IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

McRO, INC, d/b/a PLANET BLUE, Plaintiff, v. BETHESDA SOFTWORKS, LLC, Defendant.	)	Civil Action No. 12-1509-LPS-CJB
McRO, INC, d/b/a PLANET BLUE, Plaintiff, v. HARMONIX MUSIC SYSTEMS, INC., Defendant.	)	Civil Action No. 12-1510-LPS-CJB

REPORT AND RECOMMENDATION

Plaintiff McRO, Inc., d/b/a Planet Blue ("McRO" or "Plaintiff") filed the instant actions for patent infringement against Defendants Bethesda Softworks, LLC and Harmonix Music Systems, Inc. (collectively, "Defendants").[1] McRO alleges infringement of United States Patent Nos. 6,307,576 (the "'576 Patent") and 6,611,278 (the "'278 Patent") (collectively, the "Asserted Patents" or "patents-in-suit"). Presently before the Court is the matter of claim construction. The Court recommends that the District Court adopt the constructions set forth below for the four

[1] The Complaints and claim construction briefs in these actions are substantially identical. For convenience, the Court will cite herein to the docket in Civil Action No. 12-1509-LPS-CJB, unless otherwise noted.

terms/term sets discussed in this Report and Recommendation.[2]

I. BACKGROUND

A. The Parties

Plaintiff McRO is a company that "is actively involved in the advertising industry as a computer graphic, visual effects, and animation services company[.]" (D.I. 1 at ¶ 1) Defendants are companies active in the video game industry. (*See, e.g., id.* at ¶ 2)

B. The Asserted Patents

Both the '576 Patent and '278 Patent are entitled "Method for Automatically Animating Lip Synchronization and Facial Expression of Animated Characters[.]" (D.I. 1, exs. A & B)[3] The '576 Patent issued on October 23, 2001 from U.S. Appl. No. 08/942,987, which was filed on

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[2] The parties originally submitted six terms or sets of terms for claim construction, (*see, e.g.*, D.I. 100, ex. 1; D.I. 114), for which they provided argument in their claim construction briefing. Prior to the *Markman* hearing, the parties agreed to the following constructions of two previously disputed claim terms/term sets:

> 1. "lip synchronization and facial expression control"/"lip and facial expression synchronized" does not require construction, other than the parties' agreement that the "'final stream of output morph weight sets' ('576 Patent Claim 1) and the 'output morph weight set stream' ('278 Patent Claim 1) are applied to the animated characters without further changes."
>
> 2. "final stream of output morph weight sets" means "[a] series of interpolated morph weight sets which are applied to a sequence of animated characters."

(D.I. 115)

[3] The Asserted Patents appear on the docket in this action more than once, including in the above-cited locations. Hereinafter, citations to the patents will simply be to the "'576 Patent" and the "'278 Patent."

October 2, 1997. The '278 Patent is a continuation of the '576 Patent. It issued on August 26, 2003, from U.S. Appl. No. 09/960,831, which was filed on September 21, 2001.

The patents-in-suit describe and claim methods for controlling and automatically animating lip synchronization and facial expressions of three-dimensional animated characters. The patents explain that prior methods in the field "have long suffered from the need of providing an economical means of animating lip synchronization and character expression in the production of animated products due to the extremely laborious and lengthy protocols of such prior traditional and computer animation techniques." ('576 Patent, col. 1:17-22)[4] These prior methods involved "manual techniques commonly using a 'morph target' approach." (*Id.*, col. 1:46-47) "Morph targets" are models matching reference points of mouth positions to certain phonemes[5] or sets of phonemes. (*See id.*, col. 1:47-51) These morph targets are used in conjunction with a reference model of a neutral mouth position. (*See id.*) "Each morph target has the same topology as the neutral model, the same number of vertices, and each vertex on each model logically corresponds to a vertex on each other model." (*Id.*, col. 1:51-54)

The "deltas," or changes, of each morph target relative to the neutral model are computed as a vector from each vertex on the reference to each vertex on each morph target to produce a "delta set" for each morph target. (*Id.*, col. 1:58-61) In producing animation products, the animator may apply a value between 0 and 1 (called a "morph weight"), which is assigned to each delta set. (*Id.*, col. 1:63-65) The morph weight determines what percentage the animated

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[4] The Asserted Patents share identical specifications; thus, the Court will cite exclusively to the '576 Patent in this section.

[5] A phoneme "is defined as the smallest unit of speech, and corresponds to a single sound." ('576 Patent, col. 1:35-36)

mouth moves from the neutral position to the corresponding morph target. For example, if the morph target is the phoneme "oh," and the morph weight is 0.5, the neutral mouth position's geometry is modified halfway between neutral and the "oh" morph target. (*Id.*, col. 2:19-22) An animator can also blend morph targets; for example, if the "oh" morph weight is 0.3 and the "ee" morph weight is 0.7, the neutral mouth geometry is modified to have some of the "oh" model characteristics and more of the "ee" model characteristics. (*Id.*, col. 2:23-27)

The patents explain that the prior art applied this process using a "keyframe" approach, where the animator had to manually set "the appropriate weights at certain important times ('keyframes') and a program interpolate[d] each of the channels at each frame." (*Id.*, col. 2:31-34) This process "is very tedious and time consuming, as well as inaccurate due to the large number of keyframes necessary to depict speech." (*Id.*, col. 2:35-37)

The claimed invention attempts to solve these problems "by providing an integrated method embodied in computer software for use with a computer for the rapid, efficient lip synchronization and manipulation of character facial expressions, thereby allowing for rapid, creative, and expressive animation products to be produced in a very cost effective manner." (*Id.*, col. 2:39-44) It does so by utilizing "a set of rules that determine the systems output comprising a stream or streams of morph weight sets when a sequence of timed phonemes or other timed data is encountered." (*Id.*, col. 3:4-7) The claimed methodology "allows for automatically animating lip synchronization and facial expression of three dimensional characters in the creation of a wide variety of animation products" and the method and apparatuses described by the patents "are operably integrated with computer software and hardware." (*Id.*, col. 3:12-18)

C. Procedural Posture

On November 21, 2012, Plaintiff filed 11 related cases (including the instant two cases)[6] in this District.[7] (*See* D.I. 1) Plaintiff filed two additional related cases on June 6, 2013 and October 25, 2013.[8] All 13 of these cases were assigned to Chief Judge Leonard P. Stark, and all were referred to the Court by Chief Judge Stark for all purposes up to and including the resolution of case-dispositive motions. (*See, e.g.*, D.I. 17)

The related cases all alleged infringement of the '576 and '278 Patents. McRO alleges that Defendants infringed these patents by "employ[ing] automated lip-synchronization methods and processes to create and develop [ ] computer and/or video games" that are "purchased by consumers in the United States[.]" (*See, e.g.*, D.I. 1 at ¶¶ 11-12) While Plaintiff filed amended complaints in certain of the actions and not others, each of the then-Defendants had filed Answers to the operative complaint in their respective cases as of June 2, 2014. (*See, e.g.*, D.I. 51, Civil Action No. 12-1513-LPS-CJB)

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[6] On June 6, 2017, Plaintiff and current Defendant Bethesda Softworks, LLC stipulated to a stay of all deadlines for a period of 30 days. (D.I. 148) However, as of the writing of this Report and Recommendation, the case remains pending, and so the Court will continue to address Defendants in both of the instant actions collectively.

[7] The case numbers for the other nine cases filed on November 21, 2012 are: 12-1508-LPS-CJB; 12-1511-LPS-CJB; 12-1512-LPS-CJB; 12-1513-LPS-CJB, 12-1514-LPS-CJB; 12-1515-LPS-CJB; 12-1517-LPS-CJB; 12-1518-LPS-CJB and 12-1519-LPS-CJB. Six of these cases have since been transferred to the United States District Court for the Central District of California. (*See, e.g.*, D.I. 36, Civil Action No. 12-1508-LPS-CJB) The other three cases (Civil Action Nos. 12-1513-LPS-CJB, 12-1517-LPS-CJB and 12-1519-LPS-CJB) were active in this District as of the time of claim construction proceedings, but have since been dismissed by joint stipulation.

[8] The case numbers for these two cases are 13-1017-LPS-CJB and 13-1756-LPS-CJB, respectively. Both of these cases have been transferred to the United States District Court for the Central District of California. (*See, e.g.*, D.I. 29, Civil Action No. 13-1017-LPS-CJB)

On January 17, 2014, however, the Defendants in the related cases filed a motion to stay ("Motion to Stay") these actions in light of (1) requested *inter partes review* ("IPR") proceedings regarding the asserted patents that were not yet instituted by the Patent Trial and Appeals Board ("PTAB") and (2) imminent claim construction proceedings involving the same patents in related cases (the "California Actions") in the United States District Court for the Central District of California (the "Central District of California"). (D.I. 23) The Court denied the Motion to Stay via a Memorandum Order on May 1, 2014, without prejudice to Defendants' ability to renew the motion after the PTAB issued a decision on whether to initiate the IPR proceedings. (D.I. 45) However, on October 16, 2014, the parties stipulated to a stay. (D.I. 79) On November 10, 2014, the Court further ordered that the case would remain stayed pending the appeal of a decision in the related matters in the Central District of California that had dismissed those cases pursuant to 35 U.S.C. § 101 ("Section 101").

On September 13, 2016, the United States Court of Appeals for the Federal Circuit reversed the decision of the Central District of California, holding that the asserted claims are not ineligible under Section 101. *See McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1316 (Fed. Cir. 2016). That same day, Plaintiff requested that the Court lift the stay in the instant actions. (D.I. 83) The stay was lifted on September 16, 2016.

The parties filed simultaneous opening claim construction briefs on January 18, 2017, and simultaneous responsive briefs on February 8, 2017. (D.I. 105, 106, 111, 112) The Court held a *Markman* hearing on February 21, 2017. (D.I. 141 (hereinafter, "Tr."))

II. STANDARD OF REVIEW

It is well-understood that "[a] claim in a patent provides the metes and bounds of the right

which the patent confers on the patentee to exclude others from making, using, or selling the protected invention." *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989). Claim construction is a generally a question of law, although subsidiary fact finding is sometimes necessary. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837-38 (2015).

The Court should typically assign claim terms their "'ordinary and customary meaning[,]'" which is "the meaning that the term[s] would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (citations omitted). However, when determining the ordinary meaning of claim terms, the Court should not extract and isolate those terms from the context of the patent, but rather should endeavor to reflect their "meaning to the ordinary artisan after reading the entire patent." *Id.* at 1321; *see also Eon Corp. IP Holdings v. Silver Spring Networks, Inc.*, 815 F.3d 1314, 1320 (Fed. Cir. 2016).

In proceeding with claim construction, the Court should look first and foremost to the language of the claims themselves, because "[i]t is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips*, 415 F.3d at 1312 (internal quotation marks and citations omitted). For example, the context in which a term is used in a claim may be "highly instructive." *Id.* at 1314. In addition, "[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable" in discerning the meaning of a particular claim term. *Id.* This is "[b]ecause claim terms are normally used consistently throughout the patent, [and so] the usage of a term in one claim can often illuminate the meaning of the same term in other claims." *Id.* Moreover, "[d]ifferences

among claims can also be a useful guide[,]" as when, for example, "the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Id.* at 1314-15.

In addition to the words of the claims, the Court should look to other intrinsic evidence. For example, the Court should analyze the patent specification, which "may reveal a special definition given to a claim term . . . that differs from the meaning [that term] would otherwise possess." *Id.* at 1316. In that case, "the inventor's lexicography governs." *Id.* Even if the specification does not contain a special definition of the term at issue, it "is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Id.* at 1315 (internal quotation marks and citation omitted). That said, however, the specification "is not a substitute for, nor can it be used to rewrite, the chosen claim language." *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). In addition to the specification, a court should also consider the patent's prosecution history, if it is in evidence, because it "can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution[.]" *Phillips*, 415 F.3d at 1317.

Extrinsic evidence, "including expert and inventor testimony, dictionaries, and learned treatises[,]" can also "shed useful light on the relevant art[.]" *Id.* (internal quotation marks and citations omitted). Overall though, while extrinsic evidence may be useful, it is "less significant than the intrinsic record in determining the legally operative meaning of claim language." *Id.* (internal quotation marks and citations omitted); *accord Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980-81 (Fed. Cir. 1995).

In utilizing these resources during claim construction, courts should keep in mind that "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998).

III. DISCUSSION

All of the four disputed terms/term sets addressed herein appear in independent claim 1 of the '278 Patent and independent claim 1 of the '576 Patent. Those claims read, respectively:

> **1.** A method for automatically animating lip synchronization and facial expression of three-dimensional characters comprising:
>
> obtaining a first set of rules that defines a morph weight set stream as a function of phoneme sequence and times associated with said phoneme sequence;
>
> obtaining a plurality of sub-sequences of timed phonemes corresponding to a desired audio sequence for said three-dimensional characters;
>
> generating an output morph weight set stream by applying said first set of rules to each sub-sequence of said plurality of sub-sequences of timed phonemes; and
>
> applying said output morph weight set stream to an input sequence of animated characters to generate an output sequence of animated characters with lip and facial expression synchronized to said audio sequence.

('278 Patent, col. 11:43-58)

> **1.** A method for automatically animating lip synchronization and facial expression of three-dimensional characters comprising:
>
> obtaining a first set of rules that define output morph weight set stream as a function of phoneme sequence and time of said phoneme sequence;

> obtaining a timed data file of phonemes having a plurality of sub-sequences;
>
> generating an intermediate stream of output morph weight sets and a plurality of transition parameters between two adjacent morph weight sets by evaluating said plurality of sub-sequences against said first set of rules;
>
> generating a final stream of output morph weight sets at a desired frame rate from said intermediate stream of output morph weight sets and said plurality of transition parameters; and
>
> applying said final stream of output morph weight sets to a sequence of animated characters to produce lip synchronization and facial expression control of said animated characters.

('576 Patent, col. 11:27-47) Below the Court addresses the four disputed terms/term sets in the order in which they were argued.

A. "first set of rules that defines a morph weight set stream as a function of phoneme sequence and times associated with said phoneme sequence"/"first set of rules that define output morph weight set stream as a function of phoneme sequence and time of said phoneme sequence"

This first disputed term set relates to the "first set of rules" called out in claim 1 of the patents. Defendants propose that this term set be construed as:

> A set of at least correspondence rules and transition rules, manually set up[9] by a user, that define an output morph weight set stream, where (1) the correspondence rules specify a morph weight set for each incoming sub-sequence of multiple sequential phonemes, and (2) the transition rules specify time parameters of the transitions between the sub-sequences.

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[9] Defendants originally proposed that the rules be manually "created" by a user, (D.I. 100, ex. 1 at 3), and the parties argued over the inclusion of the word "created" in their claim construction briefing, (*see* D.I. 105 at 6-7; D.I. 106 at 11-12; D.I. 111 at 8-9; D.I. 112 at 5-6). However, at the *Markman* hearing, Defendants' counsel stated that they "didn't intend by using the word 'create' to have it mean something different than 'set up.'" (Tr. at 57) The parties also agreed that "manually set up" means "manually obtained." (*Id.*)

(D.I. 100, ex. 1 at 3) Alternatively, they argue that the specification lacks sufficient written description for these claim elements. (*Id.*) Plaintiff proposes that "[a]s used in these phrases, the terms 'time' and 'times' refer to one or more lengths of time, i.e. durations. Otherwise, the language in these phrases do[es] not require construction." (*Id.*)

The parties' competing proposed constructions present three primary disputes: (1) whether the construction should require the "first set of rules" to include "correspondence rules" and "transition rules"; (2) whether the construction should specify that the rules are "manually set up by a user"; and (3) whether "time" and "times" must refer to duration, or whether they can also refer to discrete moments in time corresponding to the start of each phoneme in the time-aligned phonetic transcription ("TAPT").[10]

1. Must the "first set of rules" include "correspondence rules" and "transition rules"?

The first dispute centers on Defendants' proposed requirement that the first set of rules must include at least two categories of rules: correspondence rules and transition rules. Plaintiff

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[10] Other matters are not in dispute, however. For example, there is no question that the claims' reference to "phoneme sequence" is a reference to sub-sequences consisting of multiple sequential phonemes. As the Federal Circuit stated:

> We agree with McRO that the claims are limited to rules that evaluate sub-sequences consisting of multiple sequential phonemes. This limitation is apparent on the face of the claims . . . . In particular, the intermediate morph weight sets and transition parameters are generated "by evaluating said plurality of sub-sequences against said first set of rules." . . . This limitation could not be satisfied by rules that only evaluate individual phonemes. Instead, the claimed "first set of rules" must be formulated to evaluate sub-sequences of phonemes.

Bandai, 837 F.3d at 1311 (citations omitted); *see also* (D.I. 105 at 5).

puts forward two strains of argument in advancing its position against inclusion of such a requirement.

The first strain of argument advanced by Plaintiff is that "the 'rules' do not have to be classified as 'correspondence' and 'transition' rules[,]" because the claims at issue do not literally require as much and because the patent also makes reference to rules relating to "phoneme context and duration *other than* 'correspondence' and 'transition' rules[.]" (D.I. 106 at 11 (emphasis added)) And this is all true, as far as it goes.

For example, as to the claims' literal language, independent claim 1 in both patents does not explicitly require that something called "correspondence rules" or "transition rules" be a part of the "first set of rules." (*See* '576 Patent, col. 11:27-47; '278 Patent, col. 11:43-58) And as Plaintiff notes, "[d]ependent claims 2 and 20 of the '278 Patent and dependent claims 13 and 26 of the '576 Patent [do] require that the first set of rules comprise 'correspondence rules' and 'transition rules.'" (D.I. 106 at 10; *see also* '278 Patent, cols. 11:62-65, 13:15-18; '576 Patent, cols. 12:22-28, 14:13-17)

Additionally, the patent does often refer to "rules" by using terms other than "correspondence rules" or "transition rules." (D.I. 106 at 11; *see also* Tr. at 34 (Plaintiff's counsel explaining that "[t]he naming of the rule is somewhat arbitrary.")) For example, at one point, the specification explains that "[t]he rules of the present method may be categorized in three main groupings; default rules, auxiliary rules [or 'secondary rules'] and post processing rules." ('576 Patent, col. 5:9-11) And—particularly when it describes some of these "post processing" rules—it is not obvious that the patent is there referring to something that could be categorized as a "correspondence rule" or a "transition rule." (*See, e.g.*, '576 Patent, col. 9:41-45

(describing a post processing rule in which a small amount of random noise is added to "all morph weight channels" to "slightly alter the look of each phoneme to create a more natural look"))

Yet it is not clear exactly what all of this proves as it relates to the present dispute. The patent's reference to "default rules" or "secondary rules" could well mean to refer to rules that themselves must include at least correspondence rules and transition rules. ('576 Patent, col. 6:60-62 ("The default correspondence rules and the default morph weight set transition rules define the default system behavior."); *see also* D.I. 112 at 4). And the fact that some *other* rules (like certain post processing rules) may be a part of the "first set of rules" does not necessarily mean that Defendants' proposal is off base; that proposal, after all, simply requires that this set of rules include "at least" correspondence rules and transition rules. Thus, this first strain of Plaintiff's argument is inconclusive.

However, the second strain of Plaintiff's argument is a winning one. Plaintiff's position here is that Defendants' proposal must be rejected because *the particular way in which Defendants describe* the correspondence rules and transition rules in their proposal cannot be correct.

For one thing, Defendants' proposed construction would require a correspondence rule to "specify a morph weight set for *each* incoming sub-sequence of multiple sequential phonemes[.]" (*See* D.I. 100, ex. 1 at 3 (emphasis added)) But the independent claims do not recite a requirement that a rule *must* exist for *each* incoming sub-sequence of multiple sequential phonemes. And indeed, claims 13 and 26 of the '576 Patent explicitly recite "correspondence rules between a *plurality* of visual phoneme groups and a *plurality* of morph weight sets[.]"

('576 Patent, cols. 12:24-25, 14:13-14 (emphasis added)) In contrast, claims 2 and 20 of the '278 Patent recite "correspondence rules between *all* visual phoneme groups and morph weight sets[.]" ('278 Patent, cols. 11:62-63, 13:15-16 (emphasis added)) The Court should not read an express restriction of certain dependent claims into the independent claims. *See Phillips*, 415 F.3d at 1314-15.

Additionally, Defendants' proposed requirement that transition rules "specify time parameters of the transitions *between the sub-sequences*[,]" (D.I. 100, ex. 1 at 3 (emphasis added)), appears a bit at odds with certain other claim language. For example, claim 2 of the '278 Patent and claim 13 of the '576 Patent require transition rules specifying durational data "between *morph weight sets*." ('278 Patent, col. 11:64-65 (emphasis added); '576 Patent, col. 12:26-28 (emphasis added)) That is, as Plaintiff's counsel explained at the *Markman* hearing, in at least some claims, "transition parameters are set between morph weight sets, not phoneme subsequences[.]" (Tr. at 28) In other words, according to Plaintiff, "Defendants aren't saying we only need a transition rule. They're saying we need *a very specific type* of transition rule. One that specifies time parameters of the transitions between subsequences. . . . That's not called out in any claim. That's not called out in the Federal Circuit's opinion." (Tr. at 65 (emphasis added)) The Court agrees, and will not read such a specific requirement into its construction.

For these reasons, the Court will not include a requirement of the type of "correspondence rules" or "transition rules" set out by Defendants in its construction of this term set.

2. Should the construction specify that the "first set of rules" must be "manually set up"?

Defendants next propose that the construction of "first set of rules" must require that the

rules are "manually set up by a user." This proposed limitation is based on the specification's requirement that in the invention's "operation and use, the user must manually set up default correspondence rules between all visual phoneme groups and morph weight sets." ('576 Patent, col. 6:46-48) The Court disagrees that this requirement should be read into a construction, for two reasons.

First, the Court is not convinced that the claims are concerned with whether the "first set of rules" at issue were manually set up by a user (or, more generally, how they were set up). Instead, the claims simply say that the "rules" at issue are "obtain[ed,]" without saying anything about *how* they were set up in the first place. ('576 Patent, col. 11:30-32; '278 Patent, col. 11:46-48) At the *Markman* hearing, Plaintiff's counsel argued that "the claims are not addressed to [the setting up of the rules] because they're addressed to a set of software and the software is already self-contained. That's why reading in 'creating' or 'setting up' is unnecessary and not required by the independent claims." (Tr. at 57-58) Defendants offered no response on this point, and the Court here embraces Plaintiff's argument as to the import of the claim language at issue.

Second, the one portion of the specification relied upon by Defendants (found in the '576 Patent at column 6, lines 46-48) is just not clear enough to justify Defendants' proposed phraseology. That portion of the written description does specifically state that "the user must manually set up default correspondence rules." And it does then immediately discuss how transition rules "must be specified[,]" ('576 Patent, col. 6:51)—such that the paragraph might be read to imply that these transition rules, described therein, are also "manually set up." But the paragraph is not crystal clear on that point, and it says nothing about how other types of "rules" that may be part of the "first set of rules" are to be "set up."

For these reasons, the Court will not read the limitation at issue into the claims.

3. Must "time(s)" refer to "duration(s)"?

The remaining issue relates to the fact that the "first set of rules" at issue relate in some way to the "time" or "times" associated with the phoneme sequence discussed in the claims. (*See, e.g.*, '576 Patent, col. 11:32; '278 Patent, col. 11:47-48) The dispute is over whether Plaintiff is correct in its assertion that "'time' and 'times' refer to one or more lengths of time, i.e., durations[,]" (D.I. 100, ex. 1 at 3), or whether Defendants are correct that in the patents, this reference to "'time' is not limited to 'duration' or 'lengths of time[,]'" (D.I. 112 at 6), and could instead be "directed to the location of a particular phoneme in a timed transcript[,]" (D.I. 106 at 8).

The Federal Circuit found that the claim language itself does not clearly resolve this question, noting that "whether the rules must take into account the pacing of speech based on the 'and time of said phoneme sequence' limitation" [was] neither necessary to resolve the issues on appeal *nor indisputably resolved by the claim language*." *Bandai*, 837 F.3d at 1311 n.11 (emphasis added). Plaintiff nevertheless argues that "the specification and Defendants' own construction both recognize that the claimed timing rules pertain to durations[.]" (D.I. 106 at 8)

As an initial matter, the Court notes that Plaintiff is correct in stating that "the specification repeatedly refers to, and provides examples of, the timing rules as being a function of the 'duration' of the phonemes[.]" (D.I. 106 at 9 (citing '576 Patent, cols. 3:25-28, 4:4-10; 5:25-28, 5:33-37, 6:51-58, 7:1-3)) Moreover, Defendants' own construction states that the "transition rules specify time parameters of the transitions between the sub-sequences." (D.I. 100, ex. 1 at 3) Time parameters "between sub-sequences" represent durations, rather than

discrete moments in time from the TAPT.

However, as Defendants argue, (D.I. 112 at 6), the Court must also take into account an exemplary phoneme sequence in the '576 Patent's specification. This sequence shows a table with series of time entries corresponding to the start of individual phonemes. (*Id.* (citing '576 Patent, col. 8:43-51)):

Time	Phoneme
0.0	silence begins
0.8	silence ends, "h" begins
1.0	"h" ends, "eh" begins
1.37	"eh" ends, "1" begins
1.6	"1" ends, "oh" begins
2.1	"oh" ends, silence begins.

In the above table, the column labeled "Time" clearly does not refer to "durations," but to particular time entries. "Time" is used in the same fashion later in the specification, in a similar exemplary table showing times associated with certain delta sets. (*See* '576 Patent, cols. 8:57-9:8) This suggests that while a reference to "time" in the context of phoneme sequencing *can* be a reference to a duration, it is not limited to such a restrictive definition. (*See* D.I. 112 at 7)[11]

Moreover, the Court is mindful that "claim terms are normally used consistently throughout the patent," *Phillips*, 415 F.3d at 1314, such that the usage of "time" in the

[11] Even an "exemplary rule" that Plaintiff highlights as embodying how the specification considers "the times/durations . . . associated with a phoneme sequence[,]" (D.I. 111 at 8 n.5), uses the word "time" to refer to specific "start" and "end" times of a particular phoneme, (*see* '576 Patent, col. 8:10-14).

specification and in other claims may help illuminate the meaning of "time/times" in this set of terms. *Phillips*, 415 F.3d at 1314. And here, other claims of the Asserted Patents use "time" or "times" to refer to discrete points in time, rather than durations. (*See, e.g.*, '576 Patent, col. 12:7-9 (dependent claim 10 reciting a "plurality of transition parameters compris[ing] a transition start time and a transition end time[]"); '276 Patent, col. 11:66-67 (dependent claim 3 reciting "durational data compris[ing] transition start and transition end times."))

Lastly, Plaintiff's identification of dependent claims that refer to "timing rules as pertaining to 'durations' or 'durational data[,]'" (D.I. 106 at 8 (citations omitted)), actually cut *against* its argument. The fact that certain dependent claims specifically recite timing rules that pertain to "durations" or "durational data" while the independent claims are silent as to that issue tends to suggest that when the patentee intended to refer only to "durations" or "durational data," he knew to use those words.

Thus, the specification and the claims demonstrate that "time" and "times" *may* refer to "duration[s]," but are not absolutely limited to such a meaning. As such, the Court will not adopt Plaintiff's proposed construction in this regard.

4. Defendants' alternative argument regarding written description

As an alternative to its proposed construction, Defendants assert that "the specification lacks sufficient written description for these claim elements." (D.I. 100, ex. 1 at 3) However, they made no argument in support of this contention in their briefing. Moreover, such issues are not normally addressed at the claim construction stage. *See TQ Beta LLC v. Dish Network Corp.*, C.A. No. 14-CV-848-LPS-CJB, 2016 WL 356024, at *5 n.5 (D. Del. Jan. 28, 2016); *Idenix Pharms., Inc. v. Gilead Scis., Inc.*, Civil Action No. 13-1897-LPS, 2015 WL 9048010, at *4 (D.

Del. Dec. 16, 2015). The Court will therefore not address Defendants' alternative argument in its construction of this disputed set of terms.

5. Construction

The Court concludes that none of the restrictions proposed by the parties comport with the plain and ordinary meaning of the terms at issue, as understood in the context of the Asserted Patents. The requirements sought by Defendants are either apparent on the face of the claims, or they are unsupported in light of the intrinsic evidence. The limitation on the terms "time" and "times" sought by Plaintiff is similarly unduly restrictive. As did the district court in the related California Actions, (D.I. 107, ex. 3 at 16), then, here the Court finds that no construction is necessary, and will recommend that this set of terms be afforded their plain and ordinary meaning.

B. "output morph weight set stream"

The second disputed term is "output morph weight set stream." Defendants propose that "output morph weight set stream" means "[a] series of uninterpolated morph weight sets in timed order corresponding to the order of the incoming sub-sequences." (D.I. 100, ex. 1 at 4) Plaintiff asserts that "[t]his phrase does not require construction and the plain meaning should apply, e.g. a series of consecutive morph weight sets that is output." (*Id.*)

The parties have two real disputes with regard to "output morph weight set stream": (1) whether these morph weight sets are "uninterpolated," and (2) whether they are in the proposed "timed order." (*See, e.g.*, Defendants' Claim Construction Hearing Slides at 20; D.I. 106 at 14)

1. Must the output morph weight set stream be "uninterpolated"?

The parties first dispute whether the "output morph weight set stream" at issue must be

"uninterpolated"—that is, whether there may not be something else (e.g., a frame) inserted between the keyframes in these output morph weight set streams, or between the morph weight sets themselves. Defendants believe the output morph weight set stream at issue must be uninterpolated; Plaintiff asserts that it need not be.

Defendants note that this term "appears within the context of Claim 1 of the '576 Patent as the output that is expressly defined by the first set of rules, and in Claim 1 of the '278 Patent within the context of 'generating an output morph weight set stream *by applying said first set of rules*[.]'" (D.I. 112 at 11 (certain emphasis in original)) As such, Defendants assert that the term must be interpreted within the particular context of those claims. (*See id.*) Defendants then explain that while the morph weight set stream can be interpolated, "interpolation . . . has not yet taken place at the point immediately after the 'first set of rules' are applied." (D.I. 105 at 9)

The Court acknowledges that Defendants' argument here appears strong when they point to a particular part of the specification. That portion of the specification that states that "through the use of [the first set of] rules, an appropriate morph weight stream is produced. The *uninterpolated* morph weight stream has entries only at transition start and end times, however. These act as keyframes." ('576 Patent, col. 7:10-13 (emphasis added)) The specification goes on to include an exemplary "output morph weight set stream" matching this description. (*Id.*, cols. 8:52-9:12) In reading this, one would think that the "output morph weight set stream" must always, as Defendants suggest, initially be uninterpolated.

Plaintiff, in arguing to the contrary, first asserts that Defendants' proposed construction "is . . . flatly contradicted by [the] agreed-to construction of 'intermediate stream of output morph weight sets' . . . which recognizes that output morph weight set streams may be 'interpolated[.]'"

(D.I. 106 at 14; *see also* D.I. 100, ex. 1 at 1 (setting out the agreed-upon construction for "an intermediate stream of output morph weight sets" as "[a] series of morph weight sets to which interpolation will be applied" and stating that "[t]his construction does not exclude the possibility that the intermediate stream can itself result from interpolation[.]")) But, as Defendants note, the agreed-upon construction of "an intermediate stream of output morph weight sets" provides that interpolation "*will be* applied" to the intermediate stream, and that more interpolation will be "performed to generate the *final* stream." (D.I. 100, ex. 1 at 1 (emphasis added)) That agreed-upon construction does not necessarily contradict Defendants' proposed construction for "output morph weight set stream," since Defendants' position is that while the intermediate and final streams may be interpolated, the *initial* output morph weight set stream (on which interpolation may later be performed) must itself be uninterpolated. (*See* D.I. 112 at 12 ("However, even if the 'intermediate stream' itself resulted from interpolation, there must still be an initial source of uninterpolated morph weight sets.") (emphasis omitted)) And so this argument from Plaintiff is not dispositive.

In the end though, it is Plaintiff's other argument—regarding dependent claim 17 of the '278 Patent—that the Court cannot get past, and that wins the day for Plaintiff. Claim 17 calls for "generating said output morph weight set stream *by interpolating* between morph weight sets[,]" ('278 Patent, col. 12:49-50) (emphasis added)). Accordingly, Plaintiff contends, "Claim 17's 'output morph weight set stream' is thus *interpolated*, not uninterpolated as Defendants wish [since claim 17 is dependent on a claim that is ultimately dependent on claim 1]." (D.I. 111 at 13 (emphasis in original)) Defendants, for their part, suggest that the interpolation recited in claim 17 does not change the requirement that "the 'output morph weight set stream' defined in Claim

1 of the '278 Patent must be *uninterpolated*." (D.I. 112 at 12 (emphasis in original)). But the Court does not see how that can be so. Claim 17 recites "said output morph weight set stream"—referring to the same "output morph weight set stream" that is recited in claim 1. And it does not seem possible for a morph weight set stream to be "generat[ed] . . . by interpolating[,]" as required by claim 17, while also being "uninterpolated[,]" as Defendants propose. As such, Defendants' proposed construction renders claim 17 "facially nonsensical[, and therefore it] 'cannot be correct.'" *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1255 (Fed. Cir. 2010) (quoting *Schoenhaus v. Genesco, Inc.*, 440 F.3d 1354, 1357 (Fed. Cir. 2006)).

Thus, the Court will not recommend a construction that includes Defendants' proposed requirement that the "output morph weight set stream" be "uninterpolated."

2. Must the output morph weight set stream be in "timed order"?

As to whether the "output morph weight set stream" must be "in timed order corresponding to the incoming sub-sequences" of phonemes, it is not disputed that "the 'output morph weight set stream' will follow [or will roughly track] the general order of the input phoneme sequence[.]" (D.I. 106 at 15; *see also* D.I. 111 at 14; D.I. 112 at 12) This makes sense, in light of, for example, the requirement in claim 1 of the Asserted Patents that the "output morph weight set stream" is a function of "time of said phoneme sequence[,]" ('576 Patent, col. 11:30-32) or the "times associated with said phoneme sequence[,]" ('278 Patent, col. 11:46-48).

But Plaintiff was concerned that Defendants were seeking a construction that would require a "*precise correspondence* in 'time' or 'order.'" (D.I. 106 at 15 (emphasis added)). In their responsive brief, Defendants clarified that they were not. Instead, their proposed

phraseology on this point was meant to "account[] for the 'first set of rules' to ensure that the output morph weight sets in the stream are not 'scrambled' in time with respect to the incoming phoneme sub-sequences." (D.I. 112 at 12)

Here, the Court agrees with Defendants that, on the one hand, the output morph weight set stream must be "ordered" (i.e., not "scrambled" in time, in the manner Defendants describe) relative to the incoming sub-sequences of phonemes. The above-referenced claim language indicates as much.

But on the other hand, the Court agrees with Plaintiff that there does not have to be a "precise correspondence" in time. The specification teaches exemplary rules that add certain random effects into the morph weight sets before interpolation, (*see, e.g.*, '576 Patent, col. 9:41-45), or otherwise allow the output morph weight stream to not precisely correspond to the incoming phoneme stream, (*see id.*, cols. 5:5-8 (allowing for certain phonemes in the TAPT to be ignored); 10:24-29 (creating, in long phonemes, "new transitions between alternate morph targets at certain intervals, which may be randomized . . ., avoiding a rigid look.").

As such, while the relative order of the incoming phoneme stream will remain constant (i.e., the output will not cause the second phoneme of a phrase to be animated before the first phoneme), the timing of the output morph weight sets may be subject to random change. (Tr. at 35-36, 116) Adopting Defendants' proposed construction could cause the term to be read in such a way as to exclude exemplary embodiments in the patent. *See Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1377 (Fed. Cir. 2005) ("a construction that would not read on the preferred embodiment . . . would rarely if ever [be] correct and would require highly persuasive evidentiary support.") (internal quotation marks and citations omitted). Thus, the Court's proposed

construction will specify that the *relative* order (rather than timed order) of morph weight sets must correspond to the order of the incoming phoneme subsequences.

3. Construction

For the above-referenced reasons, the Court will recommend that "output morph weight set stream" be construed as "a series of morph weight sets in relative order corresponding to the order of the incoming sub-sequences."

C. "evaluating said plurality of sub-sequences against said first set of rules"/"applying said first set of rules to each sub-sequence of said plurality of sub-sequences of timed phonemes"

With regard to this third disputed set of terms, Defendants propose a construction of "[c]hecking each sub-sequence of said plurality of sub-sequences of phonemes and durations against the first set of rules to see which rule is applicable and applying the applicable rule." (*See, e.g.*, D.I. 105 at 10)[12] Plaintiff argues that the phrase does not require construction and that the plain meaning of the terms should apply. (*Id.*)

The key disputes as to these terms centers on the meanings of the words "evaluating" and "applying." Defendants' construction suggests that both of those words mean "checking and applying." Plaintiff contends that this cannot be so, (*see, e.g.*, Tr. at 88-89), and the Court agrees.

The Court will first address the term "applying" as used in the '278 Patent before considering "evaluating" as used in the '576 Patent. It will then go on to discuss a few additional

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[12] Defendants originally proposed the following construction: "Checking each sub-sequence of said plurality of sub-sequences of phonemes and durations against the first set of rules to see which rule is applicable." (D.I. 100, ex. 1 at 5) They later modified the construction to add the phrase "and applying the applicable rule" to "make[] clear for the jury that, in 'generating an intermediate stream of output morph weight sets' . . . the claims require applying the rule." (D.I. 112 at 8 n.1 (internal citation omitted))

disputes between the parties as to the construction of these terms.

1. "Applying"

Facially, the language of the claims of the '278 Patent suggests that "checking" means something different from "applying." Claim 1 recites "generating an output morph weight set stream by *applying* said first set of rules to each sub-sequence of said plurality of sub-sequences of timed phonemes[.]" ('278 Patent, col. 11:52-54 (emphasis added)) Dependent claim 11, however, recites the "method of claim **10** [which, in turn, incorporates the method of claim 1], wherein said generating an output morph weight set stream comprises: *checking* each sub-sequence of said plurality of sub-sequences of timed data for compliance with said rule's criteria; and . . . *applying* said rule's function upon said compliance with said criteria[.]" (*Id.*, col. 12:22-29 (emphasis added)).

However, in rejecting Defendants' proposed construction, the Court need not even rely on the doctrine of claim differentiation. Even without considering the context of the claims (which would cut against Defendants' proposed construction), the ordinary meanings of the terms at issue support Plaintiff's position. The Court agrees with Plaintiff that "the world 'applying' plainly does not require 'applying' and 'checking'." (D.I. 111 at 15 & n.8; *see also* Tr. at 88, 93-94)[13]

In arguing to the contrary, Defendants note that the specification teaches that "[e]ach sub-sequence of [TAPT] or other timed data . . . *is checked against a rule's criteria to see if that rule*

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[13] Defendants' use of the word "applying" in its own proposed construction suggests that "applying" has a readily understood meaning and does not require construction. (*See* D.I. 111 at 15) At the *Markman* hearing, Plaintiff's counsel, for example, agreed that the term, as used in this context, "means something like putting a rule into play or action." (Tr. at 94)

is applicable. If so, the rule's function is applied to generate the output." ('576 Patent, col. 4:51-56 (emphasis added)) And they explain that the specification goes on to discuss "how each sub-sequence is checked against a set of default rules and secondary rule(s) to see which rule applies[.]" (D.I. 105 at 11) Here, Defendants cite to a portion of the specification that states that "[i]f, for example, a specific TAPT sub-sequence does not fit the criteria for any secondary rules, then the default rules take effect[; but i]f, on the other hand, the TAPT sub-sequence does fit the criteria for a secondary rule(s) they take precedence over the default rules[.]" ('576 Patent, col. 5:21-25; *see also id.*, col. 5:13-16) Defendants also argue that "if the . . . 'applying' step[was] distinct from 'checking,' [then it would] be inconsistent with . . . dependent Claim 11 in the '278 Patent." (D.I. 112 at 9; *see also* D.I. 105 at 12)

Yet, in light of the plain language of claim 1, the Court cannot agree that the "applying said first set of rules" referenced in the claim term *necessarily* requires first checking the sub-sequence of data against the rule's criteria. While that concept of "checking" is described in the specification, as Defendants have noted, the patent does have claims that explicitly incorporate this kind of a "checking" step. (D.I. 106 at 16 (Plaintiff noting that the "specification . . . discloses that rules *may be* checked to determine their applicability[,]" not that in all cases they must be) (emphasis added); *see also* Tr. at 89) And if anything, the fact that claim 11 explicitly calls out that "generating an output morph weight set stream" there involves "checking" each subsequence of data for compliance with criteria in the first set of rules, cuts against Defendants' argument. This suggests that claim 1, which explicitly does *not* incorporate a "checking" step into its description of what it means to generate an output morph weight set stream, does so for a reason. (Tr. at 116 (Plaintiff's counsel arguing, as to claim 1 of the '278 Patent, "the claim says

applying, but not evaluating [and likely was meant to at least allow for] a rule that applies to everything . . . You do it all of the time. You don't have to check anything. You just apply it all the time. . . . You're just going to do it automatically."))

2. "Evaluating"

Claim 1 of the '576 Patent describes how the method generates an intermediate stream of output morph weight sets and a plurality of transition parameters between two morph weight sets by "evaluating said plurality of sub-sequences against said first set of rules[.]" ('576 Patent, col. 11:36-39) Defendants argue that, pursuant to their proposed construction, "evaluating" as used in this term encapsulates both "checking" and "applying." Here, again though, the claim language itself cuts against Defendants' proposed construction.

While in claim 1 of the '576 Patent, the patentee uses the phrase "evaluating said plurality of sub-sequences against the first set of rules[,]" ('576 Patent, col. 11:38-39), dependent claim 3 recites a method "*wherein said evaluating comprises*: *checking* each sub-sequence of said-plurality of sub-sequences for compliance with the rule's criteria; *and applying* said rule's function upon said compliance." (*Id.*, col. 11:50-54 (emphasis added)) Thus, the patentee, in a dependent claim (claim 3), could be seen to have assigned "evaluating" the meaning now proposed by Defendants in their construction here for the term used in independent claim 1. Since claim 3 defines "evaluating" to include both the aspects of "checking" and "applying," it makes sense that "evaluating," as it used in claim 1, requires something less than that. *See Phillips*, 415 F.3d at 1314-15; *see also* (Tr. at 94).

Indeed, the Court concludes that in the claim term at issue, "evaluating" means "checking." This conclusion seems in line with the plain language of the claim term itself,

wherein the plurality of sub-sequences are "evaluat[ed]" "against" (i.e., checked against) the first set of rules. In fact, neither party disputes that "evaluating" requires this kind of "checking." (Tr. at 94-95 (Plaintiff's counsel suggesting at the *Markman* hearing that "evaluating" could be synonymous with "checking," as long as those two terms did not mean the same thing as "applying"); D.I. 105 at 12) Although it would seem as if the purpose of a "checking" step is to often serve as a precursor to "applying" a rule's function, (Tr. at 115), it also seems at least possible, as Plaintiff suggests, that "here you can evaluate in the one claim [claim 1 of the '576 Patent] and not necessarily apply [but y]ou get to the dependent claim [claim 3 of the patent, and] you have to do both[,]" (*id.* at 116).

3. Defendants' additional proposed limitations

Defendants' proposed construction contains two other elements that the Court will not adopt.

First, their proposed construction requires that "*each* sub-sequence of said plurality of sub-sequences" is evaluated or has rules applied to it. (*See, e.g.*, D.I. 105 at 10 (emphasis added)) But of the independent claims, only claim 1 of the '278 Patent requires application of the first set of rules to "each sub-sequence of said plurality[;]" claim 1 of the '576 Patent simply requires "evaluating *said plurality of sub-sequences* against the first set of rules[.]" (*Compare* '278 Patent, col. 11:53-55, *with* '576 Patent, col. 11:38-39 (emphasis added)) Further, dependent claim 3 of the '576 Patent specifies a narrower method in which "evaluating comprises: checking *each* sub-sequence of said plurality of sub-sequences . . . ." ('576 Patent, col. 11:50-53 (emphasis added)) As Plaintiff notes, the patentee "was capable of drafting these two phrases identically, but he elected not to." (D.I. 111 at 15)

At the *Markman* hearing, Defendants' counsel identified a portion of the '576 Patent's specification that he argued supports the requirement for *each* sub-sequence to be evaluated or have rules applied to it. (Tr. at 99-100 (citing '576 Patent, col. 4:56-64)) And the specification does state that a primary function of the first set of rules is (1) to determine the appropriate morph weight set correspondence "with each TAPT sub-sequence[,]" and that (2) this correspondence "must be completely specified for any sequence of phonemes and times encountered." ('576 Patent, col. 4:56-63) But this portion of the specification appears to describe a preferred embodiment of the invention. (*See id.*, col. 4:50 ("*Preferably*, each rule comprises two parts . . . .") (emphasis added)) Thus, it would seem possible for the evaluation/application process to occur without involving every sub-sequence, contrary to Defendants' contention. Without clearer evidence as to why this requirement should be read into claim 1 of the '576 Patent, when it is clearly stated in another claim (but not claim 1), the Court will not import such a limitation from the specification.

Second, Defendants' proposed construction adds a requirement that "durations" must also be checked against the first set of rules. This issue was hardly addressed in the parties' briefing. But Plaintiff's counsel argued at the *Markman* hearing that the inclusion of the word "durations" is confusing, noting that it does not appear in the independent claims at all. (Tr. at 89-90) Defendants' counsel responded by stating that the term "timed phonemes[,]" which appears in claim 1 of the '278 Patent, (*see, e.g.*, '278 Patent, col. 11:54), refers to durations, (Tr. at 100), and that claim 1 of the '576 Patent's reference to "said plurality of sub-sequences" refers to timed data, (*id.* at 100-01 (citing col. 11:33-34))

As this issue was not well-briefed, the correct answer is all the harder to discern. In the

end, while the relevant independent claims of the respective patents are clear enough that the "evaluating" and "applying" at issue occurs with relation to "sub-sequences" of phonemes, the claims are not clear enough that those acts are necessarily taken with regard to phoneme duration. And so the Court will not include "duration" in its construction here.

4. Construction

The Court has determined that the phrases "evaluating said plurality of sub-sequences against said first set of rules" and "applying said first set of rules to each sub-sequence of said plurality of sub-sequences of timed phonemes" must have different meanings. The Court recommends construing "evaluating said plurality of sub-sequences against said first set of rules" to mean "checking said plurality of sub-sequences against said first set of rules." It further recommends that "applying said first set of rules to each sub-sequence of said plurality of sub-sequences of timed phonemes" should be afforded its plain and ordinary meaning.

D. "applying said output morph weight set stream to an input sequence of animated characters to generate an output sequence of animated characters with lip and facial expression synchronized to said audio sequence"/ "applying said final stream of output morph weight sets to a sequence of animated characters to produce lip synchronization and facial expression control of said animated characters"

The "applying said [] output morph weight set[s/stream] to a[n input] sequence of animated characters" phrases appear in claim 1 of the '278 Patent and claim 1 of the '576 Patent, respectively. Plaintiff argues that these phrases do not require construction and the plain meaning of the terms should apply. (D.I. 100, ex. 1 at 8-9) Defendants argue that the phrases are indefinite under 35 U.S.C. § 112 ("Section 112") and lack sufficient written description.[14] (*Id.*)

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[14] In line with the Court's prior discussion of the issue, the Court will not consider Defendants' written description arguments at this stage. Thus, the following analysis focuses

Section 112 requires that a patent claim "particularly point[] out and distinctly claim[] the subject matter which the inventor or a joint inventor regards as the invention." 35 U.S.C. § 112, ¶ 2.[15] If it does not, the claim is indefinite and therefore invalid. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2125 (2014) ("*Nautilus*"). In *Nautilus*, the Supreme Court of the United States set out the test to be applied in the indefiniteness inquiry: "a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Id.* at 2124. Definiteness is to be evaluated from the perspective of someone skilled in the relevant art at the time the patent was filed. *Id.* at 2128.

The primary purpose of the definiteness requirement is to ensure that patent claims are written in such a way that they give notice to the public of what is claimed, thus enabling interested members of the public (e.g., competitors of the patent owner) to determine whether they infringe. *All Dental Prodx, LLC v. Advantage Dental Prods., Inc.*, 309 F.3d 774, 779-80 (Fed. Cir. 2002). Put another way, "[a] patent holder should know what he owns, and the public should know what he does not." *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722, 731 (2002).

Like claim construction, definiteness is a question of law for the court. *H-W Tech., L.C. v. Overstock.com, Inc.*, 758 F.3d 1329, 1332 (Fed. Cir. 2014). The United States Court of

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exclusively on Defendants' indefiniteness argument.

[15] Here, the Court refers to the text of Section 112 as it read prior to the passage of the Leahy–Smith America Invents Act, since the applications that led to the issuance of the Asserted Patents were filed before September 16, 2012. (*See* '576 Patent; '278 Patent); *see also Q.I. Press Controls, B. V. v. Lee*, 752 F.3d 1371, 1374 n.2 (Fed. Cir. 2014).

Appeals for the Federal Circuit has stated that "[a]ny fact critical to a holding on indefiniteness . . . must be proven by the challenger by clear and convincing evidence." *Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003); *see also Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1338 (Fed. Cir. 2008).[16]

Defendants' basic argument was that the Asserted Patents "fail to describe how to perform the 'applying' step"—that is, that they fail to "inform the public how to 'apply' the output morph weights to 'animated characters' to produce lip synchronization and facial expression." (D.I. 105 at 13) However, Defendants fail to offer clear and convincing evidence that any language in the disputed phrases, let alone the word "applying," could not be readily understood by those skilled in the art.

For one thing, as Plaintiff notes, both the Federal Circuit and the Court presiding over the California Actions "expressly referenced these phrases and [seemed to have] no trouble understanding what was claimed." (D.I. 106 at 19); *see also Bandai*, 837 F.3d at 1315 ("The claimed process uses a combined order of specific rules that renders information into a specific format that is then used and applied to create desired results: a sequence of synchronized, animated characters."); (D.I. 107, ex. 3 at 14 (the Court in the California Actions ruling that the claims at issue "explain[] how the morph weight sets result in synchronization and facial expression control.")) Defendants are certainly correct that "[n]either the Federal Circuit nor the

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[16] In *Nautilus*, the Supreme Court left open the question of whether factual findings subsidiary to the ultimate issue of definiteness should, in fact, trigger the application of a "clear-and-convincing-evidence standard[,]" noting that it would "leave th[is] question[] for another day." *Nautilus*, 134 S. Ct. at 2130 n.10. In the absence of Supreme Court precedent to the contrary, the Federal Circuit's caselaw (utilizing the clear-and-convincing-evidence standard) controls. *See Cal. Inst. of Tech. v. Hughes Commc'ns Inc.*, 35 F. Supp. 3d 1176, 1182 n.4 (C.D. Cal. 2014).

District Court evaluated the definiteness of these phrases." (D.I. 112 at 18) But, at a minimum, Plaintiff is also correct that these courts did not seem to be perplexed as to what the terms meant, either.[17]

Defendants' indefiniteness argument is further belied by their own statements. In their answering claim construction brief, Defendants argue that "many methods of applying a morph weight set to a sequence of animated characters exist[.]" (D.I. 112 at 19) As Plaintiff's counsel pointed out at the *Markman* hearing, this statement suggests that Defendants recognize that a person of skill in the art would know what it means to apply output morph weight sets to animated characters. (Tr. at 119) Now, if Defendants had *produced evidence* showing that (1) there actually are many different ways to perform this application process; and (2) depending on which method of application was chosen, the use of any particular method could make a difference as to whether a person infringed the claims or not, *then* (3) perhaps they would be on to a definiteness problem here. *See, e.g., W.L. Gore & Assocs., Inc. v. C.R. Bard, Inc.*, Civil Action No. 11-515-LPS, 2015 WL 12831300, at *3 (D. Del. Sept. 28, 2015) (citing *Takeda Pharm. Co. v. Zydus Pharms. USA., Inc.*, 743 F.3d 1359, 1367 n.4 (Fed. Cir. 2014)); *Butamax Advanced Biofuels LLC v. Gevo, Inc.*, 117 F. Supp. 3d 632, 641 (D. Del. 2015) (citing *Takeda*). But Defendants did not produce any such evidence. (D.I. 111 at 19-20; Tr. at 125)

Lastly (and related to the Court's prior point), it is worth reiterating that Defendants have

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[17] Moreover, even if Defendants were correct in their assertion that the Asserted Patents do not describe how to perform the "applying" step, that would not necessarily give rise to a finding of indefiniteness. *See Augme Techs., Inc. v. Yahoo! Inc.*, 755 F.3d 1326, 1340 (Fed. Cir. 2014) (rejecting the argument that a limitation was indefinite because the patent-in-suit did not disclose every limitation required by the claims, and clarifying that "[t]he standard for indefiniteness is whether those skilled in the art would understand what is claimed when the claim is read in light of the specification.") (internal quotation marks and citation omitted).

the burden of demonstrating indefiniteness by clear and convincing evidence. And yet, as Plaintiff's counsel noted at the *Markman* hearing, Defendants submitted no expert declaration, citations to the inventor, or anything other than attorney argument in order to make that showing. (Tr. at 119; *see also* D.I. 111 at 18)

Indeed, by the time of the *Markman* hearing, Defendants' counsel was indicating that "we understand that the issue of indefiniteness is something that [ ] without evidence is probably best presented in the summary judgment motion at a later date" and that "the individual words in these claim terms are understandable[.]" (Tr. at 126-27) But then Defendants offered a new argument that they had not really articulated previously: that the term "animated characters" is ambiguous, and that it prevents meaningful construction of the claim. (*See id.* at 127-36; Defendants' Claim Construction Hearing Slides at 44) Any such argument really should have been made in the briefs. And beyond that, even at the *Markman* hearing, it was a bit hard to discern what it was about the use of "animated characters" that troubled Defendants. (Tr. at 130-34) It ultimately appeared that Defendants were suggesting that the concept of applying a final stream of output morph weight sets to "animated characters" was confusing, in that the application step itself is a way of "animating" the characters, and yet (to Defendants) the use of the term "animated characters" suggests that prior to application, the characters are already "animated." (*Id.*)

Yet the Court finds nothing ambiguous on that score. It seems clear that when the claim terms use "animated characters," they are referring to a "geometric representation of a character for an animated production such as movies, video, cartoon, CD or the like[.]" ('576 patent, col. 7:36-38; *see also* Tr. at 136-37 (Plaintiff's counsel explaining: "if I showed you a picture of

Scooby-Doo and I said is that an animated character, the answer is yes."))

In light of the above, the Court finds that Defendants have not met their burden of demonstrating that the disputed set of terms are indefinite. It also concludes the terms' meanings are apparent on the face of the patent. As such, it recommends that the terms be afforded their plain and ordinary meaning.

IV. CONCLUSION

For the foregoing reasons, the Court recommends the following constructions:

1. "first set of rules that defines a morph weight set stream as a function of phoneme sequence and times associated with said phoneme sequence"/"first set of rules that define output morph weight set stream as a function of phoneme sequence and time of said phoneme sequence" should be afforded their plain and ordinary meaning.

2. "output morph weight set stream" means "a series of morph weight sets in relative order corresponding to the order of the incoming sub-sequences."

3. "evaluating said plurality of sub-sequences against said first set of rules" means "checking said plurality of sub-sequences against said first set of rules" and "applying said first set of rules to each sub-sequence of said plurality of sub-sequences of timed phonemes" should be afforded its plain and ordinary meaning.

4. "applying said output morph weight set stream to an input sequence of animated characters to generate an output sequence of animated characters with lip and facial expression synchronized to said audio sequence"/"applying said final stream of output morph weight sets to a sequence of animated characters to produce lip synchronization and facial expression control of said animated characters" should be afforded their plain and ordinary

meaning.

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 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 District Court's website, located at http://www.ded.uscourts.gov.

Dated: June 8, 2017

Christopher J. Burke
UNITED STATES MAGISTRATE JUDGE