IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

VIRENTEM VENTURES, LLC d/b/a)
ENOUNCE,)
)
Plaintiff,)
,) C.A. No. 20-787-MN
v.)
) JURY TRIAL DEMANDED
TIVO CORPORATION and XPERI)
HOLDING CORPORATION,)
)
Defendants.)

VIRENTEM VENTURES, LLC D/B/A ENOUNCE'S AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff, Virentem Ventures, LLC d/b/a Enounce, ("Plaintiff" or "Virentem" or "Enounce"), for its Complaint against Defendants, TiVo Corporation ("TiVo") and Xperi Holding Corporation ("Xperi Holding"), alleges:

THE PARTIES

- 1. Plaintiff Virentem, d/b/a Enounce, is a Delaware limited liability company duly organized and existing under the laws of the State of Delaware, with a principle place of business in the State of California. The address of the registered office of Virentem is 2666 E Bayshore Rd Ste C, Palo Alto, CA 94303.
- 2. On information and belief, Defendant TiVo Corporation is a corporation duly organized and existing under the laws of the State of Delaware, having its principal place of business located at 2160 Gold Street, San Jose, California 95002.
- 3. On information and belief, Defendant Xperi Holding Corporation is a corporation duly organized and existing under the laws of the State of Delaware, having its principal place of business located at 3025 Orchard Parkway, San Jose, CA 95134.

4. TiVo is a subsidiary of Xperi Holding.

JURISDICTION

- 5. This is an action arising under the patent laws of the United States. Accordingly, this Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).
- 6. This Court has personal jurisdiction over Defendants because they are incorporated in Delaware. Defendants provide digital video recording and streaming systems and related software applications that are and have been used, offered for sale, sold, and purchased in the District of Delaware.

VENUE

7. Venue is proper in this judicial district pursuant to 28 U.S.C. §§1391(a), (b) and (c) and 1400(b). Defendants are Delaware corporations and Delaware is a convenient forum for resolution of the parties' disputes with respect to the Counts alleged herein.

FACTUAL ALLEGATIONS

8. Inventor Donald J. Hejna, Jr. served as President and CEO of Enounce, Inc. He obtained a Bachelor of Science degree in Electrical Engineering and a Master of Science degree in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology (M.I.T.) and a Master of Science from Stanford University. Mr. Hejna began his work in the Time-Scale Modification ("TSM") field working on his M.I.T. Master's Thesis during an internship as a Graduate Researcher for ROLM Systems Incorporated. Time-Scale Modification is speeding up, by time compression, or slowing down, by time expansion, audio in a manner that preserves the perceived pitch and intelligibility. Mr. Hejna's Master's Thesis work resulted in U.S. Patent No. 5,175,769, which is incorporated by reference into the asserted patent, described below.

- 9. Mr. Hejna and Dr. Richard S. Goldhor, an accomplished MIT computer scientist, co-founded Enounce, Incorporated ("Enounce, Inc.") in 1998 and began developing products that would benefit consumers.
- 10. Enounce owns a portfolio of over 35 patents issued in the U.S. and abroad covering a wide variety of technologies, including patents that enable systems and users to listen to audio and watch audio-visual media using TSM to speed up or slow down the media.
- 11. Enounce, Inc. was a startup that transformed the way media is viewed by allowing users to select and alter TSM playback speeds while viewing content and sought to leverage data about the speeds chosen by users to determine audience affinity. Enounce, Inc. developed, productized and licensed the first Time-Scale Modification solutions for consumer video.
- 12. In 2015, Enounce, Inc. was wound down and its assets were acquired by Virentem Ventures, LLC, which currently maintains the Enounce, Inc. business and product line with several members of the original Enounce, Inc. team.
- Speeding up content playback allows users to consume more content in less time. Speeding up content playback utilizing TSM is not the same as fast-forwarding to a later point in the content speeding up content allows the user to actually experience the entirety of the media work or content, but at a faster pace, because pitch and intelligibility are maintained. This can be useful, for example, to save time when watching long lectures or interviews or when skimming content. By contrast, slowing down content allows users to better absorb the content, which can be useful, for example, when learning a new skill or foreign language or in grasping complex content. When speeding up or slowing down content, although the speed and duration change, these changes occur while maintaining intelligibility. Prior techniques such as simple digital resampling or playing vinyl records at different speeds resulted in, for example, voices sounding

like high-pitched chipmunks when sped up which adversely affected intelligibility and comprehension.

THE '225 PATENT

- 14. United States Patent No. 6,374,225 ("the '225 Patent"), entitled "Method and Apparatus to Prepare Listener-Interest-Filtered Works" was duly and lawfully issued April 16, 2002. Plaintiff is the owner of all rights, title, and interest in the '225 Patent. A true and correct copy of the '225 Patent is attached hereto as Exhibit A.
- 15. The '225 Patent built on Enounce's previously patented TSM inventions, further teaching and claiming innovative applications of the technology to the efficient customization of audio and audio-visual works. Specifically, the '225 Patent identified "a need for determining how listeners interact with audio media that provide TSM." '225, col. 1, lines 62-65. The '225 Patent explains the need as follows:

Prior art methods for determining listener interest in portions of speech and/or audio are inherently inaccurate. Specifically, these methods involve detecting fast-forward and rewind patterns of, for example, a cassette tape produced by button pushes. The use of such fast-forward or rewind patterns suffers from various drawbacks. For example, the listener often alternates between fast-forwarding and rewinding over a particular piece of audio material because the information is either not presented, or is unintelligible while fast-forwarding or rewinding. In addition, whenever a playback location is advanced, this either interrupts playback while advancing through the audio material or presents unintelligible versions of the audio material ("chipmunk like" sounds for speed-up, etc.). As such, current methods of determining listener interest are of little use for determining an optimal information delivery rate.

As one can readily appreciate from the above, a need exists in the art for a method and apparatus for determining listener interest in portions of speech, audio, and/or audio-visual works. In addition, a need exists in the art for a method and apparatus for replaying speech, audio and/or audio-visual works in accordance with the determination of listener interest to provide a listener-interest-filtered work ("LIF" work).

Id. at col. 2, lines 5-29.

- 16. "Embodiments of the ['225 Patent] advantageously satisfy the above-identified need in the art and provide method and apparatus for determining listener interest in portions of speech, audio, and/or audio-visual works and for developing Speed Contours or Conceptual Speed Association data structures that represent measures of listener interest." '225, col. 2, lines 33-39. The '225 Patent also claims embodiments that utilize Speed Contours to present audio and/or audio-visual works at various TSM rates. These claimed inventions served to "obviate the need to produce" and store "multiple versions of the same audiovisual work for different target audiences." *Id.* at col. 31, lines 32-35.
- 17. The '225 Patent discusses several useful example applications where the patented solution efficiently enables customization to target audiences or content concepts. *See, e.g., id.*, col. 30, line 48 to col. 31, line 47 (using multiple Speed Contours to allow different presentation rate profiles for different target audiences for a training video), col. 31, line 48 to col. 32, line 30 (using CSA or Speed Contour data structures to change playback of a movie to match content preferences or rating). This automatic customization improved, for example, the use and operation of computer storage because multiple versions of a work can be presented without the expense of storing multiple copies. The patentable methods and apparatus taught and claimed tailored presentation of audio and audio-visual media based on derived content preferences of the audience.
- 18. The claimed inventions enabled solutions to known problems in the prior art. *See*, *e.g.*, *id.*, col. 31, lines 54-57 ("solves the problem of pairing presentation rate with interest level or entertainment level of a particular audio-visual work to provide greater enjoyment"). The patents explained that "a need exists in the art" for a way to automatically determine "listener interest in portions" of works, and to efficiently replay those works in accord with that determination. *See*, *e.g.*, *id.*, at 2:22-29.

19. The claimed data structures here uniquely and unconventionally improve computer operation and advance the capabilities and specific applications of time-scale modification technology. *See, e.g., id.*, 2:5-41, 30:48-31:35, 31:20-32:12.

TIVO'S USE OF THE PATENTED TECHNOLOGY

- 20. TiVo develops, offers for sale, and sells to distributors, retailers, and end users in Delaware and elsewhere in the United States a variety of TiVo video systems ("TiVo systems") that support TiVo's QuickMode® ("QuickMode") and/or SkipMode® ("SkipMode") features.

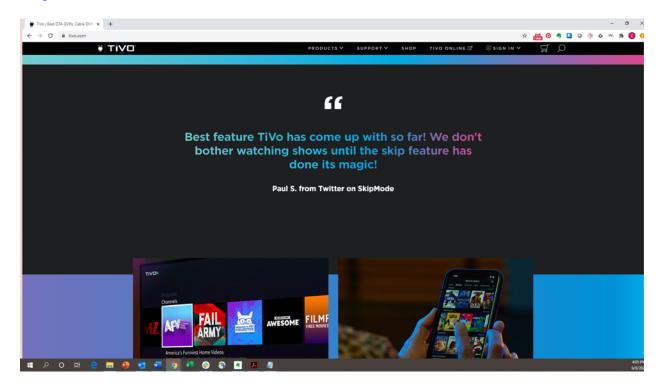
 See, e.g., https://support.tivo.com/articles/Knowledge/QuickMode;

 https://support/how-to/how-to-use-SkipMode.
- 21. TiVo systems with the associated QuickMode feature are capable of allowing a user to speed through recorded or live media (for instance if a user is viewing delayed live TV) at up to 30 percent faster while preserving the perceived pitch of audio. *See, e.g.*, https://www.tivo.com/support/how-to/how-to-fast-forward-with-QuickMode TiVo discloses that "[t]he Quickmode feature lets you speed through a show 30% faster, while also letting you hear what everyone is saying no chipmunks allowed" (*id*), or with QuickMode "nobody sounds like a caffeinated chipmunk." https://www.tivo.com/products/bolt-detail. In other words, TiVo systems with the associated QuickMode features allows faster playback with pitch-corrected audio.
- 22. The QuickMode software made its debut on September 29, 2015 and has received high praise from users as it allows a user watching media to save hundreds of hours every year by playing media shows up to 30% faster with pitch perfect audio. *See, e.g.*, https://support.tivo.com/articles/Features_Use/QuickMode.
- 23. In addition to the QuickMode feature supported by TiVo systems, TiVo systems may also support the SkipMode feature. https://www.tivo.com/support/how-to/how-to-use-

SkipMode. TiVo systems with the associated SkipMode feature are capable of skipping commercial segments of select recorded media. With SkipMode, the TiVo systems "know the difference between show content and commercials."

https://support.tivo.com/articles/Knowledge/SkipMode.

24. SkipMode also debuted at least as early as 2015. TiVo's website touts users' adoption and praise of SkipMode: "Best feature TiVo has come up with so far! We don't bother watching shows until the skip feature has done its magic! Paul S. from Twitter on SkipMode." https://www.tivo.com.



25. QuickMode and SkipMode are available on TiVo BOLT® (all models), TiVo Roamio® (all models), and TiVo Mini (if connected to TiVo BOLT or TiVo Roamio) (collectively, the "Accused Products"). https://www.tivo.com/support/how-to/how-to-use-SkipMode.

TIVO LEARNED OF THE PATENTED TECHNOLOGY PRIOR TO INTRODUCING SKIPMODE AND QUICKMODE

- 26. TiVo learned of Enounce's patented technology as least as early as 2014, including specifically of the '225 Patent. In early 2014, representatives of Enounce reached out to TiVo regarding Enounce and its intellectual property portfolio. Enounce and TiVo had several discussions regarding the Enounce technology from early 2014 through June 2014.
- 27. Representatives of Enounce had an initial conversation with a TiVo representative in April 2014, and then several follow up conversations in April and May.
- 28. In May 2014, an in-person meeting was scheduled for June 3, 2014. On June 3, 2014, representatives of Enounce met with representatives of TiVo, and explained the advantages of the Enounce patented technology. Enounce presented a PowerPoint at that meeting, that included reference to the '225 Patent. The presentation also indicated that "Commercial Skip / AutoHop" as one "interest problem" that features of the Enounce technology addresses. And the presentation indicated that "Any decent speed control system is likely infringing."
- 29. As of June 2014, TiVo had not yet released SkipMode or QuickMode features in the TiVo systems, which implement Enounce's patented TSM techniques as claimed in the '225 Patent.

FIRST COUNT (Infringement of U.S. Patent No. 6,374,225)

- 30. Enounce incorporates by reference paragraphs 1 through 31.
- 31. The '225 Patent was filed on October 9, 1998. The inventor of the '225 Patent is Donald J. Hejna, Jr.
- 32. At all relevant times, Enounce has complied with any applicable obligations required by 35 U.S.C. § 287(a).

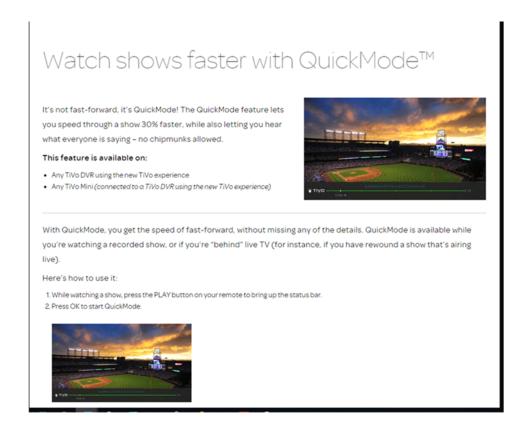
- 33. Defendants make, use, sell, offer to sell, and/or import methods and devices that incorporate the infringing features described below. The Accused Products directly infringe one or more of the claims of the '225 Patent, including independent Claims 42 and 45.
- 34. As a non-limiting example, to the extent the preamble of Claim 45 is limiting, the Accused Products perform "[a] method for playing an audio or audio-visual work in conjunction with a speed contour which includes an affinity information used to obtain a first time-scale modification (TSM) rate and an identifier information used to obtain an identifier of a portion of an audio or audio-visual work associated with the first TSM rate" when they are operating in OuickMode for shows in which SkipMode is enabled. The Accused Products are devices for playing television programming ("audio-visual work") in conjunction with a speed contour. Here, the speed contour is the information sent to the Accused Products by TiVo for SkipModeenabled shows which indicate where each segment of television content starts and stops versus where commercial content starts and stops, and thus which segments can be skipped using SkipMode. The speed contour contains information ("affinity information") from which the first "skip" TSM rate (a rate that directs the playback system to skip sections of an audio or audiovisual work) can be determined and information indicating where the commercial segments are located ("an identifier information used to obtain an identifier of a portion of an audio or audiovisual work") associated with the first TSM rate "skip."
- 35. The Accused Products "direct[] input of a portion of the audio or audio-visual work" by prompting viewers ("users") to select which programs or portions of programs to watch and receives viewer ("user") information in the form of an indication that portion(s) of the audio-visual work should be played in QuickMode and/or that commercial segment(s) should or can be skipped (when SkipMode is available and activated). To enable QuickMode, "your

selected content must be playing. Once your content is playing, press Play. This will bring up a message on the TrickPlay bar telling you to press Select to enable QuickMode:"



https://tivoidp.tivo.com/tivoCommunitySupport/s/article/QuickMode.

- 36. The Accused Products generate time-scaled modified portions of television programs when QuickMode is activated. QuickMode is only available on recorded shows (or portions of live shows which have been paused/buffered) and is only available on certain TiVo boxes, thus on information and belief, the Accused Products are actually generating the time-scale modified portions that the Accused Products playback. The Accused Products generate portions to be played at 1.3x based on the segment identifiers for that program ("identifier of the portion"), such that, for example, when SkipMode is activated, the segment which begins playing after the skipped commercial segment is played ("the portion") at 1.3x ("a TSM rate") when QuickMode is activated.
- 37. QuickMode plays recorded television back at a TSM rate of 1.3x ("playing the time-scale modified portion"), which plays the audio-visual work at a 30% faster rate than normal with pitch-corrected audio.



https://explore.tivo.com/how-to/QuickMode.

Watch more, faster with QuickMode[®].

QuickMode zips you through your recorded shows 30% faster than normal speed with pitch-corrected audio. You zoom along and nobody sounds like a caffeinated chipmunk. It's the ideal way to power through slow-moving news shows, talk shows, political debates and more. QuickMode even works for live shows that are being captured in the live TV buffer.

https://www.tivo.com/shop/bolt-detail.

38. The Accused Products generate the 1.3x or "skip" rate ("generating the TSM rate") in response to the speed contour which indicates which segments can be skipped and which segments are content, the user information which indicates the viewer's desire to play the

recorded show in QuickMode and/or to skip commercials, and the identifiers of the portions (segments) that are skippable (when SkipMode is available) or should be played back at 1.3x when QuickMode is activated.

39. Additionally, when a user enables automatic SkipMode and QuickMode ("user information"), the speed contour indicates where to play the recorded audio-visual work at 1.3x and where to skip.



https://tivoidp.tivo.com/tivoCommunitySupport/s/article/SkipMode.

PRAYER FOR RELIEF

WHEREFORE, Enounce prays for judgment and seeks relief against Defendants as follows:

- (a) For judgment that the Defendants infringed one or more claims of the patent-insuit;
- (b) For judgment awarding Enounce damages adequate to compensate it for Defendants' infringement of the patent-in-suit, including all pre-judgment and post-judgment interest;
- (c) For judgment that the Defendants have willfully infringed one or more claims of the patent-in-suit;
 - (d) For judgment awarding enhanced damages pursuant to 35 U.S.C. § 284;
 - (e) For judgment awarding costs of suit; and
- (f) For judgement awarding Enounce such other and further relief as the Court may deem just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure and D. Del. LR 38.1, Enounce demands a trial by jury of this action.

ASHBY & GEDDES

/s/ Andrew C. Mayo

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Dated: August 26, 2020

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