UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AYLO FREESITES LTD,

Petitioner,

v.

DISH TECHNOLOGIES L.L.C.,

Patent Owner.

IPR2024-00047

U.S. PATENT NO. 9,407,564

Attorney Docket No.: 081841.0167

PATENT OWNER'S PRELIMINARY RESPONSE

UNDER 35 U.S.C. § 313 AND 37 C.F.R. § 42.107

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PATENT OWNER'S EXHIBIT LIST

Ex. No.	Description of Documents
2001	Declaration of Dr. Kevin Jeffay including Curriculum Vitae ("Jeffay")
2002	File History of U.S. Patent No. 11,470,138
2003	Terminal Disclaimers of Patent Family
2004	U.S. Patent No. 6,389,473 ("Carmel")
2005	337-TA-1265 ITC Investigation Commission Opinion

I. INTRODUCTION

The Challenged Claims are directed to systems for dynamically streaming video over the internet, by creating multiple copies of the same video content that are encoded at different bitrates and subdivided into time-aligned portions. These time-aligned portions are the claimed "streamlets" or "files" of the video content. This approach permits the end-user's computer to switch smoothly between the different bitrate versions of the video in real time by requesting different streamlets that correspond to the different bitrates as network/computing resources warrant. For example, an end-user selects a live video to stream over the internet. The end-user's computer requests a 2-second streamlet of the video at a low bitrate. If the computer determines that it can handle requesting the next 2-second streamlet at a higher bitrate, then it will request that higher-bitrate streamlet.

The claimed invention creates several advantages over prior techniques, as the ITC has already found when it relied on evidence of objective indicia of non-

obviousness in support of its conclusion that the claims were not obvious, and as the Office concluded when it allowed related claims over prior art references similar to Petitioner's art.

The Petition should be denied because: (1) the prior-art combinations fail to disclose or render obvious several claim elements; (2) Petitioner fails to carry its burden of establishing a POSITA would have combined the references in the manner asserted to render the claims obvious; (3) the Office has already considered and rejected art and arguments that are "substantially similar" to those that the Petition presents; and (4) Petitioner disregards prior Board guidance by failing to adequately address the substantial evidence of objective indicia of non-obviousness that the ITC has previously relied upon to find the related claims not invalid. For these and other reasons, the Petition should be denied.

II. LEVEL OF ORDINARY SKILL

While Patent Owner disputes Petitioner's definition of the level of a person of ordinary skill in the art ("POSITA"), resolution of such dispute is not necessary for the Board to make a determination regarding institution. Patent Owner reserves the right to further address Petitioner's improper POSITA definition in subsequent filings, if necessary.

III. CLAIM CONSTRUCTION

The '564 Patent's challenged claims are to be construed "using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b)." 37 C.F.R. § 42.100(b) (Nov. 13, 2018). The Petition does not seek construction of any terms in the '564 Patent. For purposes of this filing, Patent Owner does not propose that the Board construe any claims, but Patent Owner reserves the right to do so in subsequent filings, if necessary.

IV. INSTIUTION SHOULD BE DENIED BECAUSE PETITIONER FAILS TO DEMONSTRATE A REASONABLE LIKELIHOOD OF SUCCESS ON ANY CHALLENGED CLAIM

A. Ground 1: Ogdon Does Not Render Claims 1-8, 10, and 12-16 Obvious

1. Overview of How Ogdon Differs From the Claimed Invention

The Challenged Claims relate to rate-adaptive streams of video content, where a single video is divided into time-aligned "streamlets" encoded at different bitrates, so that an end user is able to seamlessly switch between the different bitrates during

viewing. This permits all users to watch the same content, albeit potentially at different encoded bitrates based on their individual computing/network resource availability. The '564 Patent explains these different bitrates correspond to different quality levels when reproduced. *See, e.g.*, EX 1001 at 6:46-57. Thus, as a user's available computing resource/bandwidth changes during viewing, the user's computer may request higher or lower bitrate content and watch the video uninterrupted at potentially different encoded bitrates (and at concomitant different resolutions/qualities) as conditions change.

The '564 patent shows an example video stream (302) in the below Figure 3a[1], divided into multiple portions (0…n) (also termed "streamlets"), which are described in the preferred embodiment as each being two seconds long. Each streamlet is encoded into identical duration portions (corresponding to identical portions of the underlying video), but with different bitrates, resulting in the same video portion but at different resolutions/qualities. For example, streamlet 0 (306a), corresponding to the first 2 seconds of the underlying video is shown encoded into low, medium, and high bitrate versions (204, 206, 208). Fig. 3b. The challenged claims all recite limitations largely directed to this type of adaptive streaming of a single underlying video.

[1] FIG 3 of U.S. Provisional Application No. 60/566,831 is incorporated by reference. EX1001 at 1:8-13.

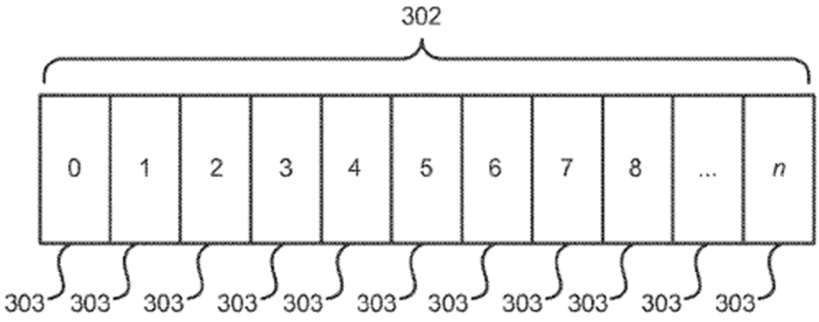

FIG. 3a

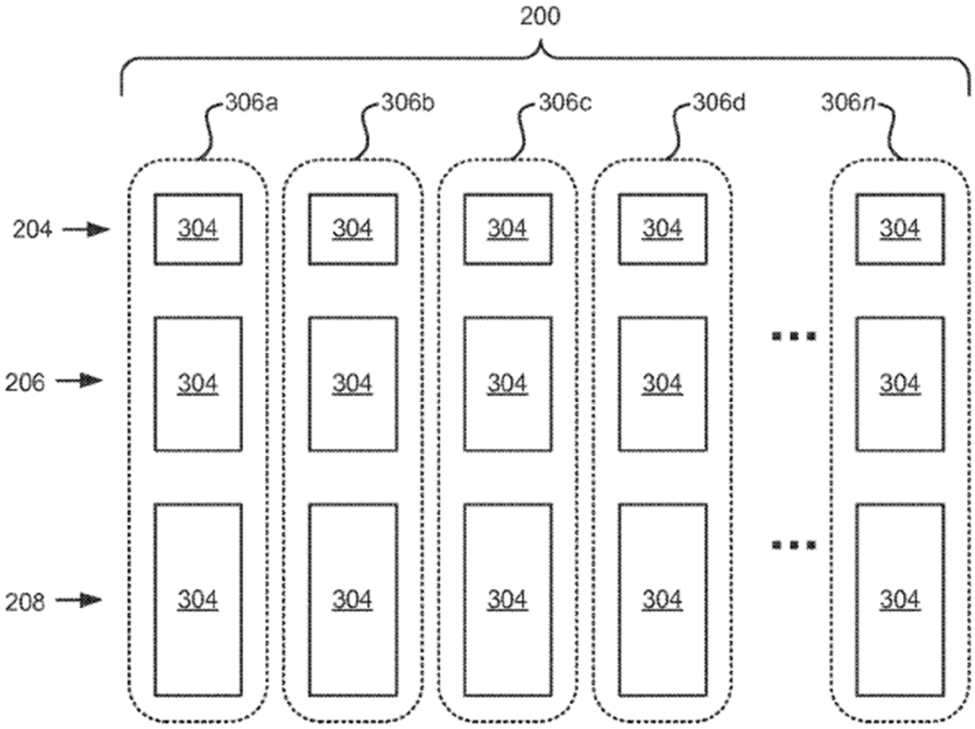

FIG. 3b

In contrast, Petitioner's Ogdon reference foregoes any attempt to perform streaming of a single underlying video of interest. Instead, Ogdon attempts to convey a "presentation," which Ogdon describes as being associated with a "telepresentation" (i.e. an "alternative to face-to-face meeting[]" such as a virtual

meeting). EX 1004 1:19-23.[2] While this may include a "real time or animated video" of the presenter and/or presentation materials, the "real time" version of the presentation is only presented to users having access to sufficiently large network transmission rates. *Id.* at 2:61-66. Ogdon teaches that users with lower bandwidths will receive different underlying content that roughly "corresponds" to the other presentation materials, such as "graphic slides" instead of "real time or animated video." *Id.*

Ogdon goes out of its way to emphasize that, depending on the user's preferred language, the written text in the presentation materials that some users receive will be in one language (e.g., English) while the written text for other users will be in another language (e.g., Japanese). *Id.* at 6:54-64, 9:31-40, 19:62-67. This

[2] Ogdon acknowledges that "telepresentations" and "video conference[es]" were growing in popularity in the 1997 time frame of Ogdon's earliest claimed priority date. EX 1004 at 1:19-23. These technologies were early ancestors of today's "Zoom" meetings, where a live video feed, typically of a room, would be captured at one conference site and distributed to one or more remote sites via a network typically comprised of dedicated telecommunications circuits. Audio was typically disseminated via "conventional telephone" because it was very difficult to beat the quality of telephony audio, however it may also be distributed by a data network technology. *Id.* at 2:4-6. However, these telepresentation video conferences required "expensive" and "specialized" video conferencing systems. *Id.* at 1:22-37. Indeed, a POSITA would have understood that video conference telepresentations would have been extremely limited and expensive in 1997, particularly in typical home or even office settings where network bandwidth and access to videoconferencing hardware was extremely limited. Ogdon confirms that the availability and use of such conferencing systems was limited. *Id.* at 1:30-42.

further illustrates that Ogdon does not attempt to perform streaming of a single underlying video to all users.

Thus, unlike the Challenged Claims, Ogdon makes no attempt to encode different "copies" of the same presentation for users with various bandwidths, instead presenting different types of presentations altogether. As explained below, this fundamental difference between Ogdon and the Challenged Claims leads Petitioner's grounds to fail.

2. Ogdon Fails To Disclose "stream a video" as Required by Element 1[A][2]

a. *Ogdon is not analogous art*

Petitioner argues that "Ogdon discloses a media player (client presentation software and/or browser) is configured to stream the video from the video server (webserver(s)) via at least one TCP connection over the network (Internet)." Pet. at 16 (citing EX1004, 7:59-63). Specifically, Petitioner points to Ogdon's disclosure of the client "requesting, receiving and displaying presentation segments." *Id.* (quoting EX1004). Ogdon, however, does not disclose or suggest streaming "***a*** video" at multiple bitrates as claimed by the '564 Patent. Rather, Ogdon teaches conveying only meeting presentation materials and ***live audio*** (via a telephone line). EX 2001 at ¶55. Tellingly, Ogdon only uses the words "stream" and "streaming" in connection with ***audio—not video***, though it does mention communicating or

providing videos ***as part of*** a presentation. EX 1004 at 13:12-19; 27:17-19; 28:31;[3] EX 2001 at ¶60. While this may include a "real time or animated video" of the presenter and/or presentation materials, the "real time" version of the presentation is only presented to users having access to sufficiently large network transmission rates. Indeed, Ogdon makes clear that a video may not be presented to some users ***at all***, and emphasizes the availability of, e.g., fully audio versions to replace the video version in order to accommodate users with lower bandwidths. For example, Ogdon expressly relies on the "audio portion" of the presentation to provide "substantial continuity in presentation ***regardless of whether a portion of the video for the presentation is displayed or not.***" EX1004 24:28-39; EX 2001 at ¶60.

Thus, Ogdon is not analogous art to the '564 Patent because it is not in the same field of endeavor as the '564 Patent (i.e., "video streaming over packet switched networks"). EX 2001 at ¶63. To put it simply, the '564 patent is in the field of "video streaming" a single video to users over changing network conditions (EX 1001 at 1:18-21), whereas Ogdon is in the field of presenting presentation materials to clients wherein the content itself varies based on bandwidth. *See* EX 1004 at 1:9-15. Ogdon criticizes video streaming and teaches replacement solutions that ***do not stream "a video."*** Instead, Ogdon opts to transmit wholly different types

[3] Ogdon does use the term "video conference" in two places (EX1004 at 1:27-29, 9:9-15) but only to distinguish a video conference from its disclosed approach of merely "viewing the presentation." *Id.* at 9:9-15.

of content (e.g., an audio presentation without video) when network transmission rates are insufficient to convey the original-quality video. EX 2001 at ¶63. Ogdon is also not reasonably pertinent to the problem faced by the inventors of the '564 Patent (i.e., bandwidth limitations on streaming video) because Ogdon proposes only **non-video streaming** solutions for facilitating a meeting between remote presentation participants, e.g., providing materials to accompany a presentation. *Id.* Merely recognizing a problem (i.e., streaming the same "video" to users having different network resources available) and then posing work-arounds that do not actually resolve that problem (i.e., distributing presentation materials in lieu of video streaming) fails to present information relevant to solving the underlying problem toward video streaming. *Id.*

Moreover, Ogdon's teachings teach away from and add to the objective indicia of non-obviousness of the Challenged Claims, discussed *supra*, as those teachings confirm: (1) long-felt and unsatisfied need for a true video streaming solution and (2) skepticism that it was achievable to have a video streaming solution that could convey the same video to multiple users over varying bandwidth connections. *Id.* at ¶64.

b. *Ogdon fails to disclose streaming segments of the same length from "a video"*

The Challenged Claims require streaming "a video" wherein "different copies of the video encoded at different bit rates" are stored as multiple files such that the

multiple files across the different copies "yield ***the same portions of the video***" on playback. *See, e.g.*, EX 1001 at Claim 1. Ogdon's presentation "segments" are not "multiple files" as disclosed and claimed in the '564 Patent. *Id.*; EX 2001 at ¶¶59-60. As explained below, different users in Ogdon would actually receive ***different content***, depending on their connectivity, rather than receiving "copies" of the ***same*** video encoded at different bitrates.

Ogdon's "segments" correspond to discrete slides a human presenter would display during a presentation—they are distinct, stand-alone pieces of content that accompany a presenter-led performance of a presentation. *Id.* at ¶60. While the individual slides (or "segments") may include multimedia content, including "video" (i.e., a "single image [] complex combination of images, audio, animation and video … [and] interactive questions that audience members answer e.g., by clicking on their display screens," Ogdon's "segments" are distinguishable from the claimed "files" because they are not portions of any continuous larger video or live video feed – *i.e.*, they do not "yield a different portion of the video on playback." EX 1004 at 3:4-10. Indeed, Ogdon does not disclose streaming any larger videos like "movie[s]," "sports event[s]," "music," "concert," or any of the other streaming content disclosed by the '564 Patent. *See* EX 1001 at 6:36-39. In fact, as noted above, the phrases "video stream" and "video streaming" do not appear in Ogdon. EX 2001 at ¶60. The only "stream" Ogdon mentions is an audio stream. EX 1004 13:12-19; 27:17-19; 28:31. And as to the audio stream, Ogdon specifies that the

audio will remain the same quality, regardless of the strength of the viewer's network. EX 1004 at 4:11-17, 4:44-59, 6:33-37, 8:41-4, 10:13-16, 13:36-46 ("regardless of the version of the video presentation provided, the clients…experience[] simultaneously ***the same audio presentation***"). Thus, there is no teaching in Ogdon of a "stream" of any kind that is divided into multiple different copies of the video encoded at different bitrates, and supplied in time-aligned segments with the "same…duration", as the claims require. EX 2001 at ¶62.

Ogdon also discloses that a presentation may also have "alternative segments" that can be retrieved "depending on, for example, performance characteristics of network transmissions." EX 1004 at 3:1-2, 36-38; *see also id.* at 3:38-44. However, Ogdon does not claim these "alternative segments" to be a solution that enables streaming " a video." EX 2001 at ¶61. Instead, Ogdon's alternative segments are static images or slides that enable a participant to participate in a presentation or meeting by viewing some limited set of presentation content, where the participant might otherwise be excluded due to insufficient bandwidth. *Id.* To illustrate, Ogdon discloses that a presentation may include "first and second ordered segments" in "full animation," while "alternative segments" are provided in "slide show format." EX 1004 at 3:44-57. However, Ogdon's alternative segments are "slides," not a "video…stored as multiple files." EX 2001 at ¶60. They are not "copies of the video encoded at a different bitrate" nor do they "yield the same portions of the video on playback," as required by this claim element. *Id.* Instead, the alternative segments

are simply static slide presentation content. *Id.* While they may be presented "synchronously" as a substitute for the default "full animation" segments, Ogdon's alternative slides do not "have the same time index in relation to the beginning of the video" because they are not portions of a video—they are static slides. *Id.* Thus, clients receiving the different presentation formats discussed in Ogdon would not receive the same video as required by the claims ("streaming…a video").[4] Instead, they would receive different content, albeit purportedly related "corresponding" to the video in the original presentation.

Ogdon recognizes that existing "telepresentations" such as videoconferences were problematic due to their "substantial expense" and the requirement for "specialized video conferencing systems with high data transmission lines." EX 1004 at 1:19-48. Ogdon therefore discloses an alternative to video conferencing that does not require video streaming when there are poor network transmission characteristics. EX 2001 at ¶56. Indeed, Ogdon recognizes that the overhead required to stream and process video at an end user's device could be reduced by

[4] Ogdon's claim 9 discusses conveying either a "first video portion" or a "second video portion" based on data transmission rates; however, that claim states that the second video portion is "different" from the first video portion and only "corresponds in content" with the first video portion, rather than conveying the identical content at a different encoded bitrate. In the context of the Ogdon specification, a POSITA would understand this claim does not disclose time-aligned copies of the identical underlying content encoded at different bitrates as the claims require, but rather involves conveying alternative content to the full-bandwidth video. EX 2001 at ¶60.

distributing only the "presentation materials" (i.e., a series of multimedia "segments" or "slides" in a slide deck) rather than the full live audio/video stream. *Id.* at ¶57. Ogdon teaches that its proposed solution is acceptable because it "allow[s] individuals to access and/or participate in a presentation using standard telephony and Internet network connections found in most offices and many homes." EX 1004 at 1:43-48. Conference participants therefore would not need to travel to dedicated "telepresentation" or "video conference" centers to attend a meeting hosted elsewhere—they could simply view basic "presentation materials" over a low bandwidth connection while separately listening in to a teleconference bridge in lieu of streaming a video of the meeting. EX 2001 at ¶57.

By contrast, the '564 Patent is directed to the streaming of a single video (e.g., distributing a continuous live video feed (or pre-recorded video content) for consumption over a network. EX 1001 at Title, Abstract. Unlike Ogdon's desire to rely solely on transmitting presentation slides and real-time streaming audio, the '564 Patent discloses a solution that allows a large number of remote clients to **stream the very same video content** at different bitrates depending on whether each client has different network resources available. EX 2001 at ¶58. In other words, the '564 Patent discloses a solution to a very problem that Ogdon circumvented, not solved—streaming of the same dynamic live/recorded video content to users regardless of their differing connection speeds and equipment. EX 2001 at ¶63.

The '564 Patent achieves this in part by creating sets of "multiple files" from the original large content file or live video feed, where the "multiple files across the different copies" contain identical temporal portions of the video (i.e., "have the same time index in relation to the beginning of the video"), but with different bitrates (corresponding to different display quality). EX 2001 at ¶59. By segmenting and encoding the files, the claimed inventions allow for contiguous playback of the files that collectively yields playback of the full video content. *Id.* The common alignment of the files in each set allows a playback device to select the file of a copy encoded at a particular bitrate, and, as needed, to adjust for changing bandwidth resources, to select a copy of the same file with a different bitrate for subsequent streaming. *Id.* When the bandwidth of the user's network is constrained, the client may request a file of one of the lower bitrate copies, thereby maintaining playback continuity instead of stalling and re-buffering. *Id.*

By using multiple sets of files of different copies in this way, the claimed inventions eliminate the need for users to download the full content file before beginning playback or perform a progressive download that may be subject to freezing or buffering, thereby offering smooth instantaneous viewing along with the ability to fast forward, rewind, direct seek, and other functions, even over a relatively low bandwidth connection. *Id.* Additionally, segmenting the media into multiple sets of copies enables users to retrieve and enjoy content at the most appropriate bitrate for their situation, thereby reducing latency, providing the highest quality

video playout that is sustainable for a real-time stream, and improving the reliability and efficiency of computer devices used to stream content data over a network. *Id.*

For these reasons, Petitioner's obviousness combination fails to render obvious each challenged independent claim.

3. Ogdon Fails to Disclose or Render Obvious "multiple different copies of the video encoded at different bit rates are stored on the video server as multiple sets of files" as Required By Element 1[A][3]

Petitioner relies primarily on Ogdon's disclosure of video presentations and/or "segments" as allegedly disclosing "multiple different copies of the video encoded at different bit rates." *See, e.g.*, Pet. at 17-18; EX 1003 at ¶ 64. However, Ogdon does not teach encoding a video at a plurality of different bitrates to create different copies of a video as claimed. EX 2001 at ¶60. Instead, Ogdon states that "each [presentation] **version** may be for a different group of audience members such as a group for **Japanese speaking audience members, or audience members affiliated with a particular organization**." EX 1004 at 2:30-35 (emphasis added). This description contemplates that **different** presentation variations, or versions, refers to altogether **different** content, customized based on language preferences of the audience or organization affiliation, not even hinting at a variation based on streaming quality. EX 2001 at ¶67. Ogdon states that, "[f]or example, a first variation might be directed to the customers of a corporation, another variation directed to the sales representatives of the corporation, and yet another directed to

the investors of the corporation." *Id.* at 25:38-42. Thus, Ogdon teaches creating separate presentation materials as "versions" or "variations" of content that are customized to a given audience – not based on the computing resources available to them. EX 2001 at ¶67. Customized versions of presentation materials do not disclose or suggest the claimed "***copies of a video***" encoded at different bitrates, at least because the underlying content – not simply the content's quality – in each presentation is different, rather than being a "copy." *Id.*

Additionally, Ogdon is silent regarding encoding even customized versions at different bitrates. *Id.* Ogdon never even mentions the video encoding required for this claim element. *Id.*

Petitioner argues that "Ogdon further discloses that the video presentation has multiple different copies…encoded at different bitrates" because "there are '[d]ifferent versions of the same presentation' with 'different network requirements,' for example, 'a first version of a presentation may require a network transmission rate sufficient for real time or animated video' and 'another version of the presentation [requiring] a transmission rate sufficient for graphic slides.'" Pet. at 18 (citing EX 1004, 2:30-66). Here, Ogdon describes creating multiple presentation versions that each include "segments (subcollections)" of different content. EX 2001 at ¶68. However, nowhere does Ogdon disclose or suggest a plurality of video streams encoded at different bitrates. *Id.*

Ogdon gives two examples of segments:

> For example, the segments (subcollections) of a first version of a presentation may require a network transmission rate sufficient for **real time or animated video** and the segments for another version of the presentation may only require a transmission rate sufficient for **graphic slides**. Thus, of a set of corresponding segments (subcollections), one segment (subcollection) may merely be an **audio presentation via a telephone**, whereas an alternative segment (subcollection) may be a **multimedia presentation element that is a combination of one or more of the following types of HTML multimedia data**: audio, images, animation or video, wherein such a multimedia element plays over a set period of time and can be as simple as a single image or as complex as a combination of images, audio, animation and video. Furthermore, segments may include **interactive questions that audience members answer by, e.g., clicking on their display screens.**

EX 1004 at 2:61-3:10 (emphasis added).

Ogdon's first example discloses a configuration where the segments of one version may require a network transmission rate sufficient for "real time or animated video" and segments for another version may simply require a network transmission rate sufficient for "graphic slides." EX 2001 at ¶68. But "graphic slides" are not a copy of a video encoded at a different bitrate, as the claims require. Instead, "slides" are an alternative presentation altogether. *Id.* Ogdon's first example therefore does not disclose or suggest a plurality of streams as claimed. *Id.*

Ogdon's second example fares no better. There, Ogdon describes a first presentation version including segments for an "audio presentation via a telephone" with an alternative segment collection being a "multimedia presentation element that is a combination of one or more of the following types of HTML multimedia data…." EX 2001 at ¶69. Notably, none of Ogdon's "versions" or "segments

(subcollections)" disclosed here include a video stream itself, even if a discrete video may be included as the segment. *Id.* To be sure, Ogdon does state that part of an alternative segment subcollection can be HTML (Hyper-Text Markup Language), which is a content formatting language that dictates the display of text and graphical elements in a web browser, and that this has the potential to display some "animation and video" content. *Id.* At best, part of one "segment" in one version may include "video," while the corresponding "segment" in another version includes only "an audio presentation." *Id.* ***Thus, in all cases, Ogdon's different "versions" refer to completely different content, not "copies of the same video encoded at a plurality of different bitrates" that "yield the same portions of the video on playback" as the claims require***. *Id.*

Petitioner also relies on Ogdon's passing reference to retrieving "presentation elements of greater size (and corresponding enhanced quality of presentation)" (EX 1004 at 2:30-66), and that "presentation quality may be enhanced from limited or no animation to full animation" (*id.* at 22:46-47). Pet. at 18. Based on this limited disclosure, Dr. Houh concludes "[a] POSITA would have understood the smaller size and lower transmission rate for 'limited or no animation' video is encoded at a lower bitrate and the larger size, higher quality, and higher transmission rate requirement 'full animation' video is encoded at a higher bitrate." EX 1003 at ¶ 65. When Ogdon discusses enhancing the "quality of presentation," it refers to different presentation elements with different content. EX 2001 at ¶71. For example, Ogdon

discloses one element of a presentation being a graphic slide with still images (i.e., "no animation") as a low-bandwidth option or an animated video (i.e., "full animation") as a high-bandwidth option. *Id.* Petitioner provides no explanation or technical reasoning supporting its expert's *ipse dixit* assertion that Ogdon's disclosures would be understood to be video streams. Indeed, a POSITA would not have understood a slide with images ("no animation") to be a video stream at all, even when accompanied by separate audio, much less a stream with any encoded bitrate. *Id.*

In the context of streaming video, "bitrate" is a measure of the number of bits that are processed per unit time when the video is displayed. *Id.* The number of bits required to display a static image is a constant, and once the image is displayed it will remain on the screen until it is erased. *Id.* No additional bits are required to be received or processed. *Id.* As such, a POSITA would have understood the concept of "bitrate" does not apply to images. Instead, different qualities of an image would simply have a different file size (i.e., the number of bits required to represent the image). *Id.*

Furthermore, Ogdon's reference to elements with "limited … animation" would have no generally accepted meaning to a POSITA and Ogdon provides no explanation. *Id.* at ¶72. For example, Ogdon does not disclose any process of, *e.g.*, removing some frames of a full animation video to produce a more "limited animation" version of the video. *Id.* Based on the descriptions in combing the

specification, "limited animation" could possibly refer to "GIF's" (EX 1004 at 5:32-34), which is a standard media type for bitmap images that can be used to display short, looping animations. EX 2001 at ¶72. But even then, Ogdon is silent regarding encoding any larger high-quality source video into a GIF. *Id.* Furthermore, the looping animation of GIFs is not itself video streaming and is entirely unsuitable for use as part of video streaming and again Petitioner provides no explanation rooted in Ogdon's disclosure, or in the contemporaneous knowledge of a POSITA, as to how GIFs could be used to stream video. *Id.*

Ogdon interchangeably references the terms "animation" and "video" throughout its disclosure, sometimes combining the two terms into a single concept and never describing "video" as anything resembling the streamed videos described in the '564 Patent. *See, e.g.*, EX 1004 at 2:64 ("animated video"), 3:5 ("animation or video"). Read in context with Ogdon's other teachings and the state of the art as of the presumed 1997 priority date of Ogdon, Ogdon's use of the term "video" establishes to a POSITA that these "video"-based presentation segments refer to an animated series of fixed images shown sequentially in a loop, like the disclosed "GIF animations." EX 1004 at 5:33; EX 2001 at ¶73. For example, a "GIF" might be made of a series of 3 images that are displayed sequentially in a loop. *Id.* A POSITA would have understood that the use of GIFs to show what one might call animated "videos" on the (relatively new) world wide web in 1997 was popular. *Id.* This is vastly different from what the "video" for adaptive bitrate streaming claimed by the

inventors of the '564 Patent. *Id.* at ¶74. For example, "videos" in the '564 Patent were much larger in duration (e.g., movies, sporting events, television programs, etc.), suitable for segmenting into a "multiple different copies of the video encoded at different bit rates" that are each "stored on the video server as multiple sets of files." '564 Patent at Claim 1; *id.* Nothing in Ogdon discloses streaming such a "video" or creating a plurality of copies of a source video encoded at different bitrates and stored as multiple files. *Id.*

For these reasons, Petitioner's obviousness combination fails to render obvious each challenged independent claim.

4. Ogdon Fails To Disclose or Render Obvious Elements 1[A][4]-[5]: "each of the files yields a different portion of the video on playback" and "the files across the different copies yield the same portions of the video on playback"

Petitioner argues that Ogdon discloses elements 1[A][4]-[5] based on Ogdon's "subcollection of segments (i.e., presentation elements) [that are] ordered according to their presentation sequence**.**" Pet. at 20-21 (quoting EX 1004 at 2:44-45, 3:46-47). But this fails to disclose these elements. Rather, Ogdon's "presentation sequence" is a list of presentation elements (i.e., slides) that the human presenter assembles in a "script" for changing on the fly (i.e., "in the middle of a presentation"). EX 1004 at 3:16-18. Ogdon's "presentation sequence" does not disclose or suggest creating a source video or live video feed with a plurality of

streams, each having streamlets or files that "yield[] a different portion of the video on playback. EX 2001 at ¶76.

Petitioner also relies on Ogdon's disclosure that "corresponding segments [] in different versions have approximately the same presentation duration" so that "any of the corresponding alternative segments [] from different versions can be presented as a replacement for another such corresponding segment [] during the presentation." Pet. at 20-21 (quoting EX 1004 at 2:49-55). There are two defects in this reasoning. ***First***, contrary to the claimed requirement, Ogdon does not disclose that each corresponding "segment" is the same duration, nor does it disclose a way to ensure they are. Instead, Ogdon expressly states that the segments would only be "***approximately*** the same presentation duration," and even then only in the (unspecified) scenario when one can "assum[e] corresponding segments." EX 1004 at 2:49-55. Moreover, Ogdon makes clear that its system does not guarantee that even these corresponding segments will actually be presented to the user. For example, Ogdon expressly describes situations where the presentation segments cannot be delivered due to network constraints. *Id.* at 24:17-39 (noting the "audio portion" of the presentation is presented "even though the portion of the presentation corresponding to the collection of segments are not retrieved in time for performance" thereby providing some continuity of presentation "regardless of whether a portion of the video for the presentation is displayed or not"). Thus, Ogdon

does not satisfy the claimed requirement that there be "multiple files" across "different copies" that yield the "same portions" on playback.

These features are critical to the operation of the '564 Patent because they provide systems and methods for seamlessly streaming a video while adapting quality in response to changing network conditions. EX 2001 at ¶76. If the "multiple files" across "different copies" did not yield the "same portions," then the viewer would experience jumping of the content on playback back and forth to accommodate the difference between files. *Id.*

Second, as discussed above, Ogdon's "presentation versions" are not a plurality of copies of the same "video." EX 2001 at ¶77. Instead, Ogdon's presentation versions are different kinds of presentations in different formats, such as a collection of graphic slides for one version, presenter audio for another version, and animation for still another version of the presentation. *Id.* While Ogdon does not explain what the "presentation duration" of each segment refers to, a POSITA would have understood that it defines how long a segment is displayed to a user so that presenter audio synchronizes with the displayed content. *See, e.g.*, EX 1004 at 4:36-40 ("[T]he host node coordinates any accompanying audio portion for this segment so that the timing for the presentation of these audio and video portions of the segment(s) are synchronized."); *id.* at 3:1-10 ("[A]n alternative segment (subcollection) may be a multimedia presentation element that is a combination of one or more of the following types of HTML multimedia data: audio, images,

animation or video, wherein such a multimedia element **plays over a set period of time and can be as simple as a single image or as complex as a combination of images**, audio, animation and video.") (emphasis added). A POSITA would have therefore understood the "duration" of the segment to be a presenter-defined term referring to the amount of time the content is relevant to the corresponding presenter audio. EX 2001 at ¶78. Ogdon's "presentation duration" does not disclose or suggest that segments across versions are streamlets of video each having the same playback duration and corresponding to the same portion of the same video. *Id.*

Further, Petitioner is wrong that Ogdon's use of alternative segments as "replacement[s] for another such corresponding segment" meets these limitations. Pet. at 21 (citing EX 1003 at ¶68). Specifically, Ogdon "replacing" an animated segment with an alternative "graphic slide" segment does not disclose or suggest video files "wherein each of the files yields a different portion of the video on playback" and "wherein the files across the different copies yield the same portions of the video on playback" as recited by these limitations because a "graphic slide" is not a video or a portion of a larger video. EX 2001 at ¶79. Furthermore, even if Ogdon were to disclose providing multiple alternative segments as **video segments** (it does not, and Petitioner fails to identify any such teaching or suggestion in Ogdon), such a disclosure would not disclose or suggest the claimed "files." *Id.* at ¶80. Instead, Ogdon's presentation segments are discrete media segments arranged by the human presenter in advance to correspond to live presenter audio. *Id.* These

segments are not sequential parts of a larger overall video stream such as a movie, sporting event, or television show such that "each of the files yields a different portion of the video on playback" and "the files across the different copies yield the same portions of the video on playback." In fact, Ogdon's "presentations" are incompatible with streaming a larger video, which the claims of the '564 Patent expressly require. *Id.*

For these reasons, Petitioner's obviousness combination fails to render obvious each challenged independent claim.

5. Ogdon Fails To Disclose or Render Obvious Elements 1[B]-1[C][1]: "requesting a plurality of sequential files of one of the copies from the video server based on the time indexes" and "automatically requesting from the video server subsequent portions of the video by requesting for each such portion one of the files from one of the copies dependent upon successive determinations by the media player to shift the playback quality to a higher or lower quality one of the different copies"

Ogdon fails to disclose or suggest client selection of a stream and/or client requests for individual files or streamlets for at least the reasons discussed above regarding Ogdon's failure to disclose a plurality of files or streamlets of the same video. *Supra* §§VI.A.2 and VI.A.3. Because Ogdon fails to disclose a plurality of files at a server, Ogdon also fails to disclose or suggest automatically requesting subsequent portions of a larger video by requesting, for each portion, files or streamlets from that stream. EX 2001 at ¶82.

While Ogdon generally discloses benefits of "***controlled*** client requests," Ogdon explains, contrary to the claimed requirement, that the client requests are "controlled" by a "presentation leader" via a server or "host" that "transmit[s] presentation controlling commands." EX 1004 at 3:30-38. Ogdon teaches that a human **presentation leader** controls which segment versions are available for each portion of the presentation and can even manually change scripts in the middle of a presentation to require clients to view a different variation of the presentation. *See id.* at 3:16-23 ("Thus, multiple sequentially-ordered scripts can be created so that the leader can choose to change scripts in the middle of a presentation based on user feedback. Accordingly, a presentation leader has the ability to **stop presentation of a particular script and its current subcollection of segments and change to a different subcollection of segments to be delivered to the audience**. Subsequently, the leader can then resume the initial script at any time.") (emphasis added). Thus, Ogdon does not disclose element 1[B]-1[C][1]'s "automatically requesting…subsequent portions of the video" since retrieving each segment is dependent upon the server's/leader's instruction, which may change at any time to eliminate or replace the version being presented. EX 2001 at ¶83.

B. Ground 2: Ogdon in view of Shteyn and Chou Does Not Render Claims 1-8, 10, and 12-16

In addition to the deficiencies noted above, Ground 2 fails for additional reasons explained below.

1. The Combination Fails to Disclose Element 1[A][3]: "wherein multiple different copies of the video encoded at different bit rates are stored on the video server as multiple sets of files"

Shteyn fails to disclose or render obvious encoding different copies of the video at different bitrates. First, "bitrate" generally refers to the quantity of bits that are played per second when the video is played out. EX 2001 at ¶102. In Petitioner's cited portions of Shteyn, the reference never discloses segments being encoded in different bitrates. Pet. at 47-48. In fact, Shteyn only mentions the term "bitrate" in connection with variable bitrate encoding (varying the encoding bitrate of a file based on the content of the file), not adaptive bitrate streaming (choosing different encoding bitrates corresponding to different reproduction qualities based on network/computing resource conditions). *See generally*, EX 1016; EX 2001 at ¶102. Accordingly, Petitioner's reliance on Shteyn fails to establish that the prior art render obvious claim element 1[A][3].

Petitioner primarily relies on the following section of Shteyn to support its obviousness theory:

> To this end, the content file is split into multiple parts. Each part or segment requires a relatively short download time. Therefore, the play-out latency is determined by the download time of the first part. The size of the individual part can be determined by the communications bandwidth, e.g., through pinging for a latency-check. The client device/application receives control information about the content. This control information comprises, for example, information relating to the size and memory location of the whole file as well as of its parts at the server.

EX 1016 at 1:65-2:7. Petitioner states that this section teaches "[e]ach segment (or "file") is stored in the server as different encoded bitrate," but this section is actually about determining the ***file-size*** of particular video segments of a single "content file." Pet. at 47. This does not disclose or suggest encoding the single "content file" into multiple copies of the "content file," where each copy is encoded at a different bitrate. Instead, this disclosure is about choosing a transmission segment "size" that the "whole" "content file" will be "split into." EX 1016 at 2:1-9.

Petitioner also cites Shteyn where it teaches "parts" and there can be multiple alternative versions of each part. Pet. at 49-50 (citing EX 1016 at 3:44-56). This argument fails because Shteyn explicitly states the "alternative…part" of the file (e.g. portion of a music file) can have a different "length," than the "preferred" (non-alternative) "part." EX 1016 3:45-53. Thus, Shteyn does not teach preserving the same content at different bitrates as the claim requires. Instead, it creates different content (files containing different "lengths" of the relevant song). Unlike the claimed requirement, Shteyn explains that it uses the "bandwidth requirement" information to determine ***how many parts to download before starting the playout***:

> To this end the content file is split into multiple parts. Each part or segment requires a relatively short download time. Therefore, the play-out latency is determined by the download time of the first part. The size of the individual part can be determined by the communications bandwidth, e.g., through pinging for a latency-check.…
>
> Preferably, the information contains references to the file location as well as references to the locations of the parts. ***The intended bandwidth information is associated with the parts. The client may make its own***

> ***decisions regarding how many parts to download before the start of the play out (execution).***

EX 1016 at 1:65-2:24 (emphasis added). Shteyn does not correlate the "bandwidth information" to the "bitrate" of the content itself. Instead, Shteyn only teaches correlating the "intended bandwidth information" to allow the client to determine how "many parts to download" before starting play out of a video (i.e. the client determines the latency between when the file is first requested, and when play out begins, to prevent the playback buffer from emptying during playback). EX 1016 at 2:20-39.

In short, Shteyn's "alternative files corresponding to a given segment" are merely files containing different amounts of the underlying content. They are not different copies of the same underlying content encoded at different bitrates, as element [A][3] requires. EX 2001 at ¶¶102-103.

2. Chou Does Not Overcome the Deficiencies in Ogdon and Shteyn

Petitioner relies on Chou for certain limitations of dependent claims 6, 7, and 13. Pet. at 54-56. Even assuming arguendo those references provide those purported teachings, they do not cure the deficiencies noted above with respect to Ogdon and Shteyn. Ground 2 fails for the same reasons as noted above.

3. A POSITA Would Not Have Been Motivated to Combine Ogdon with Shteyn and Chou

Petitioner alleges that:

> A POSITA would have understood the above disclosures and from Ogdon's disclosures (at '564 Petition, Section IX.B.1.b), including disclosure of different versions of the same video presentation each having "different network requirements," to teach ***encoding the same raw uncompressed video content to two or more versions having different bitrates***. EX 1003, ¶ 126. It was well-known to a POSITA at the time of the alleged Priority Date that streaming different versions of content at different quality levels depending on client network requirements meant encoding the content into different quality levels with different bitrates. A POSITA would have been motivated to modify the apparatus of Ogdon ***such that each segment is stored as a file and thus the multiple different copies of the video encoded at different bitrates are stored as multiple sets of files***, to simplify streaming requests by requesting individual successive files rather than requiring the requests to include byte- or other ranges of the video. EX1003, ¶ 127.

Pet. at 48-50 (emphasis added). Petitioner therefore relies on Shteyn for the limited purpose of modifying Ogdon's system to encode "presentation segments" in two or more "versions" with different bitrates and storing the different versions as "files." *Id.* ("A POSITA would have been motivated to ***modify the apparatus of Ogdon***…." (emphasis added)).

Petitioner fails to establish that the proposed combination renders obvious elements 1[A][3]-[5] pertaining to the plurality of streams and the corresponding streamlets. Specifically, Petitioner overlooks two central flaws—(1) Ogdon never discloses "different version of the *same video presentation*" and (2) no reference raised by Petitioner teaches encoding a single file into multiple copies at different bitrates. Thus, Petitioner provides no articulated reasoning with rational underpinning to supports its attempt to modify the prior art to match the claims.

Instead, the Petitioner's theory is fueled by hindsight alone. Additionally, as noted *supra*, Ogdon's teachings merely confirm the non-obviousness of the claims by describing a problem in the art (inability to stream video to users over relatively low bandwidth connections compared to the transmission rate of the underlying content) and fails to address it, instead providing a workaround that does not achieve video streaming. *See supra* § IV.A.2.

Even if a combination of Ogdon and Shteyn were properly motivated, at best, it would have resulted in a modified version of Ogdon's system that encodes each presentation element that happens to include video into multiple segment variations of differing file sizes, but without regard to the resulting bitrate. Indeed, each of Ogdon's successive "segments" for the same quality version may have different bitrates as dictated by Shteyn's focus on file size rather than bitrate. No aspect of the combination purports to change Ogdon's presentation delivery system into a system for streaming video files with multiple sequential segments.

V. DISCRETIONARY DENIAL UNDER § 314 IS WARRANTED.

A. PTAB should exercise its discretion to deny institution under *Becton* and *Advanced Bionics*.

The Board should deny institution of the Petition because "the same or substantially the same prior art or arguments previously were presented to the Office." 35 U.S.C. § 325(d). Furthermore, Petitioner fails to present any arguments

or evidence that the Office committed material error. Thus, the Board should defer to the previous findings of the Office and deny institution.

1. *Advanced Bionics* Framework

Under *Advanced Bionics*, the Board first asks "whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office." *Advanced Bionics, LLC v. MED-EL Elektromedizinische Gerate GmbH*, IPR2019-01469, Paper 6 at 8 (P.T.A.B. Feb. 13, 2020) (precedential). If either is satisfied, Petitioner must demonstrate that the "Office erred in a manner material to the patentability of challenged claims." *Id*. at 8.

Although Ogdon itself was not previously presented to the Office, U.S. Patent No. 6,389,473 to Sharon Carmel et al. ("Carmel") was presented and substantively discussed during prosecution of related Patent No. 11,470,138 ("the '138 Patent"), including reference to a thorough discussion of the reference before the International Trade Commission. EX 2002 at 1264; *Certain Fitness Devices, Streaming Components Thereof, and Systems Containing Same*, Inv. No. 337-TA-1265 (April 12, 2021) (Final). A comparison of Ogdon to Carmel makes clear that Ogdon is cumulative to (and even less relevant than) Carmel, which was already considered. Thus, the Board should apply the Advanced Bionics framework, under which "the Director generally will exercise discretion not to institute *inter partes* review" where, as here, (a) the Office previously considered prior art that was "substantially the

same as" Ogdon and (b) Petitioner "fails to make a showing of material error." *Advanced Bionics* at *8-*9.

2. Carmel Discloses at Least As Much As Ogdon, and Was Already Considered by the Office

Petitioner relies on Ogdon for teachings that are cumulative of those in Carmel, which the Office already extensively considered. Notably, part 1 of the *Advanced Bionics* framework is not limited to situations where the identical reference raised in the Petition was of record during prosecution. Instead, the Board looks to whether the Petition reference was "substantially the same" as a reference considered during prosecution. *See, e.g.*, *Evapco Dry Cooling, Inc. v. SPG Dry Cooling USA*, IPR2021-00687, Paper 11 at 24-25 (P.T.A.B. Nov. 15, 2021). This includes requiring Petitioner to explain why any proposed modification to the Petition reference (i.e., Ogdon) would not also have been obvious to make to the reference considered during prosecution (i.e., Carmel). *Id.* (agreeing with Patent Owner that the reference asserted in petition was substantially the same as a different reference considered during prosecution, noting "Petitioner, however, does not explain adequately why making the same modification to [the prior art reference previously before the Office] would not have been obvious").

During the '138 Patent's prosecution, Carmel was cited, having been previously used as a reference in an ITC litigation against a related patent. EX 2002 at 1264. The '138 Patent issued after the '564 Patent and relates to the '564 Patent

because both are continuations of U.S. Patent No. 10,659,513. Thus, the analysis of Carmel in the '138 Patent's prosecution is relevant here. *Cf. Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at *16-17 (Dec. 15, 2017) (precedential) (applying 325(d) discretion to deny institution where substantially similar art and arguments were made during prosecution of a related patent family member but not made during prosecution of that particular patent). Importantly, the Federal Circuit "has many times applied the prosecution history of one patent in a family to a related patent in the same family." *Microsoft Corp. v. Multi-Tech Sys., Inc*., 357 F.3d 1340, 1345 (Fed. Cir. 2004). *See id*. ("Any statement of the patentee in the prosecution of a related application as to the scope of the invention would be relevant to claim construction [of the patent at issue].") Here, a series of terminal disclaimers show the close relationship of the family of patents. *See* EX 2003. An analysis of one set of claims is not only helpful to the understanding of another but useful in demonstrating that the work previously done by the Office need not be rehashed and the Board's resources wasted. *See Advanced Bionics* (describing 325(d) as reflecting "a commitment to defer to previous Office evaluations of the evidence").

Carmel describes a method for broadcasting to one or more client computers by dividing data into slices with a predetermined data size. EX 2004 at Abstract. A goal of Carmel is "to provide substantially continuous, high-bandwidth data streaming over a network using common, existing server and network

infrastructure." *Id*. at 51-54. Like Carmel, Ogdon describes a system that distributes different versions of a presentation to an audience in segments. EX 1004 at 2:36-45. As shown below, all of the relevant Ogdon disclosures are substantially similar, (albeit even less relevant to the Challenged Claims), compared to the disclosures of Carmel.

Claimed Feature	**Ogdon Disclosure**	**Carmel Disclosure**
Streaming	"A presentation system is disclosed for distributing a performance of a presentation synchronously to a plurality of client nodes on a network such as the Internet." EX 1004 at Abstract (cited by Pet. at 18) "the client node 56 may receive Video (and possibly audio as well) information from a communications network 70 Such as the Internet." EX 1004 at 7:44-48 (cited by Pet. at 18) "One or more content network server sites 96…for providing presentation data to client sites. EX 1004 at 8:27-40 (cited by Pet. at 19)	"FIG. 1 is a schematic illustration showing a real-time broadcasting system …to generate a multimedia data stream representing an entertainment or informational program to be transmitted to a plurality of clients 30 …" Carmel at 1:23-33 "FIG. 6B is a flow chart illustrating the operation of clients 30 in downloading and playing back multi-level data stream 41 (FIG. 3D) transmitted from server 36, …the client selects one of the available quality levels in the stream. Responsive to the selection, server 36 begins to transmit data slices at the chosen quality level. The slices are received, decoded and output by the client." Carmel at 10:64-11:8

Claimed Feature	Ogdon Disclosure	Carmel Disclosure
Streamlet	"Note that each of the one or more presentation versions includes one or more presentation segments (hereinafter also denoted simply "segments") that provide different portions of the presentation. More precisely, subcollections each having one or more segments are provided as presentation "elements" in that each such subcollection is intended to be an indivisible portion of a presentation performance. Moreover, each version of a presentation typically has its subcollections of segments (i.e, presentation elements) ordered according to their presentation sequence. Moreover, substantially every segment (or subcollections thereof) in one version corresponds with a segment (or subcollections thereof) having the same presentation order, in each of the other versions." EX 1004 at 2:36-49 (cited by Pet. at 20) "For example, in the Telephony/Internet embodiment, such a host node, upon receiving the presentation instructions from a presentation leader	"A method for real-time broadcasting from a transmitting computer to one or more client computers over a network, including providing at the transmitting computer a data stream having a given data rate, and dividing the stream into a sequence of slices, each slice having a predetermined data size associated therewith. The slices are encoded in a corresponding sequence of files, …." Carmel at Abstract "a transmitting computer generates a data stream …divided into a sequence of segments or slices of the data, preferably time slices, wherein the data are preferably compressed. Each slice is preferably assigned a respective slice index. …The clients download the data stream from the server, …The clients use the slice indices of the frames to maintain proper synchronization of the playback. The division of the data stream into slices and the inclusion of the slice indices in the data stream to be used by the clients in maintaining synchronization allows the broadcast to go on substantially in real time

Claimed Feature	Ogdon Disclosure	Carmel Disclosure
	indicating the next presentation segment(s) to be presented, transmits Internet presentation control signals to each of the client nodes identifying the next collection of corresponding versions of video segments from which each client node is to select a video segment for presenting." EX 1004 at 4:29-36 (cited by Pet. at 20)	without the use of special-purpose hardware. Preferably, each segment or slice is contained in a separate, respective file. …." Carmel at 2:1-28
Switching between qualities	"Accordingly, if the next collection of segments is not cached on a client node 56, then step 524 is performed wherein the client presentation software 88 on the client node 56 uses its most recent network 70 data transmission characteristics together with the host 200 transmitted list of current network 70 addresses for content webservers 96 to select an appropriate content webserver and an appropriate version of the next collection of segments to be retrieved. Note that the selections determined in this step are performed with the goal of assuring that there is a high probability of this next collection of segments being delivered to the client node 56 prior to	"Periodically, client 30 makes an assessment of the rate of data transfer over the link from the server and, if necessary, changes the quality level accordingly. …the client may select a higher quality level to take advantage of the available bandwidth. …." Carmel at 11:9-22

Claimed Feature	Ogdon Disclosure	Carmel Disclosure
	the time that this collection is to be used in the presentation performance on the client node." EX 1004 at 22:10-23 (cited by Pet. at 20) "Accordingly, on such subsequent iterations for determining an alternative way to present a particular portion of the presentation, the following steps may be performed: The original calculation is again performed with new times and current bandwidth information usually resulting in selection of alternative segment collections that are smaller." EX 1004 at 24:50-55 (cited by Pet. at 21, 30)	

During prosecution, the Examiner concluded that Carmel taught away from the combination of claim limitations because Carmel focused on maintaining the same size of a streamlet rather than the same duration. EX 2002 at 1329-1331. Here, Ogdon fares no better than Carmel at disclosing the elements the Examiner previously found lacking in Carmel regarding streamlets having a particular time duration. Petitioner here relies on inferences to fill in the gaps left by Ogdon's disclosures. Ogdon explains that segments can "in different versions have

approximately the same presentation duration," which contributes to different versions with different time lengths being able to replace each other. EX 1004 at 2:43-55. This does not suggest, as emphasized by the present patent, the crucial nature of the streamlets being of ***the same time index*** across multiple versions of a video, as expressly required by the claims. *See, e.g.,* EX 1001 at Claim 1. Thus, Ogdon does not make up for what the Examiner found Carmel lacked and any disclosure made by Ogdon is simply cumulative of what Carmel teaches.

Grounds 2 and 3 are likewise cumulative of arguments presented during prosecution. As in other instances where the Board has found prior art and arguments to be cumulative, the additional teachings cited by Petitioner are cumulative of the teachings of the primary reference, Ogdon. *See, e.g.*, *Microsoft Corp. v. Throughputer, Inc.*, IPR2022-00757, Paper 10 at 18-20 (P.T.A.B. Nov. 1, 2022) (denying institution where secondary references were described as "similar" to the primary reference and presented as alternatives to the disclosure of the primary reference). Here, Petitioner provides a first ground claiming that all claims are obvious based on Ogdon alone. Pet. at 14. Petitioner then provides alternative grounds with secondary references, describing the secondary references as providing "similar systems" as Ogdon, with no explanation of how they fill the gaps discussed above. *See, e.g.*, Pet. at 45. Thus, Petitioner's prior art and arguments are substantially similar to those previously presented to the Office, establishing institution should be denied.

In short, although Ogdon's disclosure is less relevant to the present patent than Carmel, it is substantially similar for purposes of the *Advanced Bionics* framework, and Petitioner has failed to carry its burden of showing that the Board should not "defer to previous Office evaluations…unless material error is shown." *Advanced Bionics*, at *9.

B. The Board Should Exercise Its Discretion to Deny The Petition Because Petitioner Fails To Adequately Address the Objective Indicia of Non-Obviousness

In analyzing whether discretionary denial is appropriate, the Board has repeatedly "cautioned petitioners…that petitions may be denied if they do not address known evidence of secondary considerations." *Stryker Corp. v. KFX Med., LLC,* IPR2019-00817 at *28-*29 (PTAB Sep. 16, 2019) (Paper 10) (denying petition based on discretionary denial factors, including objective indicia); *accord Robert Bosch Tool Corp. v. SD3 LLC*, IPR2016-01751 (PTAB Mar. 22, 2017) (Paper 15) (denying institution for failure to address objective indicia presented during an ITC proceeding); *Coalition for Affordable Drugs V LLC v. Hoffman–LaRoche, Inc.*, IPR2015–01792 (PTAB Mar. 11, 2016) (Paper 14) (denying institution for failure to address objective indicia presented during *ex parte* prosecution); *Merial Ltd. v. Virbac*, IPR2014–01279 (PTAB Jan. 22, 2015) (Paper 13) (same); *Omron Oilfield & Marine Inc. v. MD/TOTCO*, IPR2013–00265 (PTAB Oct. 31, 2013) (Paper 11) (denying institution for failure to address objective indicia raised during reexamination).

For instance, in *Stryker*, the Board explained that the petitioner was aware of prior litigation where evidence of secondary considerations had been successfully relied upon to establish non-obviousness. IPR2019-00817 (Paper 10) at 27-29. The Board specified that "the secondary considerations evidence presented during the [prior] litigation established that the [challenged claims] may not have been obvious." *Id.* at 28. Based on this and the similarity between the art presented in the petition and art previously considered by the Office, the Board exercised its discretion to deny institution. *Id.* at 23, 29. The facts here are indistinguishable from *Stryker*. Just like *Stryker*, Petitioner here relies on art that is, at best, cumulative of art that was previously considered in detail by the Office. *See supra*. Additionally, just like *Stryker*, Petitioner was aware of the prior litigation where objective indicia of non-obviousness were presented, yet Petitioner failed to adequately address them. *Stryker*, IPR2019-00817 at *28 ("Despite knowing of the [prior] litigation, Petitioner did not address the secondary considerations evidence in its Petition").

In particular, Petitioner fails to adequately address the International Trade Commission's explicit findings that evidence of secondary considerations supported a finding of non-obviousness in a case that Petitioner is aware of and identified as a "related proceeding" in its Petition. Pet. at 1-2. The Final Initial Determination in that Investigation (as adopted in relevant part by the ITC in its written opinion) made the following findings:

> [Technology expert] Dr. Jeffay demonstrated through corroborating evidence that [initial patent-owner] Move's success is tied to the "unique characteristics of the claimed invention." As Dr. Jeffay testified, the Move system was described as early as 2008 as offering "a smooth end user experience as the Move Media Player up-shifts and down-shifts in response to network and client CPU availability." Moreover, the Move Media Player's encoding technique allowed streaming via HTTP, and the use of "[s]imple HTTP protocol transfer of media files from standard Web servers rather than deployment of expensive media servers' reduces cost and complexity." DISH further adduced evidence demonstrating that the Move Media Player was recognized as superior in streaming performance relative to its competitors, rebutting respondents' argument that "advancements in compression and encoding technologies," etc. account for the Move Media Player's success.
>
> In view of this record evidence, I [Chief ALJ] find DISH is entitled to a presumption that there is a nexus between the objective evidence of non-obvious DISH proffers and the claimed invention. I find respondents have not rebutted that presumption.
>
> … [analyzing evidence of objective indicia of nonobviousness]
>
> Having considered the claimed invention, the prior art, the objective indicia of non-obviousness, and the record as a whole, **I find that the objective indicia support a determination of non-obviousness. Thus, even if a hindsight combination of the prior art references identified by respondents would comprise every element of the claimed invention, I find that the objective evidence indicates a person of skill in the art at the time of the invention would not have found the invention to be obvious in view of those reference**s.

EX 1009 at 213-17 (internal citations omitted, emphasis added). Specifically, the APJ found DISH's objective indicia evidence had "demonstrated long-felt but unresolved need and failure of others," and that DISH had "adduced evidence demonstrating surprising results," "commercial success," and "praise by others." *Id*.; *see also* EX 2005 at 2 (adopting same).

The only response Petitioner gives to these findings is to suggest in conclusory attorney argument, without supporting evidence, that the inventors' "superior" Move Media Player does not "meet[] the claims" and that the ITC's finding of nexus was "incorrect." Pet. at 56-57. Petitioner's first assertion, however, ignores the ITC's consideration of DISH's other arguments that "it is entitled to a presumption of nexus because the product it relies on, the Move Media Player, is 'the invention disclosed and claimed' and is coextensive with the asserted claims. EX 1009 at 212. Nothing suggests that the ITC relied exclusively, or even at all, on DISH's argument that respondents conceded the nexus point.

Petitioner supports its second assertion by only two sentences, arguing that Ogdon had already disclosed shifting "quality of the stream" in order to "ensure a smooth and uninterrupted stream." Pet. at 58. As discussed below, this is factually unsupported at least because Ogdon does not disclose video "streaming" as the Challenged Claims require, and expressly abandons the attempt to stream to clients having low bandwidth connections. EX 1004 at 2:61-66 (teaching substitution of "real time…video" (i.e. video streaming) with "graphic slides" when the client's network performance does not support the real time video); *see also infra* § III.A.1. Thus, Petitioner has failed to refute or even attempt to rebut with contrary evidence, the ITC's findings that the unique combination of features in the Challenged Claims (including the ability to smoothly switch between different bitrate versions of a

streaming video) were non-obvious in view of the objective evidence of non-obviousness.

Because Petitioner has failed to address adequately the objective indicia of non-obviousness, the Board should exercise its discretion to deny this Petition. *See Stryker Corp*, IPR2019-00817 at *27-*29 (exercising discretion to deny petition "considering the factors enumerated in *Becton, Dickinson* and in further view of the secondary considerations evidence").

VI. Dr. Houh's Opinions Are Unreliable

As shown above, Petitioner's Grounds fail to show a reasonable likelihood of success because of inadequacies in the prior art disclosures. If the Board considers Dr. Houh's testimony, it is facially unreliable. Dr. Houh's testimony establishes that he fails to perform a proper obviousness analysis required under *Graham v. John Deere Co*., 383 U.S. at 17-18; MPEP2141, 2145. In particular, Dr. Houh's testimony shows that he failed to consider the evidence toward objective indicia of non-obviousness. Thus, the Board should afford little to no weight to Dr. Houh's obviousness opinions.

Dr. Houh's paragraph 21 specifies that he reviewed the 337-TA-1265 ITC Investigation Initial Determination (EX 1009). EX 1003 at ¶21. This ITC determination includes 25 paragraphs analyzing evidence relating to objective indicia of non-obviousness. EX 1009 at ¶¶211-217. Dr. Houh, however, fails to

address any of the analysis and determinations from the Chief ALJ regarding the objective indicia of non-obviousness evidence.

Further, Dr. Houh's "Legal Standards" section establishes that he relied on an erroneous legal framework when performing his obviousness analysis. Dr. Houh's paragraphs 27-32 identifies the framework for his obviousness analysis. EX 1003 at ¶¶27-32. But in paragraph 28, when listing the *Graham* factors, Dr. Houh fails to list the requisite fourth factor toward consideration of objective evidence relevant to obviousness. 386 U.S. at 17-18; MPEP2141, 2145. This further demonstrates that Dr. Houh failed to perform a proper obviousness analysis such that the Board should afford little to no weight to his obviousness opinions.

VII. CONCLUSION

For the foregoing reasons, Patent Owner respectfully requests the Board deny Petitioner's request for IPR of U.S. Patent No. 9,407,564.

Respectfully Submitted,

January 18, 2024

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e), we certify that an electronic copy of the foregoing PATENT OWNER'S PRELIMINARY RESPONSE PURSUANT TO 37 C.F.R. § 42.107(a) along with any accompanying exhibits was served on Petitioner's counsel of record at the following address:

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CERTIFICATION UNDER 37 C.F.R. § 42.24(d)

Pursuant to 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the word count under §42.24(b)(1) for the foregoing Patent Owner Preliminary Response to the Petition for *Inter Partes* Review totals 11,040 words, within the 14,000 word limit allowed under § 42.24(a)(1)(i).

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