IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

GRACENOTE, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 18-1608-RGA
	)	
FREE STREAM MEDIA CORP., d/b/a SAMBA TV	)	
	)	
	)	
Defendant.	)	

REPORT AND RECOMMENDATION

I. INTRODUCTION

Presently before the court in this patent infringement action is the motion to dismiss for failure to state a claim upon which relief can be granted pursuant to Federal Rule of Civil Procedure 12(b)(6), filed by defendant Free Stream Media Corp., d/b/a Samba TV ("Samba").[1] (D.I. 10) For the following reasons, I recommend that the court deny the pending motion to dismiss.

II. BACKGROUND

Plaintiff Gracenote, Inc. ("Gracenote") is an entertainment data and technology company that provides automatic content recognition ("ACR") services to television original equipment manufacturers ("OEMs"). (D.I. 1 at ¶¶ 7-8) Gracenote is the owner by assignment of U.S. Patent Nos. 9,066,114 ("the '114 patent"), 9,479,831 ("the '831 patent"), 9,407,962 ("the '962 patent"), and 8,171,030 ("the '030 patent") (collectively, the "patents-in-suit"). (*Id.* at ¶¶ 12, 16, 19, 22) The '114 patent, the '831 patent, and the '962 patent (collectively, the "Trigger Patents") are related and share a common specification. (*Id.* at ¶¶ 17, 20) Gracenote asserts that Samba

[1] The briefing associated with the motion to dismiss is found at D.I. 11, D.I. 14, and D.I. 16.

infringes claims 1, 8, and 10 of the '114 patent, claims 11 and 24 of the '831 patent, claims 1, 8, and 15 of the '962 patent, and claim 1 of the '030 patent. (D.I. 1 at ¶¶ 30, 62, 84, 109)

The common specification of the Trigger Patents describes systems and methods for performing actions at a specified moment in a multimedia stream when the multimedia stream is played on a playback device. ('831 patent, col. 1:22-29) By way of example, the specification explains that the URL of a website may be embedded into a commercial and retrieved by a playback device, such as a television, to provide the viewer with additional information. (*Id.* at col. 1:34-40) The specification describes the advantages of the invention over the prior art, noting that the use of the claimed fingerprint technology eliminates the need for broadcaster cooperation and accurately triggers the desired action at the appropriate point in the multimedia stream without modifying the multimedia signal itself. (*Id.* at col. 2:44-3:25) For purposes of the pending motion, the parties agree that claim 11 of the '831 patent is representative of all asserted claims in the Trigger Patents:[2]

> 11. A method comprising:
>
> playing back multimedia content on a multimedia playback device, including providing at least some of the multimedia content on a display associated with the multimedia playback device;
>
> during the playback of the multimedia content by the multimedia playback device, repeatedly deriving, by the multimedia playback device, fingerprints from respective segments of the multimedia content;
>
> comparing the derived fingerprints to reference fingerprints representing features of the multimedia content, each reference fingerprint associated with one or more actions;
>
> determining that one of the derived fingerprints matches one of the reference fingerprints; and

[2] (D.I. 11 at 5-6; D.I. 14 at 4)

in response to the determining that the one of the derived fingerprints matches the one of the reference fingerprints, causing execution of an action associated with the one of the reference fingerprints, the action being associated with a time point indicating when, in the multimedia content, the action is to be performed.

('831 patent, col. 9:27-47)

The '030 patent, entitled "Method and Apparatus for Multi-Dimensional Content Search and Video Identification," is not related to the Trigger Patents, but it is also directed to identifiers for multimedia called "robust hashes." ('030 patent, col. 15:32) Representative claim 1 of the '030 patent is a method claim directed to storing robust hashes and other data associated with a video in a database with "leaf nodes":

1. A method of organization of a multi-dimensional video database using a robust hash of a multi-dimensional vector signature as a traversal index, the method comprising:

generation of a robust hash value as a traversal index from multiple parameters extracted from a region of interest in a frame of a video sequence; and

storing data associated with the video sequence at a leaf node addressed by the robust hash value, wherein the leaf node is a member of a plurality of leaf nodes in a multi-dimensional video database.

('030 patent, col. 15:29-38) Claim 1 of the '030 patent is the only asserted claim of the '030 patent. (D.I. 1 at ¶¶ 109-18)

Gracenote filed this lawsuit on October 17, 2018, accusing Samba of infringing the patents-in-suit because Samba's product uses ACR for data collection and analysis, and for triggering actions such as presenting additional or alternative content. (D.I. 1 at ¶¶ 23-27) Specifically, Gracenote alleges that Samba's infringing product analyzes fingerprints to take actions such as enabling the presentation of additional or alternative content using traversal indexes and a multi-dimensional database. (*Id.*)

III. LEGAL STANDARDS

A. Failure to State a Claim

Samba moves to dismiss the pending action pursuant to Rule 12(b)(6), which permits a party to seek dismissal of a complaint for failure to state a claim upon which relief can be granted. Fed. R. Civ. P. 12(b)(6). According to Samba, Gracenote's complaint fails to state a claim because the asserted claims of the patents-in-suit are ineligible for patent protection under 35 U.S.C. § 101. Patent eligibility under 35 U.S.C. § 101 is a threshold test. *Bilski v. Kappos*, 561 U.S. 593, 602 (2010). Therefore, "patent eligibility can be determined at the Rule 12(b)(6) stage . . . when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law." *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018).

When considering a Rule 12(b)(6) motion to dismiss, the court must accept as true all factual allegations in the complaint and view them in the light most favorable to the plaintiff. *Umland v. Planco Fin. Servs.*, 542 F.3d 59, 64 (3d Cir. 2008). Dismissal under Rule 12(b)(6) is only appropriate if the complaint does not contain "sufficient factual matter, accepted as true, to 'state a claim to relief that is plausible on its face.'" *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007)); *see also Fowler v. UPMC Shadyside*, 578 F.3d 203, 210 (3d Cir. 2009). However, "a court need not 'accept as true allegations that contradict matters properly subject to judicial notice or by exhibit,' such as the claims and the patent specification." *Secured Mail Solutions LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 913 (Fed. Cir. 2017) (quoting *Anderson v. Kimberly-Clark Corp.*, 570 F. App'x 927, 931 (Fed. Cir. 2014)).

B. Patent-Eligible Subject Matter

Section 101 of the Patent Act provides that patentable subject matter extends to four broad categories: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. The Supreme Court recognizes three exceptions to the subject matter eligibility requirements of § 101: laws of nature, physical phenomena, and abstract ideas. *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 218 (2014). The purpose of these exceptions is to protect the "basic tools of scientific and technological work." *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012), which are "part of the storehouse of knowledge of all men . . . free to all men and reserved exclusively to none," *Bilski v. Kappos*, 561 U.S. 593, 602 (2010) (internal quotation marks and citations omitted).

The Supreme Court articulated a two-step "framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice*, 573 U.S. at 217; *see also Mayo*, 566 U.S. at 77-78. At step one, the court must determine whether the claims are directed to one of the three patent-ineligible concepts. *Alice*, 573 U.S. at 217. If the claims are not directed to a patent-ineligible concept, "the claims satisfy § 101 and [the court] need not proceed to the second step." *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1361 (Fed. Cir. 2018). If the court determines that the claims are directed to a patent-ineligible concept, the court must proceed to the second step by identifying an "'inventive concept'—*i.e.*, an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than

a patent upon the [ineligible concept] itself." *Alice*, 573 U.S. at 217-18 (quoting *Mayo*, 566 U.S. at 72-73).

At step one, "the claims are considered in their entirety to ascertain whether their character as a whole is directed to excluded subject matter." *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015); *see also Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) ("The 'abstract idea' step of the inquiry calls upon us to look at the 'focus of the claimed advance over the prior art' to determine if the claim's 'character as a whole' is directed to excluded subject matter."). However, "courts must be careful to avoid oversimplifying the claims by looking at them generally and failing to account for the specific requirements of the claims." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1313 (Fed. Cir. 2016) (internal quotation marks omitted). "At step one, therefore, it is not enough to merely identify a patent-ineligible concept underlying the claim; [courts] must determine whether that patent-ineligible concept is what the claim is 'directed to.'" *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1050 (Fed. Cir. 2016).

At step two, the court must "look to both the claim as a whole and the individual claim elements" to determine whether they "amount[] to significantly more than a patent upon the [ineligible concept] itself." *McRO*, 837 F.3d at 1312. "Simply appending conventional steps, specified at a high level of generality, [is] not enough to supply an inventive concept." *Alice*, 573 U.S. at 222 (internal quotation marks omitted). Instead, the claim elements must "involve more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018) (citation and internal quotation marks omitted); *see also Mayo*, 566 U.S. at 73. "The inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art. .

. . [A]n inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces." *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016).

IV. DISCUSSION

A. The Trigger Patents

The Trigger Patents disclose systems and methods for the performance of an action at a precise time when a specific part of a multimedia stream, *e.g.*, a scene or frame in a television program, is played on the user's playback device, *e.g.*, a television. ('831 patent, col. 1:30-40) Examples of the action include insertion of an advertisement or information about an actor when he appears on screen. (*Id.*, col. 1:55-2:3)

The Trigger Patents simultaneously solve two problems with the prior art described by Gracenote as the "Accuracy Problem" and the "Broadcaster Cooperation Problem." (D.I. 14 at 2-3) The Accuracy Problem relates to a mistimed advertisement caused by a delay in the broadcast. ('831 patent, col. 1:34-40; 3:21-25; 5:10-17; 6:61-65) The Broadcaster Cooperation Problem relates to the unwillingness or inability of the broadcaster to embed a marker in a television program at the precise video frame desired for the required action, *i.e.*, "watermarking." (*Id.*, col. 2:10-13; 2:22-25; 2:39-43; 2:50-53)

1. *Alice* Step One

At step one of the *Alice* inquiry, Samba contends that the asserted claims of the Trigger Patents are directed to the abstract ideas of: (1) recognizing portions of a multimedia signal and performing actions in response at a specified time, ('831 patent, claim 11; '114 patent, claims 1, 8, & 10), and (2) storing those portions of the multimedia signal and actions, ('962 patent, claims 1, 8, & 15). (D.I. 11 at 10-11) Samba alleges that the claimed fingerprints used to trigger

responsive actions were known in the prior art, and the encoding, storage, matching, and processing features of the asserted claims are no more than generic computer functions. (*Id.* at 11-12)

In response, Gracenote argues that the asserted claims of the Trigger Patents represent specific technological solutions to the problems of insufficient accuracy in marking a multimedia stream and requiring cooperation from the broadcaster to mark the multimedia stream. (D.I. 14 at 8) According to Gracenote, the asserted claims of the Trigger Patents represent an inventive narrative method of triggering action in a multimedia stream without involving a broadcaster. (*Id.* at 8 n.4)

I recommend that the court deny Samba's motion to dismiss at step one of the *Alice* inquiry. The asserted claims of the Trigger Patents are not directed to an abstract idea because they provide a specific, simultaneous solution to the Accuracy Problem and the Broadcaster Cooperation Problem by reciting an improved method of using fingerprints to trigger actions in a multimedia stream. ('831 patent, col. 5:10-17; col. 2:50-53) "[T]he first step in the *Alice* inquiry . . . asks whether the focus of the claims is on the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335-36 (Fed. Cir. 2016). The focus of the asserted claims of the Trigger Patents is on an improved method of using fingerprints to trigger specific actions in a multimedia stream without the involvement of a broadcaster.

Representative claim 11 of the '831 patent recites a technical solution to the Accuracy Problem and the Broadcaster Cooperation Problem, which amounts to an improvement to the functionality of the television or other multimedia playback device. Claim 11 requires "playing

back multimedia content on a multimedia playback device" and, during the playback, "repeatedly deriving . . . fingerprints from respective segments of the multimedia content" at the multimedia playback device. ('831 patent, col. 9:28-35) Once these local fingerprints are derived from the television or other playback device during playback, the derived fingerprints are compared to reference fingerprints, "each reference fingerprint associated with one or more actions." (*Id.*, col. 9:36-39) When one of the derived fingerprints matches a reference fingerprint, the action associated with the reference point is then executed. (*Id.*, col. 9:40-47) By matching the derived and reference fingerprints, a specific portion of the broadcast can be detected, and external actions may be triggered at the relevant point of the broadcast signal, without using a specific time of the anticipated broadcast or relying on the broadcaster to modify the multimedia signal. (*Id.*, col. 5:10-17; col. 2:50-53)

These steps solve both the Broadcaster Cooperation Problem and the Accuracy Problem in a particular way by reciting a specific method of generating local fingerprints at a television, comparing those local fingerprints to a reference fingerprint, and replacing an advertisement or taking another action upon finding a match between the reference fingerprints and the local fingerprints. *See Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1008 (Fed. Cir. 2018) (holding that patented method for navigating through three-dimensional spreadsheets was not abstract because the claimed method "provide[d] a specific solution to then-existing technological problems in computers and prior art electronic spreadsheets."). Limiting the claims to the narrow context of recognizing and acting on portions of a multimedia signal in a broadcast is not enough, by itself, to render the claim patent eligible. *See BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1287 (Fed. Cir. 2018) ("[A] claim is not patent eligible merely because it applies an abstract idea in a narrow way. For an application of an abstract idea to

satisfy step one, the claim's focus must be something other than the abstract idea itself."). However, what is claimed in the Trigger Patents is more than the application of an abstract idea in a narrow way because the focus of the claims is on an improvement to the technology, as opposed to the collection, storage, and display of data.

The abstract ideas identified by Samba are broader than the language of the asserted claims of the Trigger Patents. Samba's position is that the asserted claims are directed to "recognizing portions of a multimedia signal and performing actions in response at a specified time," but this summary of the asserted claims would encompass concepts such as watermarking, which are not covered by the asserted claims of the Trigger Patents. The specification explains that a watermark is embedded in a video frame at a relevant point to trigger a specified action at that time, which falls within the scope of Samba's proposed abstract idea. ('831 patent, col. 2:39-43) However, the asserted claims of the Trigger Patents do not extend to watermarking because they require the continuous marking of segments of multimedia content and a comparison of those markings to the claimed reference fingerprints to find a match, which then leads to the execution of a specific action. (*Id.*, col. 9:27-47) In contrast, watermarking "necessarily changes the video/audio." (*Id.*, col. 2:43)

The specification explains that the claimed invention "enable[s] detection of trigger actions without modifying the multimedia signal" to avoid the disadvantage of watermarking, which "necessarily changes the video/audio." (*Id.* at col. 2:42-43, 2:52-53) In this regard, the abstract idea identified by Samba does not accurately reflect the scope of the asserted claims of the Trigger Patents. *See Groove Digital, Inc. v. Jam City, Inc.*, C.A. No. 18-1331-RGA, 2019 WL 351254, at *3 (D. Del. Jan. 29, 2019) (denying the defendant's motion to dismiss based on §

101 because the defendant's proposed abstract ideas did not "satisfactorily capture the substance of the claims.").

Similarly, Samba's description of the abstract idea would encompass trigger points based on the time of day. Claim 11 of the '831 patent excludes trigger points based on the time of day by claiming that the playback device repeatedly derives "fingerprints from respective segments of the multimedia content." ('831 patent, col. 9:33-35) The specification emphasizes that an advantage of the invention of the Trigger Patents is that "the fingerprint matching ensures that the trigger actions still appear at the correct corresponding moment in the broadcast since the invention is time-independent but content-dependent." (*Id.* at 6:62-65)

The asserted claims of the Trigger Patents claim fingerprints which perform the function of marking specific points in a multimedia stream to trigger specific actions delivered to a multimedia playback device. ('831 patent, col. 9:27-47) The asserted claims, read as a whole, are directed to a system and method of implementing accurate fingerprinting in a multimedia stream to avoid the necessity of involving broadcaster cooperation. (*Id.*) In this regard, the asserted claims of the Trigger Patents recite a particular manner of marking portions of a multimedia stream, resulting in an improvement to the manner in which multimedia content is played back on a multimedia playback device.

Samba's comparison of the Trigger Patents to the real-world case of a stagehand lifting a curtain at a designated time in a performance of *Romeo and Juliet* fails to account for the functional improvement achieved by comparing continuously-generated fingerprints in the multimedia stream with marked fingerprints in the database. ('831 patent, Abstract) The Federal Circuit has held that "[i]t is not enough . . . to merely trace the invention to some real-world analogy." *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1011 (Fed. Cir. 2018)

(observing that the question of whether anyone has ever used tabs to organize information was reserved for an analysis under §§ 102 and 103). Instead, the court must consider the claims as a whole to determine whether they are directed to a functional improvement. *Id.* Like the notebook tabs in *Digital Engines*, the fingerprints claimed in the Trigger Patents function as structures that allow a user to accurately identify portions of multimedia content and execute an action associated with the fingerprints.

The asserted claims in the Trigger Patents are analogous to the claims at issue in *Thales Visionix Inc. v. United States*, 850 F.3d 1343 (Fed. Cir. 2017), in which the Federal Circuit upheld the validity of the asserted claims on a § 101 challenge. In *Thales*, the Federal Circuit determined that the use of conventional sensors and a mathematical equation to more accurately calculate the position of an object on a moving platform did not render the claims ineligible because the claims identified a particular configuration of the sensors and a particular way of using the raw data that eliminated problems inherent in prior art methods. *Thales*, 850 F.3d at 1349. Although the inertial sensors were conventional, the claims were not directed to an abstract idea because they improved the accuracy of the calculation of the helmet's position relative to the airplane, and they eliminated the necessity of measuring the position and orientation of the helmet and the airplane in comparison to Earth. *Id.* at 1348. Similarly, the asserted claims of the Trigger Patent recite known fingerprints in an unconventional manner to improve the accuracy of a trigger's position within a multimedia stream. ('831 patent, col. 3:21-25) Like the claims in *Thales*, which are directed to systems and methods of using inertial sensors in a non-conventional manner to reduce errors in measuring the relative position between the helmet and the airplane, the asserted claims of the Trigger Patents are directed to systems and methods of using fingerprints in a non-conventional manner to increase the accuracy of the

location of a given time point of a multimedia signal by using a segment of the signal itself. (*Id.* at col. 5:10-13)

According to Samba, the asserted claims of the Trigger Patents are more analogous to the claims at issue in *Smart Systems Innovations, LLC v. Chicago Transit Authority*, 873 F.3d 1364 (Fed. Cir. 2017) and *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016). In both cases, the Federal Circuit concluded that the asserted claims were directed to an abstract idea under § 101. In *Smart Systems*, the Federal Circuit determined that the asserted claims were directed to the abstract ideas of collection, storage, and recognition of financial data, and restricting the field of the invention to financial transactions in mass transit was insufficient to render the invention patent-eligible. *SSI*, 873 F.3d at 1372. The Federal Circuit observed that the claims did not recite a new type of bankcard, turnstile, or database, nor did they recite a method for processing data that improved the existing technological processes. *Id.* The asserted claims recited a "hash identifier," which the Federal Circuit defined as "consist[ing] of data extracted from a bankcard to create a 'digital fingerprint' of the card that a bankcard terminal processor uses to identify the card in question." *Id.* at 1374 n.9. The Federal Circuit concluded that "[a] hash identifier is a generic and routine concept that does not transform the claims to a patent eligible application of the abstract idea." *Id.*

However, the claims at issue in *Smart Systems* are distinguishable from the asserted claims of the Trigger Patents because the Trigger Patents focus on a specific improvement to an existing technological process by claiming a method of comparing one set of reference fingerprints to another set of fingerprints derived from the broadcast signal. In this regard, the Trigger Patents go beyond the collection, analysis, and display of data without any particular improvement. Whereas the financial transaction at issue in *Smart Systems* amounts to paying

transit fare with a credit card at its core, the Trigger Patents alter the way fingerprints are utilized in a multimedia stream to perform an external action, such as replacing an advertisement, at a specific point in the signal without modifying the signal itself. ('831 patent, col. 5:10-17; col. 2:50-53) The claimed method of deriving fingerprints from the multimedia stream for comparison with reference fingerprints to trigger an action at a specific point in the signal was not known in the prior art. (*Id.*, col. 3:16-25)

In *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016), the Federal Circuit concluded that the asserted claims for performing real-time performance monitoring of an electric power grid were abstract because they "d[id] not go beyond requiring the collection, analysis, and display of available information in a particular field." *Elec. Power Grp.*, 830 F.3d at 1351. The Federal Circuit concluded that the purported advance of the claims amounted to a process of gathering, analyzing, and displaying a specific kind of information, as opposed to claiming a particular inventive technology for performing those functions. *Id.* at 1354. In contrast, the asserted claims of the Trigger Patents are directed to a method of achieving a specific solution to a known technological problem in the field of the invention, thereby improving the computer technology itself. ('831 patent, col. 5:10-17; col. 2:50-53) The Federal Circuit recognized this "distinction between ends sought and particular means of achieving them, between desired results (functions) and particular ways of achieving (performing) them" in *Electric Power*, observing that "there is a critical difference between patenting a particular concrete solution to a problem and attempting to patent the abstract idea of a solution to the problem in general." *Elec. Power Grp.*, 830 F.3d at 1356.

2. *Alice* Step Two

Having determined that the asserted claims of the Trigger Patents are not directed to an abstract idea, the court need not proceed to step two of the *Alice* framework. If the claims are not directed to a patent-ineligible concept, "the claims satisfy § 101 and [the court] need not proceed to the second step." *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1361 (Fed. Cir. 2018) (citing *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1262 (Fed. Cir. 2017)).

B. The '030 Patent

1. *Alice* Step One

Samba contends that claim 1 of the '030 patent is ineligible because it is directed to the abstract concept of "creating identifying data (a robust hash from a video) and storing and indexing the identifiers and other video information in a database." (D.I. 11 at 18) According to Samba, the fact that the asserted claims are limited to a certain field or type of data does not save them from ineligibility under § 101 where, as here, the patent does not purport to have invented robust hashes or a database with leaf nodes. (*Id.* at 18-19) Samba alleges that the Federal Circuit's decision in *Enfish* is inapposite because the asserted claims recited a new type of database structure with a self-referential table. (D.I. 16 at 10) In contrast, Samba contends that the '030 patent is directed to storing a particular type of information in a known database type, and the invention does not create a new database structure. (*Id.*)

In response, Gracenote alleges that the asserted claim of the '030 patent is not directed to an abstract idea because it recites the improved organization of a multi-dimensional video database through the generation of a robust hash used as a traversal index, which specifies the address of a leaf node where data is stored. (D.I. 14 at 18-19) According to Gracenote, the

claimed invention of the '030 patent improves the accuracy and efficiency of video database searches by using characteristics of the video to index stored video information and address leaf nodes. (*Id.* at 19)

I recommend that the court deny Samba's motion to dismiss based on the eligibility of the '030 patent under § 101. The invention is directed to the improved organization of a multi-dimensional video database. ('030 patent, Abstract) This improvement is accomplished through the generation of a "robust hash,"[3] derived from certain parameters extracted from a region of interest, that is used as a traversal index. (*Id.*, col. 2:29-33)

Claim 1 of the '030 patent is similar to the claims found to be patent eligible in *Enfish, LLC v. Microsoft Corp.* The asserted claims in *Enfish* recited "[a] data storage and retrieval system" that disclosed "an indexing technique [for a database] that allows for faster searching of data." *Enfish*, 822 F.3d at 1333, 1336. The indexing technique at issue in *Enfish* is comparable to the robust hash used as a traversal index in claim 1 of the '030 patent, which allows for efficient access to the database. ('030 patent, col. 8:52-54; col. 15:29-34) The specification of the asserted patents in *Enfish* taught "benefits over conventional databases, such as increased flexibility, faster search times, and smaller memory requirements." *Enfish*, 822 F.3d at 1337. Similarly, the specification of the '030 patent explains that the claimed "traversal index is used to access the database efficiently," achieving both accuracy and performance over complex prior art systems. ('030 patent, col. 2:2-13; col. 8:53-54) The '030 patent specification states that conventional video search approaches "do not include unique information about each video and are not generally accurate," whereas the invention of the '030 patent overcomes prior art

[3] In the context of the '030 patent, a "robust hash" is a video fingerprint. (D.I. 11 at 2)

concerns regarding "the size and complexity of the individual signatures generally used, and the absence of an indexing system for these complex signatures." ('030 patent, col. 1:54-59)

In *Enfish*, the Federal Circuit determined that "the plain focus of the claims [was] on an improvement to computer functionality itself, not on economic or other tasks for which a computer is used in its ordinary capacity." *Enfish*, 822 F.3d at 1336. The benefits of the invention, which included faster searching and more effective data storage, distinguished the invention from conventional database structures. *Id.* at 1333, 1337. Similarly, the focus of the asserted claim of the '030 patent is on a "specific asserted improvement in computer capabilities." *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1258 (Fed. Cir. 2017). The use of a self-referential table in the database claimed in *Enfish* is analogous to the use of a robust hash as a traversal index that is derived from multiple parameters and using that index to address a leaf node. ('030 patent, col. 15:29-38) Like the patents at issue in *Enfish*, the specification discusses the advantages offered by the technological improvement, including improved accuracy and performance achieved without limiting the size of associated documents or dividing the database into smaller sections. (*Id.*, col. 2:2-13) Accordingly, the traversal index claimed in the '030 patent enables efficient access to the database. (*Id.*, col. 8:52-54) Because the claim language is specifically directed to the use of a robust hash to organize a multi-dimensional video database, and because the claimed invention represents an improved method providing greater efficiency over conventional methods of organizing such a database, the asserted claim of the '030 patent does not recite an abstract idea. *See Enfish*, 822 F.3d at 1337; *see also Visual Memory*, 867 F.3d at 1258.

Samba applies the Federal Circuit's decision in *Intellectual Ventures I LLC v. Erie Indem. Co.* in support of its argument that the '030 patent is ineligible under § 101. 850 F.3d

1315 (Fed. Cir. 2017). In *Erie*, the claimed invention associated every record in a database with a descriptive term, and a database index organized the information using a series of "tags." *Id.* at 1326. In a preferred embodiment, the tags were written in the known "XML" language. *Id.* Upon receiving a search request, the claimed system identified a set of tags corresponding to the request. *Id.* The Federal Circuit held that this improved computer database search technology was ineligible under § 101 because the claims did not focus on how the usage of the XML tags altered the database in a way that led to an improvement in the technology of computer databases. *Id.* at 1328. "Instead, the claims simply call for XML-specific tags in the index without any further detail," and "[t]he patent concedes that the XML tags were previously known in the art." *Id.* In contrast, claim 1 of the '030 patent focuses on the generation of a robust hash as a traversal index, and the specification emphasizes how the claimed invention resolves accuracy and performance issues presented by known methods.

2. *Alice* Step Two

Having concluded that the asserted claim of the '030 patent is not directed to an abstract idea, the court need not proceed to the second step of the *Alice* inquiry. *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1361 (Fed. Cir. 2018) (citing *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1262 (Fed. Cir. 2017)).

V. CONCLUSION

For the foregoing reasons, I recommend that the court deny Samba's motion to dismiss pursuant to Rule 12(b)(6). (D.I. 10).

This Report and Recommendation is filed pursuant to 28 U.S.C. § 636(b)(1)(B), Fed. R. Civ. P. 72(b)(1), and D. Del. LR 72.1. The parties may serve and file specific written objections within fourteen (14) days after being served with a copy of this Report and Recommendation.

Fed. R. Civ. P. 72(b)(2). The objections and responses to the objections are limited to ten (10) pages each. The failure of a party to object to legal conclusions may result in the loss of the right to de novo review in the District Court. *See Sincavage v. Barnhart*, 171 F. App'x 924, 925 n.1 (3d Cir. 2006); *Henderson v. Carlson*, 812 F.2d 874, 878-79 (3d Cir. 1987).

The parties are directed to the court's Standing Order For Objections Filed Under Fed. R. Civ. P. 72, dated October 9, 2013, a copy of which is available on the court's website, http://www.ded.uscourts.gov.

Dated: November 1, 2019

Sherry R. Fallon
UNITED STATES MAGISTRATE JUDGE