Nos. 2014-1076, -1317

United States Court of Appeals for the Federal Circuit

HTC CORPORATION and HTC AMERICA, INC.,

Plaintiffs-Cross-Appellants,

v.

TECHNOLOGY PROPERTIES LIMITED, PATRIOT SCIENTIFIC CORPORATION, and ALLIACENSE LIMITED,

Defendants-Appellants.

Appeals from the United States District Court for the Northern District of California in Case No. 5:08-cv-00882-PSG, United States Magistrate Judge Paul S. Grewal

REPLY BRIEF OF PLAINTIFFS-CROSS-APPELLANTS HTC CORPORATION AND HTC AMERICA, INC.

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September 26, 2014

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

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v.
TECHNOLOGY PROPERTIES LIMITED, PATRIOT SCIENTIFIC CORPORATION, and ALLIACENSE LIMITED
Nos. 14-1076, -1317

CERTIFICATE OF INTEREST

Counsel for the Plaintiffs-Cross-Appellants HTC Corporation and HTC America, Inc. certifies the following (use "None" if applicable; use extra sheets if necessary):

1. The full name of every party or amicus represented by me is:

HTC Corporation and HTC America, Inc.

2. The name of the real party in interest (if the party name in the caption is not the real party in interest) represented by me is:

None.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

HTC America, Inc. is a wholly owned subsidiary of HTC Corporation.

4: The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

Cooley LLP (formerly known as Cooley Godward Kronish LLP), Heidi L. Keefe, Mark R. Weinstein, Stephen R. Smith, Kyle D. Chen, Lam K. Nguyen, Neil N. Desai, Matthew J. Leary, Mark F. Lambert (all of Cooley LLP);

Ronald S. Lemieux, Jason C. Fan, Dena Chen, Lia C. Smith (all former counsel at Cooley LLP);

White & Case LLP, William S. Coats, III, Samuel C. O'Rourke, Taryn Lam, Jennifer Yokoyama, Wendi R. Schepler (all former counsel at White & Case LLP).

Dated: September 26, 2014

/s/ Heidi L. Keefe
Heidi L. Keefe

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I. INTRODUCTION

TPL[1] does not dispute that the applicants, during the prosecution of U.S. Patent No. 5,809,336 (the "'336 patent"), disclaimed subject matter in connection with the "entire oscillator" claim limitation.[2] The only disputes between TPL and HTC relate to the *scope* of those disclaimers.[3] TPL asserts that the disclaimers extend only to the location of the component that generates the oscillating clock signal and imposes only one limit on the asserted claims – that the oscillator clocking the CPU must "be located on the same chip as the CPU for the microprocessor." (*See*, *e.g.*, TPL Resp. Br. at 11-13; *see also id.* at 29-35.) But TPL's attempts to limit the scope of the disclaimers stand in stark contrast to the actual statements the applicants made during the '336 prosecution. Those statements demonstrate that the applicants clearly disclaimed an on-chip oscillator

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[1] This brief will use "TPL" to refer to Defendants-Appellants Technology Properties Limited, Patriot Scientific Corporation, and Alliacense Limited.

[2] TPL's brief repeatedly acknowledges that the applicants made disclaimers during the '336 prosecution. (*See*, *e.g.*, TPL's Responsive Brief, Doc. 43 (hereinafter "TPL Resp. Br.") at 3 ("the applicants disclaimed only off-chip oscillators that generate the clock signal used to clock the CPU") and 33 ("At most, the '336 applicants disclaimed systems in which an off-chip crystal 'determines the frequency' of the CPU clock signal because it generates that signal.") (emphasis removed).)

[3] *See*, *e.g.*, TPL Resp. Br. at 14 ("Whatever the applicants may have disclaimed during prosecution was not as broad as HTC contends.") and 28 ("2. The district court's construction of 'entire oscillator' captures the full scope of prosecution history disclaimer.") (boldface removed).

that relies on an input control from an external clock or a command input to determine the oscillator's frequency.

This Court's precedents make clear that "[a] patentee may not state during prosecution that the claims do not cover a particular device and then change position and later sue a party who makes that same device for infringement." *Springs Window Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989, 995 (Fed. Cir. 2003). That is precisely what occurred here. TPL accused HTC of infringement based on a CPU clocking system with an on-chip oscillator whose frequency is determined by an external clock and a command input – precisely the arrangement that the applicants disavowed during prosecution. TPL does not dispute, and repeatedly conceded before the trial court below, that it simply cannot show infringement if the claims are construed to exclude such a clocking system.

TPL attempts to defend the district court's incomplete claim construction by providing a revisionist narrative of the prosecution history that seeks to obscure, minimize, reinterpret, and in some cases erase, the ***actual*** statements made by the applicants. Although TPL understandably wishes that the applicants had distinguished the prior art on narrower grounds, or made arguments different from the ones they actually made, TPL is bound by those statements. TPL is not free to walk away from the statements the applicants made to obtain the '336 patent simply because those statements are inconsistent with TPL's current infringement

theory. For the reasons stated below and in HTC's principal brief (Doc. 34, hereinafter "HTC's Prin. Br."), the district court's denial of JMOL and the judgment of infringement should be reversed.

II. THE '336 APPLICANTS SURRENDERED AN ON-CHIP OSCILLATOR THAT RELIES ON AN INPUT CONTROL TO DETERMINE THE OSCILLATOR'S FREQUENCY.

TPL's brief repeatedly acknowledges that the '336 applicants disclaimed subject matter during prosecution.[4] In determining the *scope* of that disclaimer, this Court's precedents make clear that "[t]he relevant inquiry is whether a competitor would reasonably believe that the applicant had surrendered the relevant subject matter." *Cybor Corp. v. FAS Techs.*, 138 F.3d 1448, 1457 (Fed. Cir. 1998) (*en banc*);[5] *see also Ballard Med. Prods. v. Allegiance Healthcare Corp.*, 268 F.3d 1352, 1361 (Fed. Cir. 2001) ("The court emphasized that the scope of the disclaimer must be determined by what 'a competitor would reasonably believe that the applicant had surrendered.'") (citation omitted). A competitor, relying on the statements made by the applicants during the prosecution of the '336 patent, would reasonably believe that the applicants had

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[4] *See, supra,* n.2, n.3.

[5] *See also Cordis Corp. v. Medtronic Ave, Inc.*, 511 F.3d 1157, 1177 (Fed. Cir. 2008) ("surrenders of claim scope" are determined by "the statements … such that 'a competitor would reasonably believe that the applicant had surrendered the relevant subject matter'") (citing *Cybor*, 138 F.3d at 1457).

surrendered (among other things) an on-chip oscillator that relies on an input control from an external clock or a command input to determine the oscillator's frequency.

TPL asserts that the scope of the applicants' disclaimers extends only to the location of the oscillator. (*See, e.g.*, TPL Resp. Br. at 8-14.) In particular, TPL contends that the disclaimer only extends to "the location of the component that actually generates the oscillating clock signal used to clock the CPU," and requires nothing more than a clock/oscillator "located on the same chip as the CPU for the microprocessor." (*See, e.g.*, *id.* at 11 (emphasis omitted); *see also id.* at 12-13.) TPL claims that the prior-art Magar and Sheets references did not disclose an on-chip oscillator whose frequency is determined by an off-chip clock. "Thus," according to TPL, "such an oscillator could not have been disclaimed." (*See, e.g.*, *id.* at 3.)

As explained in more detail below, TPL's arguments about Magar and Sheets are contradicted by the references themselves and/or the actual statements made by the applicants during prosecution of the '336 patent. But more fundamentally, TPL's arguments are irrelevant even if they were supportable.

Federal Circuit law makes clear that the scope of a disclaimer is determined by the applicants' *actual* statements to the PTO. A disclaimer cannot be avoided

by arguing in subsequent litigation that the prior art *could* have been distinguished on grounds narrower than the ones the applicants presented:

> The problem with that argument is that there is no principle of patent law that the scope of a surrender of subject matter during prosecution is limited to what is absolutely necessary to avoid a prior art reference that was the basis for an examiner's rejection. To the contrary, it frequently happens that patentees surrender more through amendment than may have been absolutely necessary to avoid particular prior art. In such cases, we have held the patentees to the scope of what they ultimately claim, and we have not allowed them to assert that claims should be interpreted as if they had surrendered only what they had to.

Norian Corp. v. Stryker Corp., 432 F.3d 1356, 1361-62 (Fed. Cir. 2005) (emphasis added); *see also Cordis Corp. v. Boston Scientific Corp.*, 658 F.3d 1347, 1357 (Fed. Cir. 2011) ("[a]rguments made during the prosecution of a patent application are given the same weight as claim amendments.") (citation omitted). "Post-hoc, litigation-inspired argument cannot be used to reclaim subject matter that the public record in the PTO clearly shows has been abandoned." *Desper Prods., Inc. v. QSound Labs, Inc.*, 157 F.3d 1325, 1340 (Fed. Cir. 1998).

As explained below, although the applicants did make statements to the PTO about the *location* of the oscillator, the applicants did not stop there. They went on to repeatedly tell the PTO that the claimed "entire oscillator" was patentable because it does not rely on an external clock or a command input to determine its frequency.

This Court has made clear that "[a]n applicant's invocation of multiple grounds for distinguishing a prior art reference does not immunize each of them from being used to construe the claim language." *Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1374 (Fed. Cir. 2007). "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." *Id.* The location of the CPU clock generator was, at most, one of the several grounds upon which the '336 patent applicants clearly distinguished the prior art.

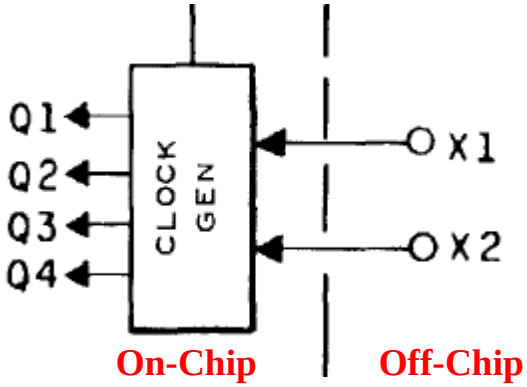
A. The Applicants Disavowed Reliance on an Input Control from an External Clock or a Command Input To Determine the CPU Clock Generator's Frequency.

1. TPL's Arguments Misinterpret the Magar Reference and How It Was Distinguished During Prosecution.

TPL's assertion that Magar "completely lacked an on-chip oscillator" ignores the actual statements made by '336 applicants. (TPL Resp. Br. at 10.) During the prosecution of the '336 patent, in fact, the Examiner initially concluded that the applicants distinguished the clock generator in Magar on the basis that it was external to the chip. The applicants responded by specifically disagreeing and correcting the Examiner:

> The Examiner also states that 'applicants contend that Magar's clock is external to the IC.' **This is <u>not</u> the case. The 'clock gen' part of the <u>oscillator</u> circuit is clearly <u>on the IC</u>**, but not the crystal.

(A1171 (part of February 1998 response (A1168-72)) (emphasis added).)[6] The applicants' remarks were based on Figure 2a from Magar, shown in relevant part below, including an on-chip "CLOCK GEN" component with off-chip inputs:



(A5462 (Magar Fig. 2a (partial) ("On-Chip" and "Off-Chip" added for clarity)).)

The applicants further explained, in that same Office Action response, that "while most of Magar's clock (generator) circuitry is on the IC, the **entire oscillator**, which because it requires an external crystal, **is not**." (A1171 (emphasis added).) The applicants clearly conveyed through these statements that Magar has an on-chip clock generator but does not disclose the claimed "entire oscillator" because it requires an external crystal.

TPL's treatment of this aspect of the prosecution history is telling. Pages 10 and 11 of TPL's responsive brief block-quote from this same Office Action

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[6] "IC," which stands for "integrated circuit," is synonymous with "chip." (*See* HTC Prin. Br. at 10, n.2.)

response, but conspicuously skip over (using ellipses) the critical statements quoted above. (TPL Resp. Br. at 10-11 (citing A1170-72).) This is because those statements cannot be reconciled with TPL's attempt to rewrite the prosecution history.

TPL's brief also ignores many other statements driving home the point that the location of the oscillator that clocks the CPU, *e.g.*, whether or not it is entirely on-chip, was only one of several distinctions the applicants relied upon during prosecution. The applicants also distinguished Magar on the separate basis that its on-chip clock generator's frequency is "determined" or "controlled" by the external (off-chip) fixed frequency crystal clock:

> [T]he Magar microprocessor clock is **frequency controlled** by a crystal which is also external to the microprocessor. Crystals are by design fixed-frequency devices whose oscillation speed is designed to be **tightly controlled** …. The Magar microprocessor in no way contemplates a variable speed clock as claimed.

(A1175-76 (part of July 1997 response (A1173-77)) (emphasis added).)[7]

> The essential difference is that … the **frequency** or rate of the Q1, Q2, Q3, and Q4 signals depicted in Magar Fig. 2a are **determined** by the fixed frequency of the external crystal ….

(*See* A1171 (part of February 1998 response (A1168-72)) (emphasis added).)

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[7] *See also* A1176 ("Even if" the "crystal oscillators" were "fabricated on a single silicon substrate with a CPU," because "crystals are by design fixed-frequency devices whose oscillation frequency is designed to be **tightly controlled**[,]" they are still not "as claimed.") (emphasis added).

> The Magar teaching is well known in the art as a conventional crystal controlled oscillator. It 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.

((A1172) (emphasis added).)

A competitor would reasonably conclude from these statements that the scope of the disclaimer does not just cover the location of the "entire oscillator," but also extends to how it determines its frequency. *See Andersen*, 474 F.3d at 1374 ("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").

2. TPL Ignores the Actual Arguments Made by the Applicants in Distinguishing Sheets.

The prosecution history also undermines TPL's argument that Sheets was distinguished based solely on the location of the oscillator. TPL points to portions of the prosecution history in which the applicants discussed the location of the clock in Sheets, but TPL ignores the fact that the applicants made an alternative argument based on the assumption that the clock was on-chip:

> **Even if** the Examiner is correct that **the variable clock in Sheets is in the same integrated circuit** as the microprocessor of system 100, that **still does not** give 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 of the electronic devices of the microprocessor because both the variable speed clock and the microprocessor are fabricated

> together in the same integrated circuit. No command input is necessary to change the clock frequency.

(A4571 (part of January 1997 response (A4568-72)) (emphasis added).)

The first sentence of this quote, by assuming a scenario in which the variable speed clock ***was*** on-chip, leaves no doubt that the applicants were distinguishing the prior art based on more than simply the location of the clock.

TPL's treatment of this passage from the prosecution history is reminiscent of its arguments about Magar discussed above. Page 13 of TPL's responsive brief block-quotes from this passage but conspicuously omits the "even if" sentence at the beginning. (TPL Resp. Br. at 13 (citing A1179, which is the same as A4571).) This was yet another attempt to obscure the fact that the applicants were arguing a separate distinction here while entirely eliminating any distinction based on the location of the CPU clock generator.[8]

TPL must be held to the actual statements made by the applicants, and cannot avoid those statements through a tortured interpretation of the prior art and selective quotations from the prosecution history. *See*, *e.g.*, *N. Am. Container, Inc.*

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[8] TPL misleadingly argues in a footnote that "[t]he applicants also explained that Sheets would not meet the claims even if the Sheets clock were located on the same integrated circuit as the microprocessor (which it was not)," and then block-quotes an unrelated passage from an earlier April 1996 response (A1182-90). (TPL Resp. Br. at 13 n.1 (quoting A1189).) The applicants never linked the "even if" statement from their January 1997 response to their earlier April 1996 correspondence, or suggested any relationship between them.

v. Plastipak Packaging, Inc., 415 F.3d 1335, 1345-46 (Fed. Cir. 2005) ("Although the inner walls disclosed in the [prior-art] patents may be viewed as entirely concave, that is not what the applicant argued during prosecution to gain allowance for his claims."). A correct construction of "entire oscillator" must therefore reflect that the term requires an oscillator that does not rely on an input control from an external clock or a command input to determine the oscillator's frequency.[9]

B. The Specification Also Supports HTC's Proposed Construction.

The specification of the '336 patent also supports HTC's proposed construction and is entirely consistent with the applicants' statements made during prosecution. As explained in HTC's principal brief, the specification supports HTC's proposed construction by criticizing prior art microprocessors whose oscillators ran at a fixed ("rated") clock speed. (HTC Prin. Br. at 12-13.) It would therefore be inconsistent with the purpose of the invention to allow the frequency

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[9] TPL misrepresents HTC's claim construction position on the "entire oscillator" limitation. TPL contends that HTC seeks to exclude "any on-chip oscillator that uses an off-chip clock or control signal to help set the frequency of the clock signal that was already generated by the on-chip oscillator." (*E.g.*, TPL Resp. Br. at 2 (emphasis omitted); *see also id.* at 1, 24, 35.) HTC's proposal has nothing to do with a clock signal "already generated" by the on-chip oscillator. HTC's position involves controlling or determining the frequency of the oscillator (or the CPU clock generator) for clocking the CPU. (*E.g.*, HTC's Prin. Br at 4, 7, 8, 14, 20, 31, 32, 37, 41, 43, 45.)

of the "entire oscillator" to be determined by an external fixed frequency clock – a property shared by all of HTC's accused products.

TPL nonetheless contends that a construction of "entire oscillator" that excludes use of an external clock to determine the oscillator's frequency, as HTC proposes, would be redundant of other language in claims 6 and 13. (TPL Resp. Br. at 22-23.) In particular, TPL asserts that these claims already recite that the frequency of the entire oscillator should "vary … in the same way" based on the process, voltage, or temperature ("PVT") parameters. (*Id*.) But that limitation speaks to the separate concept of how the frequency varies based on parameter fluctuation, not whether the claimed oscillator can use an external clock to determine its frequency in the first instance.

The functional difference between these claim limitations was illustrated by the way in which TPL presented its infringement case at trial. TPL specifically argued that HTC's products satisfy the "vary … in the same way" limitation, despite acknowledging that the accused oscillator in them uses an external reference clock to set or determine the oscillator's frequency. (*See, e.g.*, A7961-62 at 661:23-662:13; *see also* A8038 at 738:9-13, A8046 at 746:11-18.) TPL's theory at trial, therefore, confirmed that the two limitations are directed at different aspects of the claimed clocking system. TPL obviously could not have made this argument at trial if, as it now suggests, HTC's proposed construction of "entire

oscillator" is captured by the "vary … in the same way" limitation because TPL would have been admitting non-infringement at trial.

TPL also attempts to distance itself from the applicants' statements in the specification and file history by misapplying *A.B. Dick Co. v. Burroughs Corp*., 713 F.2d 700 (Fed. Cir. 1983). TPL cites *A.B. Dick* for the proposition that an accused product cannot avoid infringement by incorporating "additional PLL components – such as an external clock – that provides a reference or control signal to help determine the frequency of the clock signal that was already generated by the ring oscillator." [10] (TPL Resp. Br. at 23.) But the dicta cited by TPL from *A.B. Dick* merely states the unremarkable idea that adding components to an otherwise infringing product does not avoid infringement. 713 F.3d at 703. The case did not deal with prosecution disavowals, or for that matter, claim construction. In the present case, the use of an external clock to determine the frequency of the "entire oscillator" would, under a correct construction, negate infringement. This Court has recognized that the principle identified in *A.B. Dick* does not apply in this situation. *See Outside the Box Innovations, LLC v. Travel Caddy, Inc*., 695 F.3d 1285, 1305 (Fed. Cir. 2012) (distinguishing *A.B. Dick* and

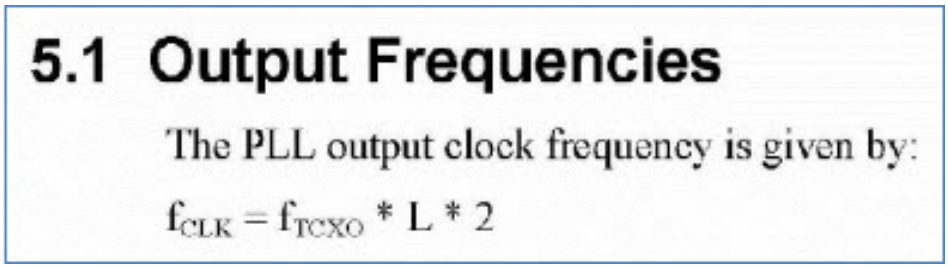
[10] "PLL" stands for "Phase Locked Loop," a clocking mechanism for clocking the CPU that predates the '336 patent. (*See* HTC Prin. Br. at 22, n.12.)

observing that adding an element precludes infringement where it "changed the structure of the purported infringing object such that it could not infringe") (internal quotations omitted).

III. THE ACCUSED OSCILLATORS UNDISPUTEDLY RELY ON AN INPUT CONTROL TO DETERMINE THEIR FREQUENCY AND THUS DO NOT INFRINGE.

TPL repeatedly conceded to the trial court below, and does not dispute in its responsive brief, that TPL could not show infringement if HTC's proposed construction were adopted. (HTC Prin. Br. at 20-21, 27.) This is because HTC's products clock the CPU with a Phase-Locked Loop ("PLL") that relies on an external crystal clock and a command input to determine the frequency. (*Id.* at 43-45.) HTC's products therefore fall squarely within the scope disclaimed by the applicants during prosecution.

In particular, HTC's accused products cannot infringe because the accused oscillator's frequency (a) relies on an external crystal that generates a fixed frequency and (b) relies on a command input to change the oscillator's frequency. Both of these aspects, which track the disclaimers that the applicants made for Magar and Sheets, respectively, are reflected in the exemplary formula used by HTC's products to provide the accused oscillator's frequency:



5.1 Output Frequencies

The PLL output clock frequency is given by:

$f_{CLK} = f_{TCXO} * L * 2$

(A9073.)

As HTC explained in its principal brief, the formula establishes that the frequency of the accused oscillator (f_{CLK}) for clocking the CPU (*i.e.*, the "PLL output clock frequency") equals the external crystal clock's frequency (f_{TCXO}), multiplied by the command input value "L," and then multiplied by 2. (*Id.*; A8042-49 at 742:24-749:6; HTC's Prin. Br. at 44-45.). It is undisputed, therefore, that all of HTC's accused products rely on an **input control** from an **external clock** (f_{TCXO}) to determine the CPU clock's frequency (f_{CLK}). Additionally, because the external clock's frequency (f_{TCXO}[11]) comes from a crystal oscillator whose frequency is fixed[12] at, *e.g.*, 19.2 MHz, the accused oscillator actually relies on the **command input** "L" to change its output frequency (f_{CLK}).

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[11] "TCXO … stands for temperature compensated crystal oscillator." (A8346 at 1045:8-10.)

[12] *See*, *e.g.*, A1176 (prosecution history) ("Crystals are by design fixed-frequency devices …."); *see also* A0255 (the '336 patent) at 17:18-20 and 17:26 ("the I/O interface 432, speed of which is controlled by a conventional crystal clock **434**…. the *fixed speed* of the I/O interface **432**, …") (italics and underlining added, boldface in original).

Table 5-1 PLL output clock frequencies with 19.2 MHz reference

Input frequency	L	PLL_L_VAL[5:0]	Output frequency (MHz)
19.2 MHz	10	001010	384.0
19.2 MHz	11	001011	422.4
19.2 MHz	12	001100	460.8
19.2 MHz	13	001101	499.2
19.2 MHz	14	001110	537.6

(A9073.) [13]

Because HTC's accused products rely on an input control from an external clock, and a command input, to determine the oscillator frequency, they do not satisfy the "entire oscillator" limitation.

IV. EVEN UNDER THE DISTRICT COURT'S CONSTRUCTION, HTC PRODUCTS STILL DO NOT INFRINGE THE "ENTIRE OSCILLATOR" LIMITATION AS A MATTER OF LAW.

The undisputed operation of HTC's accused products confirms, even under the district court's incomplete construction of "entire oscillator," that no reasonable jury could find infringement. The jury's verdict in this case was the result of a misunderstanding of the word "generate" in the district court's claim construction, which was predicted by HTC prior to trial and evidenced by the questions the jury

[13] A9073 ("Table 5-1 PLL output clock frequencies with 19.2 MHz reference," where "Input frequency" is fixed at 19.2 MHz, and "L" can be set at different values ("10," "11," "12," "13," …, etc.) to change the "Output frequency (MHz)" (to "384.0," "422.4", "460.8," "499.2," …, etc., respectively)).

submitted during its deliberations.[14] This confusion was no doubt enhanced by TPL's misleading arguments to the jury, including its inapposite automobile analogy used in its closing argument that TPL reproduced in its brief. (TPL Resp. Br. at 26.) Nonetheless, a plain reading of the district court's construction of "entire oscillator" confirms that HTC indisputably does not infringe.

A. The District Court's Construction of "Entire Oscillator" Excludes an External Clock "Used" in Any Way "To Generate" the CPU Clock Signal.

TPL misstates the district court's claim construction by arguing that "the applicants only disclaimed off-chip oscillators that '***generate*** the signal used to clock the CPU.'" (TPL Resp. Br. at 36 (emphasis in original).) But that is not what the district court's "entire oscillator" construction actually states. The district court construed the "entire oscillator" limitation as excluding "any external clock **used to generate** the signal used to clock the CPU." (A0104 (Final Jury Instructions at 26:4-5) (emphasis added).) Because the actual construction adopts the passive voice to exclude any external clock "***used*** to generate" the clock signal, the exclusion is not limited to only external clocks that physically generate the actual clocking signal.

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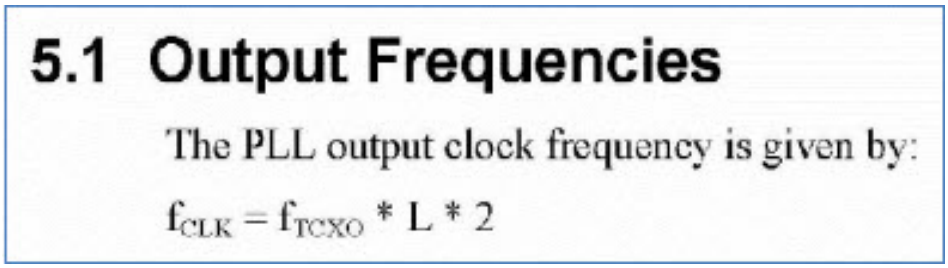
[14] *See* HTC Prin. Br. at 26-27; *see also* A9007 (the jury's note asking for the "court[']s definition of 'generate' [in "any external clock used to generate the signal used to clock the CPU" on] pg 26 lines 4&5 [in the final jury instructions]" (A0104 (Final Jury Instructions at 26:4-5)).

An external clock that is merely "used" in some way (*e.g.*, as a reference clock signal in a PLL) "to generate" the CPU clock signal does not necessarily have to actually perform the generation of the CPU clock signal to fall within the district court's exclusion. All that is needed for the exclusion to apply is for an external clock to be "used" or involved in some way "to generate" the CPU clock signal.

B. An External Clock Is Indisputably "Used" To Generate the CPU Clock Signal.

TPL does not dispute that HTC's accused products all use a formula that relies on the external clock to determine the frequency of the accused oscillator, such as the one below:



5.1 Output Frequencies

The PLL output clock frequency is given by:

$f_{CLK} = f_{TCXO} * L * 2$

(A9073.) The formula establishes that the accused oscillator's frequency (f_{CLK}) is L * 2 times the external crystal clock's frequency (f_{TCXO}). (*Id.*; A8042-49 at 742:24-749:6.) That means the external crystal clock is "used" to determine the frequency (f_{CLK}) for the accused oscillator "to generate" the clock signal used to clock the CPU. Thus, no reasonable jury could find that the exclusion in the district court's construction of "entire oscillator" does not apply.

TPL argues that "'generating a clock signal' is not the same as 'determining or setting the frequency of the clock signal.'" (TPL Resp. Br. at 25 (emphasis removed).) TPL is wrong. As explained by HTC's brief (and not disputed in TPL's brief), a clock signal is actually a periodic "high" or "low" signal (akin to the tick-tock in a mechanical clock) that a clocking device generates by oscillating at a frequency. (HTC Prin. Br. at 10-11). The generated clock signal thus alternates periodically between high and low *at the clocking device's oscillation frequency*. (*See id.*) The oscillation at that frequency, in other words, is what "generates" the clock signal. (*See id.*) As a result, it is impossible to separate "generating a clock signal" from "determining its frequency," as the International Trade Commission concluded when it rejected TPL's infringement claims against several of the same HTC products accused in this case. (*See* Request for Judicial Notice, Doc. 32, Ex. A, at 30 ("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[s] sole purpose is to provide a frequency for timing the operations of devices" (internal quotations omitted)); *see also* A0103 (Final Jury Instruction) at lines 17-18 ("The term 'clocking said central processing unit' means 'providing a timing signal to said central processing unit.'").)

Because a clock signal cannot be generated without its frequency also being determined or set during generation, and because it is undisputed that an external

crystal clock in HTC's products is used to determine or set the frequency of the accused oscillator for clocking the CPU, the external crystal clock is "used," at least as a reference for the PLL, "to generate" the signal used to clock the CPU. The exclusion in the district court's construction of "entire oscillator" therefore applies, and no reasonable jury could find infringement.

V. CONCLUSION

For all of the reasons presented above and in HTC's principal brief, this Court should reverse the judgment with respect to the '336 patent in the district court's Amended Judgment (A0148-49) and direct the district court to enter judgment in favor of HTC with respect to the '336 patent.

Dated: September 26, 2014

Respectfully submitted,

COOLEY LLP

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UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

Nos. 2014-1076, -1317

CERTIFICATE OF SERVICE

I, Robyn Cocho, being duly sworn according to law and being over the age of 18, upon my oath depose and say that:

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/s/ Robyn Cocho
Robyn Cocho
Counsel Press

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

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