Case3:12-cv-03877-VC Document96 Filed08/18/15 Page1 of 26 1 (Counsel listed on signature page) 2 3 4 5 6 7 UNITED STATES DISTRICT COURT 8 9 NORTHERN DISTRICT OF CALIFORNIA SAN JOSE DIVISION 10 11 TECHNOLOGY PROPERTIES LIMITED Case No. 3:12-cv-03865-VC (PSG) LLC, et al., 12 **DEFENDANTS' RESPONSIVE CLAIM** Plaintiffs, **CONSTRUCTION BRIEF** 13 v. DATE: September 18, 2015 14 TIME: 10:00 AM Courtroom 5, 4th Floor HUAWEI TECHNOLOGIES CO., LTD., et al., PLACE: 15 Hon, Paul S. Grewal JUDGE: Defendants. 16 17 18 TECHNOLOGY PROPERTIES LIMITED Case No. 3:12-cv-03870-VC (PSG) LLC, et al., 19 Plaintiffs, 20 v. 21 GARMIN LTD., et al., 22 Defendants. 23 24 25 26 27 28

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DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF CASE NOS.: 3:12-CV-03865; -03870; -03876; -03877; -03880; -03881

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3	Plaintiffs	
4	V.	
5	ZTE CORPORATION, et al.,	
6	Defendants.	
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9	Plaintiffs	
10	v.	
11	SAMSUNG ELECTRONICS CO., LTD., et al., Defendants.	
12	Defendants.	
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15	LLC, et al.,	
16	Plaintiffs	
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18	LG ELECTRONICS, INC., et al.,	
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21	TECHNOLOGY PROPERTIES LIMITED LLC, et al.,	Case No. 3:12-cv-03881-VC (PSG)
22	Plaintiffs	
23	v.	
24	NINTENDO CO., LTD, et al.	
25	Defendants.	
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28	DEFENDA	NTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

The parties' opening briefs squarely frame the issues to be decided by the Court: (1) do applicants' prosecution history disclaimers limit the "entire oscillator" claim term; and (2) if so, what are those limits? The Court must decide these issues because the Federal Circuit requires that all disclaimers be fully embodied in the construction of this claim term. *See* Defendants' Opening Claim Construction Brief ("Def. Op. Br.") at 5-6. Plaintiffs do not dispute this.

The response to the first question is clear: the intrinsic evidence conclusively establishes that applicants' prosecution history disclaimers limit the scope of the "entire oscillator" claim term, and every court that has addressed this issue has so found. *Id.* at 7-13, 16-18. Nevertheless, Plaintiffs' proposed construction and their opening brief ignores *all* of Defendants' disclaiming arguments, even though Plaintiffs have seen Defendants successfully make these same arguments in the International Trade Commission. Plaintiffs' head-in-the-sand approach of studiously ignoring the file history forces Defendants to wait until the *Markman* hearing to respond to whatever Plaintiffs will say about the file history in their responsive brief.

The answer to the second question also is clear: during prosecution, applicants argued clearly, repeatedly, and unmistakably that their "entire oscillator," unlike the prior art, does not rely on an external crystal, clock generator, or control signal to cause clock signal oscillation or control clock signal frequency. Defendants' construction accurately captures applicants' disclaimers. Plaintiffs, however, ignore the disclaiming statements applicants made about the prior art references and instead resort to characterizing the references themselves. But Federal Circuit law is clear that the scope of the disclaimer is measured by what applicants said during prosecution, not by what the prior art says and not by what is necessary to distinguish the claims from the prior art.

As established in Defendants' opening brief, and as further confirmed below, Defendants' construction is consistent with all prior constructions of "entire oscillator," and Defendants' construction clarifies in plain English what it means "to generate" a signal. This is necessary to avoid the misapplication of this claim term and jury confusion that resulted in prior cases.

II. REPEATED AND UNAMBIGUOUS PROSECUTION HISTORY DISCLAIMERS MANDATE DEFENDANTS' CONSTRUCTION

As discussed above, and as established in detail in Defendants' opening brief, applicants repeatedly and unambiguously distinguished their purported invention from the prior art on several distinct grounds during prosecution of the '336 patent. Def. Op. Br. at 7-13. Specifically, applicants distinguished their on-chip oscillator from the prior art Magar reference on the grounds that their purported invention did not rely on an external crystal oscillator or clock generator to either (1) control the frequency of the clock or (2) cause clock signal oscillation. *Id.* at 7-11. Applicants further distinguished their on-chip oscillator from the Sheets prior art reference on the grounds that their purported invention did not rely on a control signal to cause clock signal oscillation or control the frequency of the clock signal. *Id.* at 11-13. The repeated arguments made by applicants during prosecution to distinguish the claims from the Magar and Sheets prior art constitute clear disclaimers that Federal Circuit law mandates must be reflected in the proper construction of this term. *Id.* at 5-6.

Plaintiffs' opening brief ignores applicants' prosecution history disclaimers, preventing Defendants from meaningfully responding until the *Markman* hearing. Meanwhile, Defendants establish below that the arguments in Plaintiffs' opening brief fail for the following reasons: (1) Plaintiffs ignore applicants' disclaimers over the prior art Magar reference; (2) Plaintiffs erroneously focus on the disclosure in Magar itself, as opposed to focusing (as must be the case) on the *distinguishing arguments* applicants actually made to avoid Magar; (3) Plaintiffs' arguments about the word "cause" in Defendants' construction lack merit; (4) Plaintiffs ignore applicants' disclaimers over the prior art Sheets reference; and (5) Plaintiffs rely on irrelevant portions of the prosecution history.

A. Plaintiffs Ignore Applicants' Disclaimers Over Magar

It is true, as Plaintiffs contend, that Defendants' construction "exclude[s] scenarios where an external crystal is used as a reference signal." Pl. Op. Br. at 9. However, Plaintiffs' narrow focus on reference signals is misplaced. As discussed below, applicants' clear and unambiguous disclaimers exclude use of an external crystal *to control the frequency of the clock signal*. This

1 disclaimer applies equally to exclude use of a reference signal from an external crystal to control 2 the frequency of the clock signal. 3 For convenience, reproduced below are all six of the arguments applicants made during 4 prosecution to distinguish Magar on the ground that it uses a crystal to control the frequency of the clock signal that clocks the CPU:¹ 5 6 A review of the Magar reference shows that it is apparently no more pertinent than prior art acknowledged in the application, in that *the clock* 7 disclosed in the Magar reference is in fact driven by a fixed frequency crystal, which is external to the Magar integrated circuit.² 8 Ex. D³ (July 7, 1997 Amend.) at 2 (TPL85300002426). 9 Contrary to the Examiner's assertion . . . one of ordinary skill in the art 10 should readily recognize that the speed of the CPU and clock *do not* vary together due to manufacturing variation, operating voltage, and 11 temperature of the IC in the Magar processor . . . This is simply because the Magar microprocessor clock is frequency controlled by a crystal 12 which is also external to the microprocessor. Crystals are by design fixed frequency devices whose oscillation speed is designed to be tightly 13 controlled and to vary minimally due to variations in manufacturing, operating voltage and temperature. The Magar microprocessor in no way 14 contemplates a variable speed clock as claimed. 15 *Id.* at 3-4 (TPL85300002427-28) (first emphasis in original). 16 [C]rystal oscillators have never, to Applicants' knowledge, been fabricated 17 on a single silicon substrate with a CPU, for instance. Even if they were, as previously mentioned, crystals are by design fixed-frequency devices 18 whose oscillation frequency is designed to be tightly controlled and to vary minimally due to variations in manufacturing, operating voltage and 19 temperature. The oscillation frequency of a crystal on the same substrate with the microprocessor would inherently not vary due to variations in 20 manufacturing, operating voltage and temperature in the same way as 21 ¹ At least a subset of these citations are prominently discussed in no fewer than 7 different publicly available papers filed in the ITC investigation: the Staff's opening Markman brief (23-22 25); the Staff's reply the Markman brief (12-14); the transcript of the ITC's Markman hearing (93-95, 108, 127, 128, 132, 142-85); ALJ Gildea's claim construction order (15-20); ALJ 23 Gildea's Initial Determination (122-124); Respondents' Opposition to Complainants' Petition for 24 Review (36-47); and the Commission's Opinion (14-25). ² Unless otherwise indicated, all emphasis in this brief is added by Defendants. 25 ³ Unless otherwise indicated, all exhibits cited in this brief are attached to the Declaration of 26 Aaron Wainscoat in Support of Defendants' Opening Claim Construction Brief (Exs. A-Q) (Dkt. No. 94-1) and the Supplemental Declaration of Aaron Wainscoat in Support of Defendants' 27 Responsive Claim Construction Briefs submitted herewith (Exs. R-U).

1	the frequency capability of the microprocessor on the same underlying substrate, as claimed.
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3	<i>Id.</i> at 4 (TPL85300002428).
4	The signals PHASE 0, PHASE 1, PHASE 2 and PHASE 3 in Applicants' Fig. 18 are synonymous with Q1, Q2, Q3 and Q4 depicted in Magar Fig.
5	2a. The essential difference is that the frequency or rate of the PHASE 0, PHASE 1, PHASE 2 and PHASE 3 signals is determined by the processing
6	and/or operating parameters of the integrated circuit containing the Fig. 18 circuit, while the frequency or rate of the Q1, Q2, Q3 and Q4 signals
7	depicted in Magar Fig. 2a are determined by the fixed frequency of the external crystal connected to the circuit portion outputting the Q1, Q2, Q3
8	and Q4 signals shown in Magar Fig. 2a.
9	Ex. E (Feb. 10, 1998 Amend.) at 4 (TPL853_02954560).
10	Magar's clock generator relies on an external crystal connected to
11	terminals X1 and X2 to oscillate, as is conventional in microprocessor designs. It is not an entire oscillator in itself. And with the crystal, the
12	clock rate generated is also conventional in that it is a fixed, not a variable, frequency. The Magar clock is comparable in operation to the
13	conventional crystal clock 434 depicted in Fig. 17 of the present application for <i>controlling</i> the I/O interface <i>at a fixed rate frequency, and</i>
14	not at all like the clock on which the claims are based, as has been previously stated.
15	<i>Id.</i> at 3 (TPL853_02954559).
16 17	The Magar teaching is specifically distinguished from the instant case in that it is both <i>fixed frequency</i> (being crystal based) and requires an external crystal or external frequency generator.
18	<i>Id.</i> at 5 (TPL853_02954561).
19	Each of these <i>six</i> file history arguments distinguishes Magar from the claimed invention
20	either by stating that the frequency of the Magar clock signal is crystal-controlled, or by stating
21	that the Magar clock signal is "determined," "fixed," or "set" by the crystal – all of which mean
22	precisely the same thing. Applicants left no doubt about what they viewed as the feature that
23	distinguished Magar from the "entire oscillator" of their claimed invention: Magar used a clock
24	signal whose frequency is controlled by an external crystal, whereas applicants' "entire oscillator
25	does not.
26	These repeated and unambiguous arguments expressly disclaim oscillators whose
27	frequency is controlled, set, determined or fixed by an external crystal. See North Am. Container
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Inc. v. Plastipak Packaging Inc., 415 F.3d 1335, 1345-46 (Fed. Cir. 2005) (holding that disclaimer of any concavity was the "inescapable consequence" of applicant's argument that the prior-art inner walls are "slightly concave"). The six file history excerpts quoted above certainly meet the Federal Circuit standard cited by Plaintiffs in their opening brief, namely that the disavowing statement be "so clear as to show reasonable clarity and deliberateness, and so unmistakable as to show unambiguous evidence of disclaimer." Pl. Op. Br. at 5 (quoting Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1325 (Fed. Cir. 2003) (citations omitted).

B. Plaintiffs Incorrectly Focus On The Magar Disclosure Itself, Rather Than On Applicants' Actual Disclaimers

Plaintiffs' opening brief ignores all six of applicants' disclaimers quoted above. Rather than confront what applicants actually told the Patent Office to distinguish Magar, Plaintiffs focus on Magar itself, arguing:

Presumably the Defendants will cite to the prosecution history surrounding Magar (U.S. Patent No. 4,503,500), arguing that the patentees disclaimed all use of an external crystal. But that characterization is incorrect. Magar relied upon an external crystal *to generate* the actual clock signal used by the CPU. As the Court is aware, such an argument is distinct from using an external crystal or clock signal generator as a *reference* to adjust the frequency of an already existing clock signal.

Pl. Op. Br. at 9 (emphasis in original). This distinction is incorrect for several reasons.

<u>First</u>, this is legal error. The focus must be on the arguments applicants made to distinguish Magar, as those are what define the disclaimer. Instead, Plaintiffs focus on Magar itself – which runs counter to Federal Circuit disclaimer law. As the Federal Circuit made clear in *North Am. Container*, for example, the scope of the disclaimers must be measured by *what the applicants said during prosecution*, not by what was necessary to distinguish the claims from the prior art. 415 F.3d at 1340-41.

(a court "cannot construe the claims to cover subject matter broader than that which the patentee itself regarded as comprising its invention and represented to the PTO").

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⁴ See also, Chimie v. PPG Indus., Inc., 402 F.3d 1371, 1384 (Fed. Cir. 2005) ("where the patentee has unequivocally disavowed a certain meaning to obtain his patent, the doctrine of prosecution disclaimer attaches and narrows the ordinary meaning of the claim congruent with the scope of the surrender."); Microsoft Corp. v. Multi-Tech. Sys., Inc., 357 F.3d 1340, 1349 (Fed. Cir. 2004)

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In *North Am. Container*, the applicant made the following arguments during prosecution to overcome two prior art patents, Jakobsen and Dechenne:

The shape of the base as now defined in the claims differs from those of both the Dechenne patent, wherein the corresponding wall portions 3 are *slightly concave* . . . and the Jakobsen patent, wherein the entire re-entrant portion is clearly *concave in its entirety*. This is also generally true of all of the prior art known to the applicant and/or referred to by the examiner.

Id. at 1340. Nevertheless, after the patent issued, the patentees argued that there was no disclaimer over walls with some concavity, but rather only a disclaimer over walls that were entirely concave. *Id.* at 1344. The Federal Circuit rejected that argument for the following reasons:

We are not persuaded by NAC's argument that the applicant intended only to distinguish his invention from the prior art on the basis that the inner walls in the prior art bottles are entirely concave. Although the inner walls disclosed in the Dechenne and Jakobsen patents may be viewed as entirely concave, that is not what the applicant argued during prosecution to gain allowance for his claims. The applicant stressed the difference in the extent of the concavity between the Dechenne and Jakobsen patents, noting that Dechenne is "slightly concave," whereas Jakobsen is "clearly concave in its entirety." Such a distinction would have been unnecessary if the only point that the applicant intended to make was that both prior art patents disclosed inner walls that are entirely concave.

Id. at 1345-46. The court made clear that the scope of the disclaimer is measured by the words used by the patentee and can be broader than what is necessary to overcome the prior art. This holding is in accord with well-established Federal Circuit precedent. See, e.g., Norian Corp. v. Stryker Corp., 432 F.3d 1356, 1361 (Fed. Cir. 2005) ("[T]here is no principle of patent law that the scope of surrender of subject matter made during prosecution is limited to what is absolutely necessary to avoid a prior art reference that was the basis for an examiner's rejection"); Atofina v. Great Lakes Corp., 441 F.3d 991, 998 (Fed. Cir. 2006) ("[t]hat the applicants only needed to surrender nickel-chromium catalysts to avoid a prior art reference does not mean that its disclaimer was limited to that subject matter"); Marctec LLC v. Johnson & Johnson, 394 Fed. App'x 685, 687 (Fed. Cir. 2010) ("[1]imitations clearly adopted by the applicant during prosecution are not subject to negation during litigation, on the argument that the limitations were not really needed in order to overcome the reference"); Saffran v. Johnson & Johnson, 712 F.3d

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549, 559 (Fed. Cir. 2013) (holding that arguments made to distinguish prior art "preformed chamber" constitute a disclaimer of not only the prior art "preformed chamber" but also a broader disclaimer of anything other than a "sheet.").

Here, as in *North Am. Container*, applicants disclaimed what they *actually argued* to overcome Magar, not just what was necessary to overcome Magar. By repeatedly arguing that, unlike their claims, Magar's clock signal frequency was controlled by an external crystal, they disclaimed the use of an external crystal to control clock signal frequency – regardless of whether that scope was necessary to avoid Magar. Indeed, applicants pointed to their argued distinction as being the "essential difference" between Magar and their claimed invention:

The *essential difference* is that the frequency or rate of the [clock] signals [of the claimed invention] is determined by the processing and/or operating parameters of the integrated circuit containing [applicants] Fig 18 circuit, while the frequency or rate of the [clock] signals depicted in Magar Fig. 2a are determined by the fixed frequency of the external crystal connected to the circuit portion outputting the [clock] signals shown in Magar Fig. 2a.

Ex. E (Feb. 10, 1998 Amend.) at 4 (TPL853_02954560). Applicants did not distinguish Magar on the basis of whether the components necessary for Magar's oscillator to oscillate were on-chip or off-chip. Rather, they argued that Magar's clock frequency is controlled by the external signal while the frequency of the claimed "entire oscillator" is not.⁵

Second, while Plaintiffs acknowledge that "Magar relied on an external crystal to generate

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Notably, during the claim construction hearing in the ITC proceeding between the parties, Defendants specifically pointed out that Plaintiffs did not discuss applicants' disclaimer of oscillators whose frequency is controlled by an external crystal. Ex. S (ITC *Markman* Hearing Tr.) at 143:7-23. Defendants then presented a comprehensive discussion of the actual words used by applicants to disclaim frequency control, including those set forth above. *Id.* at 145:3 -156:3. When Plaintiffs were given the opportunity to explain why they felt those words were not disclaimers of frequency control, they chose not to do so and, instead, again focused on what Magar itself discloses and the disclaimer relating to causing oscillation. *Id.* at 205:6-214:6. This pattern repeated itself in the post-hearing briefing to the Commission. *See* Ex. T (Complainants' Petition for Review) at 16-21; Ex. U (Respondents' Response to Complainants' Petition for Review) at 30-40. The reason for this pattern of silence on this issue is clear: Plaintiffs have no credible factual basis to dispute that disclaimers over frequency control were made, and no credible legal basis to dispute that such disclaimers must be reflected in the proper claim construction.

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the actual clock signal used by the CPU," Plaintiffs incorrectly argue that the construction of "entire oscillator" is limited to this distinction. As established above, applicants *also* argued that the "entire oscillator" is different from Magar because the clock signal *frequency* of Magar's oscillator was controlled by the external crystal. The applicants themselves acknowledged that these were two different (albeit closely related) arguments, and indicated that they were relying on both arguments when they told the examiner:

The Magar teaching . . . is specifically distinguished from the instant case in that it is <u>both fixed frequency</u> (being crystal based) <u>and requires an external crystal or external frequency generator.</u>

Ex. E (Feb. 10, 1998 Amend.) at 4 (TPL853_02954560). Federal Circuit precedent is clear that when multiple disclaimers are made the Court's claim construction must capture *all* of the disclaimers. *Krippelz v. Ford Motor Co.*, 667 F.3d 1261,1267 (Fed. Cir. 2012); *Am. Piledriving Equip. v. Geoquip, Inc.*, 637 F. 3d 1324, 1336 (Fed. Cir. 2011). This is true even if one of the disclaimers was unnecessary. *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 979 (Fed. Cir. 1999).

Third, Plaintiffs' opening brief inaccurately suggests that generating a clock signal somehow is distinct from setting the clock signal's frequency. Not so. Every clock signal has a frequency from its inception. Thus, generating a clock signal and setting its frequency are part and parcel of the same act. Accordingly, as the ITC found, Plaintiffs' argued distinction between generating a clock signal and setting its frequency fails because the two concepts are inseparable:

Furthermore, the ALJ found that "the process of setting the frequency of a clock signal and generating a clock signal are inseparable, because a clock signal must have a frequency, since it [sic] sole purpose is to provide a frequency for timing the operations of devices." *Id.* We affirm the ALJ's finding and analysis.

Ex. N, Commission Opinion at 28-30 (quoting ID at 121); Ex. Q, ID at 120-124 (finding, *inter alia*, that at its base, a clock is a periodic signal, that the periodicity is the frequency of the clock, and that frequency is "incidental to clock generation").

<u>Finally</u>, Plaintiffs mischaracterize Defendants' construction. Defendants do not contend that applicants disclaimed "all use of an external crystal." Pl. Op. Br. at 9. What Defendants

contend is that applicants disclaimed those uses of an external crystal to control the frequency of, or cause oscillation of, the claimed "entire oscillator," and only those uses are excluded by Defendants' construction.

C. Plaintiffs' Arguments About The Word "Cause" Lack Merit

As established in Defendants' opening brief and as discussed above, applicants also distinguished their purported invention from Magar on the grounds that Magar required an external crystal oscillator to cause clock signal oscillation. Def. Op. Br. at 10. These prosecution history arguments constitute a second independent disclaimer, which is properly reflected in Defendants' construction. Although Plaintiffs are less than unequivocal on this point, and although their proposed construction lacks this disclaimer, Plaintiffs do not appear to dispute that the "entire oscillator" may not use an external crystal or clock generator to cause clock signal oscillation. Pl. Op. Br. at 7-8. Instead, Plaintiffs focus on the use of the term "cause" in Defendants' construction. *Id.* at 8-9.

In this regard, Plaintiffs argue without support that the term "cause" in Defendants' construction is "significantly broader than the concept of 'generation." Pl. Op. Br. at 9. As an initial matter, Plaintiffs' argument is irrelevant because neither construction uses the term "to generate." Plaintiffs' argument is also incorrect because the definition of "generate" includes the word "cause": "to bring into existence; *cause* to be; produce." Ex. R, The Random House Dictionary of the English Language (2d ed. 1987). Defendants are not using the word "cause" to change the meaning of the word "generate." Rather, as explained in Defendants' opening brief, that word clarifies in plain English the meaning of the word "generate" to obviate the kind of jury confusion that occurred in the HTC trial, and in light of the post-*Markman* hearing arguments over the meaning of that word in the ITC proceedings. Def. Op. Br. at 17-18.

Plaintiffs' other assertions regarding the word "cause" also lack merit. Plaintiffs hypothesize that, under Defendants' construction, "a general reset signal that is asserted on power-on and that holds many systems in a non-active state for some period of time" could be a control signal that causes clock signal oscillation. Pl. Op. Br. at 9. But Plaintiffs never explain

how a signal that "that holds many systems in a non-active state" could possibly be said to cause
oscillation. Plaintiffs then suggest that Defendants' construction could cover "a signal that causes
power to be applied to the clocking systems." <i>Id.</i> This is incorrect. Defendants' construction
does not exclude reliance on a power signal (or a power button, battery connection or any other
such potential "but for" causes of clock signal oscillation). Defendants' construction only
excludes what applicants disclaimed: reliance on an external crystal oscillator/clock generator or
control signal that causes clock signal oscillation.
D. Plaintiffs Ignore Applicants' Disclaimers Over Sheets
As established in Defendants' opening brief, applicants distinguished their claimed
invention from the Sheets prior art reference on the ground that Sheets required a control signal to
generate a clock signal. Def. Op. Br. at 12-13. But just as Plaintiffs' brief ignores applicants'
disclaiming statements about frequency control, their brief ignores all but one line of applicants'
disclaiming statements about control signals and then quotes that single line out of context.
Specifically, Plaintiffs partially quote the file history as saying "obviates the need for
provision of the type of frequency control information described by Sheets" and then argue that

the quoted statement merely means that the use of control signals is not required in the claimed invention, not that they cannot be used. Pl. Op. Br. at 10. Plaintiffs' argument fails upon even a cursory review of what applicants argued to get around Sheets:

Crucial to the present invention is that . . . when fabrication and environmental parameters vary, the oscillation or *clock frequency* and the frequency capability of the driven device *will automatically vary together*. This differs from all cited references in that . . . the oscillator or variable speed clock varies in frequency but *does not require manual or* programmed inputs or external or extra components to do so.

Ex. D at 5 (TPL853 00002429).

Even if the examiner is correct that the variable speed clock in Sheets is in the same circuit as the microprocessor of system 100, that still does not change the claimed subject matter. In Sheets, a command input is required to change the clock speed. In the present invention, the clock speed varies correspondingly to variations in operating parameters . . . No command input is necessary to change the clock frequency.

Ex. G at 4 (TPL853 00002449). Thus, applicants told the Patent Office that their invention does not require control by programmed inputs, distinguished "all cited references" on that ground, and

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1	then specifically distinguished Sheets on that very ground. In doing so, the applicants told the
2	Patent Office that this feature is the reason why the "clock frequency and the frequency capability
3	of the driven device will automatically vary together"—a feature they told the Patent Office is
4	"[c]rucial to the present invention." The applicants' arguments leave no doubt that their invention
5	does not rely on a control signal to change the clock frequency. See Microsoft Corp. v. Multi-
6	Tech Sys., Inc., 357 F.3d 1340, 1351-52 (Fed. Cir. 2004) (construing claim to require a feature
7	that was "central to the functioning of the claimed invention"); see also Ballard Med. Prods. v.
8	Allegiance Healthcare Corp., 268 F.3d 1352, 1360-62 (Fed. Cir. 2001) (use of "present
9	invention" signifies that disclaimer applies to all claims).
10	The applicants' disclaiming arguments also establish that their invention as claimed
11	cannot rely on a control signal. As discussed above, applicants argued that their CPU frequency
12	and clock speed vary together because the clock does not rely on inputs. The claims expressly

require that the CPU frequency and clock speed vary together. Therefore, the claims cannot cover a clock that relies on inputs to change the clock speed because that is precisely what applicants disclaimed to get around Sheets.

Here, applicants' arguments regarding control inputs include a disclaimer of the use of a control signal to control the frequency of the clock signal, and not just that "the oscillator or variable speed clock in their invention varies in frequency." Pl. Op. Br. at 10. The claims are limited by both of these disclaimers. See Saffran, 712 F.3d at 559.⁶

Plaintiffs' Discussion Of Talbot Is Irrelevant Ε.

Plaintiffs' opening brief addresses the prosecution history discussion of the Talbot prior

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⁶ As explained by the Federal Circuit in *Saffran*:

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Saffran's arguments to the examiner presented two bases for distinguishing Gaskill: (i) that his device is a sheet, and (ii) that his device is not a pre-formed chamber. Even if. as Saffran suggests, the examiner had relied only on the latter, that would not annul the remainder of his statement. "Rather, as we have made clear, an applicant's argument that a prior art reference is distinguishable on a particular ground can serve as a disclaimer of claim scope even if the applicant distinguishes the reference on other grounds as well." Andersen Corp. v. Fiber Composites, LLC, 474 F.3d 1361, 1374 (Fed. Cir. 2007).

art reference. Pl. Op. Br. at 10-11. But that part of the prosecution history is irrelevant because it relates to the "ring oscillator" claim limitation, not the "entire oscillator" term at issue here. Defendants do not rely on any statements or arguments made in the prosecution history relating the Talbot reference to support their construction of the "entire oscillator" term or that there was a disclaimer as to that term, so this discussion is entirely irrelevant to the issue at hand.

To be sure, even if the prosecution history concerning Talbot were relevant, it could not undo applicants' disclaimers. Applicants made their disclaimers during the original prosecution of the '336 patent, while Talbot was cited during reexamination, and claims cannot be broadened during reexamination. 35 U.S.C. § 314 (pre-AIA) ("no proposed amended or new claim enlarging the scope of a claim of the patent shall be permitted."); *Hakim v. Cannon Avent Group Plc.*, 479 F.3d 1313, 1317-18 (Fed. Cir. 2007) (prosecution disclaimer cannot be rescinded absent sufficiently clear statement).

III. PLAINTIFFS MISCHARACTERIZE THE PRIOR CONSTRUCTIONS

Plaintiffs' "Factual Background" section is rife with incorrect or misleading statements about prior construction of the "entire oscillator" term. For example, Plaintiffs baldly assert that "this Court has held that the intrinsic record permits the use of an external crystal or clock generator as a reference signal . . ." Pl. Op. Br. at 1. Plaintiffs cite no support for this "fact" – because there is none.

A. Plaintiffs Mischaracterize Judge Ward's Prior Construction

Plaintiffs argue that Judge Ward's construction "left open the possible use of an external crystal/clock generator for a *reference signal*." Pl. Op. Br. at 2 (emphasis in original). However, Judge Ward's order does not state or suggest that an external crystal/clock generator could be used as a reference signal. To the contrary, Judge Ward explained that the dispute before him was "whether the ring oscillator may rely on a control signal or an external crystal/clock generator." Ex. L at 11. And Judge Ward concluded that he "*agrees with the defendants* that the applicant disclaimed the use of an input control signal and an external crystal/clock generator *to generate a clock signal*." *Id*. at 12 (emphasis added).

B. Plaintiffs Mischaracterize Judge Ware's Prior Construction

Plaintiffs next assert that Judge Ware "considered" the phrase "entire ring oscillator variable speed system clock." Pl. Op. Br. at 2. This is incorrect: Judge Ware construed the term "ring oscillator" – not "entire oscillator," or even "entire ring oscillator variable speed system clock." *See* Ex. B to Bumgardner Decl.; Pl. Op. Br. at 13. In addition to mischaracterizing the subject of Judge Ware's construction of "ring oscillator," Plaintiffs neglect to mention that the focus of Judge Ware's inquiry was whether the voltage controlled oscillator in the Talbot prior art reference was a ring oscillator – and not any other issue concerning frequency control or the meaning of "entire oscillator." *Id.* Furthermore, while Plaintiffs' opening brief implies that Judge Ware's call for additional briefing reflected a deficiency in the briefing of defendants (Pl. Op. Br. at 2-3), it was actually the sufficiency of *Plaintiffs*' position on "ring oscillator" with which Judge Ware was concerned:

The Court has examined the Talbot patent. Although the component is, indeed, referred to as a "voltage-controlled oscillator," declarations and other extrinsic materials that have been tendered during the claim construction proceedings *call into question the validity of the inventors' contention to the PTO and to this Court* that the "ring oscillator" is different from the "voltage-controlled oscillator" disclosed in Talbot.

Id. at 16 (emphasis added).

C. Plaintiffs Focus On The Construction Of A Different Term, "Ring Oscillator"

Plaintiffs next address this Court's construction of "ring oscillator." Pl. Op. Br. at 3. The "ring oscillator" term is *a different term*, which does not appear in either of the two asserted independent claims in this case (claims 6 and 13). Those claims instead recite "an entire oscillator." Ex. A, '336 patent at claims 6, 13. In this litigation, the meaning of "ring oscillator" is not in dispute because the parties have agreed upon the construction of the term "ring oscillator" in the asserted dependent claims (claims 9 and 15). Dkt. No. 72 (JCCS), Ex. A at 5 (construing "ring oscillator" to mean "an [oscillator] having multiple, odd number of inversions arranged in a loop, wherein the [oscillator] is variable based on the temperature, voltage and process parameters in the environment").

D. Plaintiffs Mischaracterize The ITC's Claim Construction

Plaintiffs next engage in spin control in attempting to minimize their loss on this very issue in the ITC. Pl. Op. Br. at 3-4. Plaintiffs first focus (again without explanation as to relevance) on ALJ Gildea's construction of the "ring oscillator" term, as opposed to his construction of the "entire oscillator" term. And while Plaintiffs eventually acknowledge that ALJ Gildea rejected their construction at the ITC, Plaintiffs limit their discussion of claim construction in the ITC to solely ALJ Gildea's *Markman* order, ignoring the portions of his Initial Determination, as well as the Commission's affirmance of that decision, that directly bear on the claim construction issue before this Court.

For example, Plaintiffs ignore ALJ Gildea's flat rejection of Plaintiffs' position that controlling the frequency of a clock signal is separate from generating it in his Initial Determination:

What Dr. Oklobdzija [Plaintiffs' expert] and his fellow authors said in their book coincides with Respondents' argument that *the process of setting the frequency of a clock signal and generating the clock signal are inseparable*, because a clock signal must have a frequency, since its sole purpose is to provide a frequency for timing the operations of devices.

. .

Frequency – and the regulation thereof, which is a form of control – are *incidental to clock generation*.

Ex. Q (Initial Determination) at 121, 123 (emphasis added). Plaintiffs also ignore the Commission's affirmance of ALJ Gildea's finding on this issue. After citing many of the same statements by applicants discussed earlier in this brief, including as the final sentence the applicants' statement that the Magar patent "is specifically distinguished from the instant case in that it is both fixed frequency (being crystal based) and requires an external crystal or external frequency generator," the Commission stated:

The patent applicants' statement in the final sentence quoted above, in particular, shows that the applicants intended to disclaim, not only an external crystal/frequency generator, *but also a fixed frequency, crystal controlled generator*. Thus, the "entire oscillator" limitation requires both that the circuitry required to generate and/or determine (adjust) the frequency of the oscillator's clock rate must be entirely on-chip.

n-emp

ALJ's application of his construction of the 'entire oscillator' limitation to the Accused Products was correct, including in particular his discussion of the intricate relationship between the generation and frequency of a clock signal.").

Ex. N (Commission Opinion) at 24 (emphasis in original); see also id. at 29-30 ("We find that the

E. Plaintiffs Mischaracterize HTC Litigation Events

Plaintiffs' opening brief next discusses this Court's treatment of HTC's summary judgment motion and subsequent Emergency Motion. Pl. Op. Br. at 4. As Plaintiffs acknowledge, in the Court's summary judgment order, "the Court did agree that, as a result of prosecution history, the claims exclude 'any external clock used to *generate* a clock signal.'" Pl. Op. Br. at 4 (emphasis in original); Ex. H to Bumgardner Decl. at 11 (summary judgment order). Significantly, the very next sentence of the Court's order (which Plaintiffs' brief ignores) states that "there remains a factual dispute whether HTC's products contain an on-chip ring oscillator that *is self-generating* and *does not rely on an input control to determine its frequency.*" Ex. H to Bumgardner Decl. at 11 (emphasis added). The existence of a factual issue concerning whether HTC's products include a self-generating oscillator and rely on an input control to determine frequency only would have been relevant if the Court's construction excluded such reliance. Thus, the Court's summary judgment order does not support Plaintiffs' current claim construction position.

In response to the summary judgment order, HTC brought an Emergency Motion. Pl. Op. Br. at 4. The Court ruled that the jury would be instructed that the "entire oscillator" term "is properly understood to exclude any external clock used to generate a signal." Ex. K to Bumgardner Decl. at 1. While, as Plaintiffs note, the Court did not grant HTC's additional request to further instruct the jury that the "entire oscillator" must be self-generating and cannot rely on an input control signal to determine its frequency, the Court did not state its reasons for declining to do so (or otherwise discuss those additional requests in its order). *Id.* Indeed, when the Court later addressed this issue in its JMOL Order, the Court noted only that the "Court chose not to adopt the second sentence of HTC's proposal" Ex. L to Bumgardner Decl. at 9. Notably, the Court did not explain why it chose not to do so.

IV. PLAINTIFFS' REMAINING ARGUMENTS ALSO LACK MERIT

Although Plaintiffs' construction does not incorporate any prosecution history disclaimer, Plaintiffs nonetheless make the remarkable assertion that their construction of the "entire oscillator" term is consistent with this Court's prior construction of that term. Pl. Op. Br. at 7. This assertion is surprising because the Court instructed the jury that the "entire oscillator" limitation is "properly understood to exclude any external clock used to generate a clock signal."

Plaintiffs contend that their construction is consistent with the Court's prior construction, because their construction requires that the oscillator be "located entirely on the same semiconductor substrate as the CPU," and because other claim language requires that the oscillator "generates the signal(s) used for timing the operation of the [CPU]." Pl. Op. Br. at 7. Thus, according to Plaintiffs, their construction "already makes clear that an external clock may not generate the signal used to clock the CPU." Id. at 8. Of course, there is no dispute that an external clock that generates the CPU clock signal cannot be the claimed "entire oscillator," because, among other reasons, such a clock would not be on the same semiconductor substrate as the CPU. However, unlike the Court's prior construction in the HTC case, which "exclude[s] any external clock used to generate the signal used to clock the CPU" (Ex. K. to Bumgardner Decl. at 1), Plaintiffs' current construction could be read to allow an on-chip oscillator that uses an external clock to generate the signal used to clock the CPU. As established above in Section II and in Defendants' opening brief (at 7-13), such a construction would be both incomplete and incorrect, because applicants clearly and unambiguously disclaimed on-chip oscillators that rely on a control signal or an external crystal/clock generator to cause clock signal oscillation or control clock signal frequency.

V. CONCLUSION

Federal Circuit law requires that the full extent of applicants' prosecution history disclaimers, including the frequency control disclaimers, be reflected in the construction of "entire oscillator." Defendants' construction must therefore be adopted.

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3	Defendants' Responsive Claim Construction Brief. In compliance with Civil Local Rule 5-
4	1(i)(3), I hereby attest that the signatories listed above have read and approved the filing of this
5	brief.
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