UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

CIVIL MINUTES - GENERAL

Case No.	SAVC 16-1052 JVS (JCGx)	Date	October 5, 2016
Title	**Broadcom Corp., et al v. Sony Corp., et al**		

Present: The Honorable	James V. Selna
Karla J. Tunis	Not Present
Deputy Clerk	Court Reporter
Attorneys Present for Plaintiffs:	Attorneys Present for Defendants:
Not Present	Not Present

Proceedings: **(IN CHAMBERS) Order Denying Defendants' Motion to Dimiss**

Defendants Sony Corporation, Sony Corporation of America, Sony Interactive Entertainment America LLC, and Sony Electronics Inc. (together, "Sony ") have moved to dismiss on grounds that the claims of U.S. Patent Nos. 6,744,387 (the "'387 Patent") and 6,982,663 (the "'663 Patent") (together, "Patents") are directed toward patent-ineligible subject matter. (Mot., Docket No. 47.) Plaintiffs Broadcom Corporation and Avago Technologies General IP (Singapore) Pte. Ltd. (together, "Plaintiffs") filed an Opposition. (Opp'n., Docket No. 50.) Sony filed a Reply. (Reply, Docket No. 59.) Plaintiffs filed a Notice of Supplemental Authority. (Suppl. Auth., Docket No. 61.)

For the following reasons, the Court **DENIES** Sony's Motion to Dismiss. The claims of the '387 Patent and the claims of the '663 Patent are patent eligible.

I. BACKGROUND

Plaintiffs allege that Sony has infringed on the Patents. (See Compl., Docket No. 1 ¶¶ 34–40; 41–49.) These Patents are "directed to an improved method for the binarization of data in an MPEG data stream." (Compl. Ex. B, Docket No. 1-2 at 2; Compl. Ex. C., Docket No. 1-3 at 2.) The invention in the '387 Patent uses unary binarization to create codewords; when codewords exceed a certain threshold, then the codewords have an exp-Golomb suffix appended to them. (Compl. Ex. B, Docket No. 1-2 at 2.) The '387 Patent asserts that this binarization scheme reduces the amount of codewords that a Binary Arithmetic Coder needs to process. (Id.) Because of this method, there is a considerable savings in data transmissions. (Id. at 1:51–54; 3:34–37.) The '663 Patent is a continuation of the '387 Patent. (Compl. Ex. C., Docket No. 1-3 at 2.)

1. The '387 Patent's Independent Claims

Independent claim 1 recites:

> A method of binarization,
> comprising the step of:
> determining if a code symbol index value;
> if said code symbol index value is less than a threshold value, constructing a codeword using a unary binarization; and
> if said code symbol index value is not less than said threshold value, constructing a codeword using a exp-Golomb binarization.
>
> (Compl. Ex. B, Docket No. 1-2 at 8:30–39.)

Independent claim 3 recites:

> A binarization system comprising:
> means for determining if a code symbol index value is less than a threshold value
> means for constructing a codeword using a unary binarization if said code symbol index value is less than a threshold value; and
> means for constructing a codeword using a exp-Golomb binarization if said code symbol index value is less than a threshold value.
>
> (Id. at 8:55–63.)

Independent claim 5 recites:

> A computer readable medium containing instructions for binarization, comprising instructions for:
> determining if a code symbol index value;
> if said code symbol index value is less than a threshold

> value, constructing a codeword using a unary binarization; and
> if said symbol index value is not less than said threshold value constructing a codeword using a exp-Golomnb binarization.

(Id. at 9:12–20.)

2. The '663 Patent's Independent Claims

Independent claim 1 recites:

> A method for generating an index value from a code word for digital video decoding, comprising the steps of:
> (A) setting said index value to a threshold in response to a first portion of said codeword having a first pattern;
> (B) adding an offset to said index value based on a second pattern in a second portion of said codeword following said first portion in response to said first portion having said first pattern; and
> (C) adding a value to said index value based on a third pattern in a third portion of said codeword following said second portion in response to said ?first portion having said first pattern.

(Compl. Ex. C., Docket No. 1-3 at 7:31–44.)

Independent claim 11 recites:

> A system comprising:
> a decoder configured to generate a codeword; and
> a circuit configured to set an index value to a threshold in response to a first portion of said codeword having a first pattern, (ii) add an offset to said index value based on a second pattern in a second portion of said codeword following said first portion in response to

> said first portion having said first pattern and (iii) add a value to said index value based on a third pattern in a third portion of said codeword following said second portion in response to said first portion having said first pattern.

(Id. at 8:14–25.)

Independent claim 12 recites:

> A method for generating a codeword from an index value for digital video encoding, comprising the steps of:
> (A) generating a first pattern in a first portion of said codeword in response to said index value being at least as great as a threshold;
> (B) generating a second pattern in a second portion of said codeword following said first portion representing an offset of said index value above said threshold; and
> (C) generating a third pattern in a third portion of said codeword following said second portion representing a value of said index value above said offset.

(Id. at 8:26–36.)

Independent claim 21 recites:

> A system comprising:
> a circuit configured to (I) generate a first pattern in a first portion of a codeword in response to an index value being at least as great as a threshold, (ii) generate a second pattern in a second portion of said codeword following said first portion representing an offset of said index value above said threshold and (iii) generating a third pattering in a third portion of said codeword following said second portion representing a value of

said index value above said offset; and
an encoder configured to encode said codeword.

(Id. at 8:65–10:3.)

II. LEGAL STANDARD

A. Federal Rule of Civil Procedure 12(b)(6)

Under Federal Rule of Civil Procedure 12(b)(6), a defendant may move to dismiss for failure to state a claim upon which relief can be granted. A plaintiff must state "enough facts to state a claim to relief that is plausible on its face." Bell Atl. Corp. v. Twombly, 550 U.S. 544, 570 (2007). A claim has "facial plausibility" if the plaintiff pleaded facts that "allow[] the court to draw the reasonable inference that the defendant is liable for the misconduct alleged." Ashcroft v. Iqbal, 556 U.S. 662, 663 (2009).

In resolving a 12(b)(6) motion under Twombly, a court must follow a two-step approach. Id. at 679. First, a court must accept all well-pleaded factual allegations as true, but "[t]hread-bare recitals of the elements of a cause of action, supported by mere conclusory statements, do not suffice." Id. at 677. Furthermore, a court must not "accept as true a legal conclusion couched as a factual allegation." Id. at 677–78 (quoting Twombly, 550 U.S. at 555). Second, assuming the veracity of well-pleaded factual allegations, a court must "determine whether they plausibly give rise to an entitlement to relief." Id. at 664. This determination is context-specific, requiring a court to draw on its experience and common sense, but there is no plausibility "where the well-pleaded facts do not permit the court to infer more than the mere possibility of misconduct." Id.

B. 35 U.S.C. § 101

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." However, § 101 has a longstanding, "important implicit exception: [l]aws of nature, natural phenomena, and abstract ideas are not patentable." Assoc. for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107, 2116 (2013). "[A]n invention is not rendered ineligible for patent simply because it involves an abstract concept," but only applications of an abstract concept "to a new and useful end" remain eligible for patent protection.

Alice Corp. Pty. Ltd. v. CLS Bank Int'l, 134 S. Ct. 2347, 2354 (2014).

The U.S. Supreme Court has set forth 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." Id. at 2355. First, the Court must "determine whether the claims at issue are directed to one of those patent-ineligible concepts." Id. at 2355. If so, then the second step requires the Court to search for an "inventive concept" by considering the elements of each claim—both individually and as an ordered combination—"to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." Id. at 2355. If the claims at issue are directed to a patent-ineligible concept and the elements of each claim do not transform it into a patent-eligible application, then the claims are patent-ineligible under 35 U.S.C. § 101. See id. at 2355, 2360.[1]

III. DISCUSSION

The Court finds that (1) the independent claims in the '387 Patent are directed to abstract ideas; (2) claims 11 and 21 of the '663 Patent are directed to abstract ideas; (3) claims 1 and 12 of the '663 Patent are not directed to abstract ideas; and (4) an inventive concept sufficiently transforms the nature of the claims in the '387 Patent and in the '663 Patent into patent-eligible inventions.

1. Whether the Claims are Directed to a Patent–Ineligible Abstract Idea

Under step one of the Alice analysis, a court needs to consider whether a patent claim's "character as a whole" is "directed to" excluded subject matter, such as an abstract idea. See Internet Patents Corp. v. Active Network, Inc., 790 F.3d 1343, 1346 (Fed. Cir. 2015). During this step, a court needs to avoid oversimplifying a patent's claims because, to a certain extent, all inventions are built from abstract ideas. Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1293 (2012). However, the concept of an abstract idea does not have a clear definition, so a court needs to compare the claim at issue with claims in previous cases. See OIP Techs., Inc. v. Amazon.com, Inc., 788 F.3d 1359, 1362 (Fed.

[1] For the remainder of this Order, this two-step analysis will be referred to as the "Alice analysis."

Cir. 2015). The Patents' claims at issue in this case are regarding computer-related inventions, and courts have taken different approaches to determining whether these types of claims are abstract ideas. Compare Alice, 134 S. Ct. at 2359, with Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1336 (Fed. Cir. 2016).

For instance, when defining "abstract" some courts have found that mathematical algorithms, including those executed on a generic computer, are abstract ideas. See e.g., Gottschalk v. Benson, 409 U.S. 63, 71–74 (1972); DDR Holdings, LLC v. Hotels.com, L.P., 773 F.3d 1245, 1256 (Fed. Cir. 2014). The court in Digitech Image Techs. LLC v. Elecs. for Imaging, Inc., 758 F.3d 1344, 1348–51 (Fed. Cir. 2014), found that a patent's claim was abstract because it described using a mathematical algorithm to combine two data sets, and that process was not tied to a specific structure or machine. Id. at 1349, 1351. The court held that, without additional limitations, a process using mathematical algorithms to alter existing data is not patent eligible. Id. at 1351.

In contrast, other courts have found that claiming an improvement in computer capabilities does not always entail claiming an abstract idea. See e.g., Enfish 822 F.3d at 1339. The court in Enfish determined that a logical model for a computer database was not abstract because it was "designed to" improve the way that a computer stores and retrieves data. Id. at 1339. The claims were not regarding general-purpose computers simply performing mathematical equations. Id. Rather, the claims attempted to improve specific computer software. Id. Based on this analysis, the court found that the claims at issue were not directed to an abstract idea. Id. at 1338.

On September 13, 2016, the Federal Circuit issued its decision in McRO, Inc. v. Bandai Namco Games America, No. 15-1080, 2016 WL 4896481 (Fed. Cir. Sept. 13, 2016). The patents at issue were regarding a method for automatically animating the lip synchronization and the facial expression of animated characters. Id. at *4. Through a series of rules, the patents sought to automate a 3-D animator's duties. Id. at *9. Unlike the claims in Digitech, the claim at issue went beyond simply "organizing [existing] information into a new form" Id. at *9 (citing Digitech, 758 F.3d at 1351). The claim was limited to achieving automated lip-synchronization of 3-D characters, and it had a computer conduct a task that humans previously performed. Id. at *24. Therefore, the court determined that the claim was directed to improving automated lip-synchronization, so the claim was not directed to an abstract idea. Id. at *24, 27.

1. The ’387 Patent

The Court finds that independent claims 1, 3, and 5 of the ’387 Patent are directed to abstract ideas.[2] Like in Digitech, claims 1, 3, and 5 describe a process of using a mathematical algorithm to combine two binarization methods. (Compl. Ex. B, Docket No. 1-2 at 8:30–39; 8:54–63; 9:11–20.) In addition, that process is not tied to a specific structure or machine. (Id.) When looking at the language of claims 1 and 3, the Court cannot find that these claims are directed to more than a mathematical formula. (Id. at 8:30–39; 8:54–63.) In addition, claim 5 states “[a] computer readable medium containing instructions for binarization,” but, as stated in DDR Holdings, having a computer perform a mathematical algorithm is an abstract idea. (Id. at 9:11–20.) Unlike in McRO, the language of the rules in claims 1, 3, and 5 does not limit the claims to a specific technological improvement. (Id. at 8:30–39; 8:54–63; 9:11–20.) Claims 1, 3, and 5 simply organize existing binarization codes into a new form. (Id.) Furthermore, dependent claims 2, 4, and 6 simply add additional mathematical instructions to the independent claims. (Id. at 8:40–54; 8:64–9:11; 10:1–17.) Because independent claims 1, 3, and 5 are directed to abstract ideas, the Court must examine these claims under step two of the Alice analysis.

2. The ’663 Patent

The Court also finds that independent claims 11 and 21 of the ’663 Patent are directed to abstract ideas. The language of claims 11 and 21 demonstrate that these claims are simply directed to a mathematical formula. (Compl. Ex. C., Docket No. 1-3 at 8:14–25; 8:65–10:3.) For instance, the elements of claims 11 and 21 are steps such as “add an offset to said index value based on a second pattern in a second portion of said codeword following said first portion in response to said first portion having said first pattern . . . .” (Id.) The process is tied to “a decoder” and “a circuit.” (Id.) However, as

[2] Broadcom asserts that the claims in both patents are just a series of steps and not mathematical algorithms. (Opp’n., Docket No. 50 at 12.) The court in Signal IP, Inc. v. American Honda Motor Co., Inc., No. LA CV14–02454 JAK (JEMx), 2016 WL 1693091, at *11 (C.D. Cal. Mar. 22, 2016), held that steps such as “determining the relative speed of the host and target vehicles” and “at the end of the alert command, determining whether the alert signal was active for a threshold time” are not inherently mathematical. In contrast, the steps in the ’387 Patent are described in mathematical formulas and the steps in ’663 Patent are mathematical in nature.

stated in DDR Holdings, having a computer perform a mathematical algorithm does not change an abstract idea into a patent-eligible idea. (Id.) In conclusion, claims 11 and 21 are directed to abstract ideas, so the Court must examine them under step two of the Alice analysis.

However, independent Claims 1 and 12 of the '663 Patent are not directed to abstract ideas. Like in McRO, claims 1 and 12 are limited to generating an index value for digital video decoding.[3] (Id. at 7:32–42; 8:26–36.) The preamble of claim 1 states "[a] method for generating an index value from a code-word for digital video decoding . . . ." (Id. at 7:32–42.) Also, the preamble of claim 12 states "[a] method for generating a codeword from an index value for digital video encoding . . . ." (Id. at 8:26–36.) Additional language in each claim indicates that these claims are built upon mathematical formulas. (Id. at 7:32–42; 8:26–36.) However, this Court must examine whether each claim's character as a whole is directed to abstract ideas. When considering the character of claims 1 and 2, the Court finds that these claims are not simply regarding a general-purpose computer performing a mathematical equation. Instead, claims 1 and 12 are directed to improving digital video decoding. Therefore, these claims are not directed to abstract ideas.

B. Whether the Claims Include an "Inventive Concept" Sufficient to "Transform the Nature of the Claim" into a Patentable Invention

At the second step, a court needs to examine whether the "elements of the claim to determine whether it contains an inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application." See Alice, 134 S. Ct. at 2357. A court must look to the remaining elements aside from those directed to an abstract idea, either in isolation or combination with the other non-patent-ineligible elements. E.g., In re BRCA1– & BRCA2–Based Hereditary Cancer Test Patent Litig., 774 F.3d 755, 764 (Fed. Cir. 2014). However, this step does not replace the tests for validity—e.g., non-obviousness, utility, or novelty—because its only objective is to determine whether the claims attempt to solve a problem. See Versata Dev. Grp., Inc. v. SAP Am., Inc., 793

[3] During oral argument, the Plaintiffs and Sony discussed whether the preambles in claims 1 and 12 limit the claims. Because the Court finds that all of the claims within the Patents form an inventive concept under step two of the Alice analysis, the Court does not need to address the issue at this time; instead, the Court will examine whether the preambles are limiting during claim construction.

F.3d 1306, 1332 (Fed. Cir.2015).

At the hearing on September 26, 2016, Sony argued that the Court could only consider the language of the claims when determining whether the claims contained an inventive concept. However, other courts have relied on the specification during step two of the Alice analysis. See e.g., Affinity Labs of Texas, LLC v. Amazon.com Inc., 2015–2080, 2016 WL 5335502, at *4 (Fed. Cir. Sept. 23, 2016) (concluding that "there is nothing *in the claims or the specification* of the '085 patent that constitutes a concrete implementation of the abstract idea in the form of an 'inventive concept.'") (italics supplied); Elec. Power Grp., LLC v. Alstom S.A., 2015-1778, 2016 WL 4073318, at *5 (Fed. Cir. Aug. 1, 2016) (stating that "[n]othing in the claims, understood *in light of the specification*, requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, sending, and presenting the desired information.") (italics supplied); Potter Voice Techs., LLC v. Apple Inc., No. C 13–1710 CW, 2015 WL 5672598, at *5 (N.D. Cal. June 11, 2015) (finding that "claims 23 and 24, may involve an inventive concept of content determination when described and limited by the *relevant language in the specification*.") (italics supplied). These post BRCA1 cases make clear that the Court may look beyond the claim elements. Therefore, this Court can rely on "the claims *or* the specification" to determine whether a combination of abstract ideas forms an inventive concept. Affinity Labs of Texas, 2016 WL 5335502, at *4 (italics supplied).

Asking several questions can help a court discover whether a claimed invention simply applies an abstract idea to a technological setting or actually makes an improvement in a field: "(1) Is there an improvement recited? (2) Is there a benefit recited? (3) Is something new recited? (4) Does the patent have one or more particular applications? (5) What are the steps and limits to be followed in applying the invention?" Iron Gate Security, Inc. v. Lowe's Co., Inc., No. 15-cv-8814 (KBF), 2016 WL 4146140, at *10 (S.D.N.Y. Aug. 3, 2016) (alteration to paragraph format).

Courts have taken different approaches to determining whether claims include inventive concepts. For instance, courts have found that simply reciting routine and conventional steps is insufficient. See, e.g., In re Smith, 815 F.3d 816, 819 (Fed. Cir. 2016). Courts have also asserted an abstract idea does not become an inventive concept by having a computer conduct that abstract idea. See, e.g., OIP Techs, 788 F.3d at 1363; Intellectual Ventures, 792 F.3d at 1367. In contrast, courts have found that claims

purporting "to improve the functioning of the computer itself or effect an improvement in any other technology or technical field" suffice under step two. See, e.g., Mortgage Grader, Inc. v. First Choice Loan Servs. Inc., 811 F.3d 1314, 1325 (Fed. Cir. 2016) (quoting Alice, 134 S. Ct. at 2359) (quotation marks omitted).

For example, in DDR Holdings, the Federal Circuit found a claim to be patent-eligible at step two of Alice. 773 F.3d 1245, 1258–59. First, the court held that the patent claims at issue included an inventive concept because the patent claimed a technical solution to a problem unique to the Internet. Id. The problem was that websites instantly lost views upon the click of a link; the claimed invention solved the problem with a technical solution that sent the viewer to a hybrid webpage that combined visual elements of the first site with the desired content from the second site. Id. at 1248–50, 1257–59.

However, in Alice, the Supreme Court held that an abstract idea does not transform into a patent-eligable idea simply because it is performed on a computer. Alice, 134 S. Ct. at 2359. The claims at issue in Alice were directed to having a computer perform intermediate settlement, which is a patent-ineligible concept. Id. at 2350. The Court determined that the claims did not attempt to improve the functioning of the computer itself or a technological field. Id. at 2358. Therefore, these method claims only recited an abstract idea that a computer performed, so the claims were patent-ineligible ideas. Id. at 2358–59.

Here, the Court finds that claims 1, 3, and 5 in the '387 Patent and claims 1, 11, 12, and 21 in the '663 Patent attempt to improve a technological issue. The '387 Patent's specification and the '663 Patent's specification contain identical language. (Compl. Ex. B, Docket No. 1-2 at 5:22–45; Compl. Ex. C., Docket No. 1-3 at 5:22–45.) As described in each specification, unary binarization can create codewords that are very long. (Id.) In addition, a disadvantage of binary binarization is that the codewords become indistinguishable. (Compl. Ex. B, Docket No. 1-2 at 5:50–55; Compl. Ex. C., Docket No. 1-3 at 5:35–40.) The claimed invention asserts that "[t]he present invention provides a binarization that retains the most valuable properties of the unary and exp-Golomb binarization. That is, small codewords are distinguishable as with a unary binarization, while large codewords have their binarization limited to a reasonable length." (Compl. Ex. B, Docket No. 1-2 at 6:26–31; Compl. Ex. C., Docket No. 1-3 at 6:19–23.) Each specification further asserts that "the present invention provides a binarization that

reduces the complexity and the bitrate/size for compressing and decompressing video, images, and signals that are compressed using binary arithmetic encoding for entropy encoding." (Compl. Ex. B, Docket No. 1-2 at 6:31–36; Compl. Ex. C., Docket No. 1-3 at 6:24–29.) Unlike in Alice, the claims do not simply use general computers to perform abstract ideas; instead, the mathematical formula attempts to improve the functioning of compressing and decompressing video, images, and signals. Therefore, an inventive concept sufficiently transforms the nature of the claims in the '387 Patent and in the '663 Patent into patent-eligable inventions.[4]

IV. CONCLUSION

For the foregoing reasons, the Court **DENIES** Sony's Motion to Dismiss. The claims of the '387 Patent and the claims of the '663 Patent are patent eligible.

IT IS SO ORDERED.

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[4] Sony argues that "the '387 and '663 Patents 'simply instruct the practitioner to implement the [mathematical binarization algorithm] within a feature of conventional computers. . . . ." (Reply, Docket No. 59 at 13.) However, Sony misstates the purpose of the invention. Unlike in Parker v. Flook, 437 U.S. 584 (1978), the claims at issue do not simply have a computer perform a mathematical algorithm. Instead, the claims at issue use a mathematical algorithm to improve a computer.