, 132–138). Specifically, Petitioner argues that:

With regard to the constant fill rate limitation, Willebeek discloses a system which is capable of filling a server buffer at a constant fill rate which is at a playback rate. Ex. 1006, Loy Decl., ¶¶ 70-79, 132-138. Willebeek streams audio and video generated by a live source. Ex. 1004, Willebeek, 277. When doing so, “audio and video inputs are converted from analog to digital form, compressed, and then packetized” at a “capture station.” *Id.* After packetizing the data, the capture station transmits it to the Reflector, which includes a circular buffer queue. *Id.*, 277-78, Fig. 6. The Reflector then establishes and manages multiple

connections to interested recipients and distributes the audio and video streams to the various playback stations in the network. *Id.*, 278. The Reflector in Willebeek is the analog of the server in the Price patents. The audio stream is compressed to a fixed 6.3 Kb/s stream. *Id.*, 272. “Each of the circular buffers is written to by the incoming capture station input and read from by the TCP/IP connection to the corresponding playback station.” *Id.*, 278.

Pet. 38–39. Petitioner contends that the live media capture station in Willebeek outputs a fixed 6.3 Kb/s stream of audio to the server buffer, and thus a fixed 6.3 Kb/s stream is a constant rate stream that is used to fill a server buffer. *Id.* at 39.

Patent Owner argues that Willebeek does not disclose a constant bit rate transmission. Prelim. Resp. 6–7. Instead, Patent Owner contends that Willebeek expressly teaches that video is not constant bit rate as the frame sizes vary from frame to frame, as the Bamba file system compresses and interleaves video and audio. *Id.* Patent Owner also contends that the type of streaming media, either real-time or from a disk file, affects the requirements for smooth and continuous delivery of media. *Id.* at 8–9. Thus, Patent Owner asserts that the Chen system designed for on-demand distribution of pre-recorded media is not easily combined with the distribution of live, real-time streaming media as disclosed in Willebeek. *Id.*

Based on present record, we are not persuaded by Petitioner’s argument that Chen and Chen FH in combination with the live audio transmission in Willebeek teaches the “matches the constant fill rate” limitation of the challenged claims. Petitioner’s argument relies on the live Bamba system and fixed stream coding at 6.3 Kb/s to establish the constant

rate used to fill the server buffer in Willebeek (Pet. 38, 48), but relies on the live audio of Willebeek in combination with Chen and Chen FH to teach that the media data element is sent to the user at a rate that matches the constant fill rate of a server buffer. Petitioner's argument and evidence focus on the constant fill rate of the server based on the fixed rate audio in Willebeek and concludes that this rate is at playback rate. Pet. 37–38.

Petitioner has not persuasively shown that the rate of data flowing into the server buffer matches the rate of data flowing out of the server buffer. Petitioner relies on the fixed rate of data out of the server in Chen, but fails to show that this rate necessarily matches the server fill rate based on the encoding of live broadcast audio as disclosed in Willebeek. Petitioner's argument relies on the circular buffers being written to by the capture station of Willebeek, but does not show how this rate is matched by the output of the server buffer that relies on the server process as disclosed in Chen. Pet. 38–39, 50.

We also note that Petitioner has not adequately shown how the reflector of Willebeek used for live transmission could be combined with the fixed-rate server buffer of Chen. Pet. 38. Petitioner asserts that:

It would have been obvious to a POSITA to combine the teachings of Chen, Chen File History and Willebeek to use a constant fill rate at the Chen server stream buffer. Ex. 1006, Loy Decl., ¶¶ 113, 132-138. As explained above, the constant fill rate in Willebeek is suited for transmission of live audio or the live audio component of an audio-video program. Further, at the time of the Willebeek and Chen inventions, there was a demand for distribution of live media content via the Internet. The '611 Patent admits this as prior art. *See* Ex. 1001, '611 Patent, 1:41-45 ("The advent of streaming media technologies . . . allowed

users to ‘tune-in’ to a continuous media broadcast, or ‘stream’, such as from a radio station.”)[.] Thus, a POSITA would have been motivated to employ the live broadcast transmission facilities of Willebeek in the Chen system to expand the usefulness of the Chen system for use with live broadcasts. Ex. 1006, Loy Decl., ¶ 138.

Pet. 38. Although the Petition identifies the live broadcast of Willebeek as a rationale to expand and modify Chen, it fails to address how the transmission rate determined by frame size for media files disclosed in Chen would be adapted to address the live broadcast transmission of Willebeek such that the input and output of the combined server buffer would match. Petitioner’s cited evidence depends on a series of conclusions regarding the H.263 constant bit rate data delivery and encoding of the live media, the consumption of the media base on the Willebeek and playback of the media based on Chen. *See* Ex. 1006 ¶ 135 (discussing how “the POSITA would understand that media delivery to Chen’s server buffer must ‘pace’ (to use Chen’s term) the live source being encoded by Willebeek’s capture system capture system”). On the present record, Petitioner has not provided sufficient argument or evidence regarding the combination of Chen and Willebeek.

Based on the present record, we find that Petitioner has not presented sufficient evidence that Chen, Chen FH, and Willebeek teach the limitations of claim 1–18, as each of the challenged claims recite the “wherein the media data elements is sent at a rate that matches the constant fill rate of a server buffer, and is received at the same rate by the user computer if there are no interruptions” limitation. Accordingly, we find that Petitioner has not

demonstrated a reasonable likelihood claims 1–18 are unpatentable as obvious over Chen, Chen FH, and Willebeek.

E. Obviousness based on Chen, Chen FH, Willebeek, and Lin

Petitioner asserts that Chen, Chen FH, and Lin discloses the claim limitations that “the media data elements [are] sent at a rate that matches the constant fill rate of a server buffer.” Pet. 63–64. Specifically Petitioner asserts that:

To the extent [Chen, Chen FH and Willebeek] do not explicitly disclose the limitation: “the media data elements [are] sent at a rate that matches the constant fill rate of a server buffer,” it would have been obvious to combine them with the teachings of Lin to achieve a system that provided this limitation. Ex. 1006, Loy Decl., ¶¶ 83-94, 143-150. As explained above, Chen and Chen File History disclose sending media data elements from the server at a playback rate. *See e.g.*, Chen File History, ChenFH086.

Pet. 61–62. Petitioner argues that the:

“continuous” “first data rate” of Lin is a constant bit rate and at a playback rate. *See* Ex. 1006, Loy Decl., ¶ 149. Lin describes that the system is configured so that the caching server buffer fill rate matches the sending rate when operating in steady state. “As the client device depletes the initial data segment in its buffer, the client device is replenished with a new data segment by the nearest caching server, and the nearest caching server is replenished with a new data segment by the nearest caching server, and the nearest caching server is replenished with a new data segment from the next upstream caching server, and so on.” Ex. 1005, Lin, 3:2-7; *see also* 8:46-62. Thus, as recited in claims 1-18, in steady state, data is entering and leaving the server buffers at the same constant playback rate.

It would have been obvious to use Lin’s expandable buffer teaching on the Chen server buffer. This would allow Chen’s

server buffer to achieve the advantages described for the caching buffers in Lin: being able to expand to adapt to changing input speeds (in this case, any variations in input to Chen's server buffer) while, when in the steady state, maintaining an optimally small buffer. *Id.*, 3:8-28. The use of an expandable buffer would be the application of a known technique (Lin's expandable buffers) to a known device (Chen's server buffer) to yield predictable results. Ex. 1006, Loy Decl., ¶ 150.

Pet. 62–63.

Patent Owner contends that Petitioner has not shown how Lin's multi-stage content distribution system would work with Chen and Willebeek. Prelim. Resp. 19–20. Patent Owner asserts that Chen involves transmissions pushed from server to client differs from the client-driven data requests that pulls data through caching servers. *Id.* at 20–21 (citing Ex. 1005, 7:60–8:21). In addition, Patent Owner argues that Petitioner does not show how the data delivered to the client at a constant rate equals a playback rate. *Id.* at 23.

We agree with Patent Owner that Petitioner has failed to show that Lin discloses a constant rate equal to the playback rate. The evidence cited by Petitioner, Ex. 1006 ¶ 149, is conclusory. In addition, Petitioner's citations to Lin do not establish that Lin discloses a constant rate equal to the playback rate. Pet. 62–63 (citing Ex. 1005, Fig 1, 2:48–64, 2:65–3:2, 3:2–7, 8:46–62). Instead, as we determined in *WebPower-1162*, slip op. at 16–17, Lin discusses increasing and decreasing the data transfer rate into the server buffers and increasing or decreasing the buffer size based on network congestion. Ex. 1005, 3:8–28. In sum, Petitioner has not provided

persuasive argument or evidence that buffers in Lin are filled at a constant rate that is equal to the playback rate.

Petitioner has also not provided adequate explanation or argument that demonstrates how to modify or incorporate the Lin server and content distribution system in combination with Chen and Willebeek. Indeed, Petitioner's argument focuses exclusively on combining Lin's expandable buffer with the Chen server buffer, to adapt to changing input speeds, but fails to explain adequately how this combination works with the constant bit input of Willebeek or yields the limitation that "the media data elements [are] sent at a rate that matches the constant fill rate of a server buffer."

On the present record, Petitioner has not provided sufficient evidence that the variable buffer size and data rates disclosed in Lin teach a server buffer being filled at the "constant fill rate" that matches the data rate out of the server buffer to the client. Because this "matching" limitation appears in each of the challenged claims 1–18, we find that Petitioner has failed to demonstrate a likelihood of showing that Chen, Chen FH, Willebeek, and Lin teach the limitations of claims 1–18.

F. Obviousness based on Chen, Chen FH, Willebeek, and Zheng

Petitioner contends that combination of Chen, Chen FH and Zheng teaches the limitations of claims 1–18, specifically relying on Zheng to teach the "sending initial streaming media elements to the user system at an initial sending rate more rapid than the playback rate," and "configuring the initial streaming media elements so that the amount of said initial elements, and said initial sending rate, are sufficient for the user system to begin playing back the streaming media while the user buffer continues to fill" limitations

of the challenged claims. Pet. 63–66. With respect to the “wherein the media data elements is sent at a rate that matches the constant fill rate of a server buffer, and is received at the same rate by the user computer if there are no interruptions” limitation that is common to the challenged claims of the ’611 patent, Petitioner relies on the arguments presented with respect to Chen, Chen FH, and Willebeek discussed above.

Because we determined above that Petitioner has not presented sufficient evidence that Chen, Chen FH, and Willebeek teach the “wherein the media data elements is sent at a rate that matches the constant fill rate of a server buffer, and is received at the same rate by the user computer if there are no interruptions” limitation, we find that Petitioner has not demonstrated a reasonable likelihood claims 1–18 are unpatentable as obvious over Chen, Chen FH, Willebeek, and Zheng.

III. CONCLUSION

For the foregoing reasons, we are persuaded that Petitioner has not met its burden of showing a reasonable likelihood that claims 1–18 are unpatentable as obvious under 35 U.S.C. § 103(a) over (1) Chen, Chen FH, and Willebeek; (2) Chen, Chen FH, Willebeek, and Lin; and (3) Chen, Chen FH, Willebeek, and Zheng.

IV. ORDER

For the foregoing reasons, it is:

ORDERED that pursuant to 35 U.S.C. § 314, an *inter partes* review is hereby denied as to all grounds raised in the Petition for the reasons stated above and no trial is instituted.

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