The designer of a high speed microprocessor must produce a product which operate[s] over wide temperature ranges, wide voltage swings, and wide variations in semiconductor processing. Temperature, voltage, and process all affect transistor propagation delays.

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Clock circuit 430 is the familiar "ring oscillator" used to test process performance. The clock is fabricated on the same silicon chip as the rest of the microprocessor 50.

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The ring oscillator 430 is useful as a system clock. . .because its performance tracks the parameters which similarly affect all other transistors on the same silicon die.

(*Id.* (citing JXM-0001 at 16:44-67).) Nothing in the specification indicates that "varying together" or "varying in the same way" must be "proportional," argue Complainants. Rather, the fact that the clock and the CPU are fabricated on the same silicon die means they will vary in a "similar" manner with any changes in temperature, voltage, and semiconductor processing. (*Id.*)

Complainants also argue that the prosecution file history explains that clock frequency and CPU processing capability vary similarly with parameter variations. (*Id.* at 22.) The reason for this is simple, according to Complainants: The transistors of the ring oscillator clock are manufactured on the same silicon die as the transistors of the CPU. (*Id.* (citing CXM-0012 at 7-8).) There is nothing in the file history that indicates that the "varying" mentioned must be "proportional." (*Id.*)

According to Complainants, all of the intrinsic evidence in the claims, the specification, and the prosecution history is consistent with respect to the term "varying," and no construction is needed; however, if a construction is deemed necessary, it should be this: "changing in a corresponding manner." (*Id.*)

## Respondents' arguments in support of their proposed construction

Respondents argue that Complainants should be estopped from advancing their proposed construction because it is inconsistent with Complainant TPL's two previous positions with

respect to the "varying" limitations. (RMBr. at 36-37.) Respondents say the specification of the '336 patent, the patent's prosecution history, Complainants' prior admissions, and testimony of the named inventor all support Respondents' and Staff's proposed constructions. (*Id.* at 37.) Respondents also say the Complainants' proposed interpretation is admittedly non-technical, wholly unhelpful to one of ordinary skill in the art, and inconsistent with the positions that TPL previously took in respect to similar claim language that has been rejected by at least one of the named inventors. (*Id.*)

Respondents note that the "varying" limitations have been the subject of two prior

Markman rulings in separate federal district court proceedings, one in the Eastern District of

Texas, and the other in the Northern District of California. (*Id.*) In each of those cases, the

"varying" limitation was construed to mean "increasing and decreasing proportionally." (*Id.*) In

the Texas case the district court rejected TPL's proposed construction and instead construed the

"varying" limitation to mean "increasing and decreasing proportionally," which Respondents note

is identical to their and Staff's proposed constructions. (*Id.* (citing RXM-0002 (*Markman* Order,

June 15, 2007) at 15-16).) And in the California case, TPL abandoned the construction it had

proposed in the Texas district court case and proposed the construction that had been adopted by

the Texas court, *i.e.*, "increasing and decreasing proportionally." (*Id.* (citing RXM-0003 (Joint

Claim Construction Statement, October 29, 2010), Ex. A at 5).) The defendants in the California

case, Acer and HTC<sup>6</sup>, agreed with TPL's proposed construction. The interpretation of the

"varying" limitations in the California district court case is identical to the one in the Texas district

court case, note Respondents. (*Id.*)

<sup>&</sup>lt;sup>6</sup> Two of the Respondents named in this investigation.

Respondents point out that in this investigation TPL rejects the construction that the two district courts, and TPL itself, previously adopted. (*Id.* at 38.) Instead, TPL now argues that the "varying" limitations no longer require a construction or, alternatively, that another and different construction should be applied. (*Id.*) In so doing, TPL advances two distinct constructions for the "varying" limitations, one in the pending California litigation, and another in this investigation, both of which affect Acer and HTC. (*Id.*) According to Respondents, the doctrine of judicial estoppel precludes TPL from advancing its present construction, for three reasons. First, because it is inconsistent with the two earlier positions TPL adopted in the Texas and California cases; second, because TPL successfully convinced the California court to adopt the construction they are now disputing in this investigation; and third, because TPL will derive an unfair advantage and impose prejudice upon HTC and Acer Respondents by forcing them to simultaneously defend against two competing claim construction proposals. (*Id.* (citing *Transclean Corp. v. Jiffy Lube Int'l. Inc.*, 474 F.3d 1298, 1307 (Fed. Cir. 2007); *New Hampshire v. Maine*, 532 U.S. 742, 750-752 (2001)).)

According to Respondents, the specification, prosecution history, TPL's prior positions, and testimony from the named inventors all support Respondents' proposed construction, and Staff's too. (*Id.*) The '336 patent describes and claims a microprocessor system with a ring oscillator and a CPU on the same substrate. (*Id.*) The patent explains that the primary purpose of the invention is to allow the CPU to operate at the highest safe operating speed at all times: "CPU 70 will always execute at the maximum frequency possible, but never too fast." (*Id.* (citing JXM-0001 at 16:67-17:2).) Therefore, the ring oscillator is used to clock the CPU because the speed of the ring oscillator "tracks the parameters (temperature, voltage, and process) which similarly affect all other transistors on the same silicon die," including the transistors of the CPU.

(*Id.* at 38-39 (citing JXM-0001 at 16:59-67).) Because the ring oscillator and the CPU contain transistors that have been made in common, they are affected in the same way by changes in temperature, voltage, and process parameters. (*Id.* at 39 (citing JXM-0001 at 17:21-22).) When the ring oscillator speeds up, the CPU speeds up in the same way. When the ring oscillator slows down, the CPU slows down in the same way. (*Id.* (citing JXM-0001 at 17:2-10).) Thus, the CPU's processing frequency capability automatically varies with the ring oscillator's speed. (*Id.*)

During prosecution of the '336 patent, the applicants repeatedly stressed that their invention is different from the prior art because its ring oscillator's speed automatically varies with, or tracks, the CPU's processing frequency capability with changes to parameters such as temperature and voltage, note Respondents. (*Id.*) In an office action, the patent examiner rejected all of the pending claims over Magar, which discloses a microprocessor with a clock generator fabricated on the same silicon chip as the microcomputer. (*Id.* (citing RXM-8 at Fig. 2A).) The examiner concluded that "[s]ince the microcomputer of Magar is fabricated on a single chip, one of ordinary skill in the art should readily recognize that the speed of the cpu [sic] and the clock vary together due to manufacturing variation, operating voltage, and temperature of the IC." (JXM-0002 (July 7, 1997 Amendment) at 3).)

In response, the applicants made it clear that the "varying" limitations require the ring oscillator's speed to automatically vary together with the CPU's processing frequency capability: "Crucial to the present invention is that since both the oscillator or variable speed clock and the driven device [i.e., CPU] are on the same substrate, when fabrication and environmental parameters vary, the oscillator or clock frequency and the frequency capability of the driven device will automatically vary together." (*Id.* at 39-40 (citing JXM-0002 (July 7, 1997 Amendment) at 5).) In an attempt to overcome a later office action rejecting the '336 patent application claims

based on Magar, the applicants equated this "crucial" feature with "tracking" the clock rate, explaining that "there would be no 'tracking' of the clock rate produced by the Magar clock generator...." (*Id.* at 40 (citing JXM-0002 (February 10, 1998 Amendment) at 3).) Respondents note that in the district court case in California TPL agreed that "track" should be accorded the same definition as "varying"—"increasing and decreasing proportionately." (*Id.* at n. 26 (citing RXM-0003 (October 29, 2010 Joint Claim Construction Statement) at Ex. A).) Furthermore, one of the named inventors, Russell Fish, explained that the word "track" means proportional. (*Id.* (citing RXM-0001C (Fish Dep.) at 166).)

Also, argue Respondents, the applicants explained that, under the laws of physics, a CPU's processing frequency capability necessarily tracks the rate of the variable speed clock when both are located on the same substrate. (*Id.* at 40-41 (citing JXM-0002 (April 24, 1998 Supplemental Amendment) at 1-3).) In the Texas case, TPL confirmed that the laws of physics control the relationship between the CPU clock speed and the CPU processing frequency. (*Id.* at 41 (citing RXM-11 (*TPL v. Fujitsu, et al.*, Case No. 2:05-CV-00494, Dkt. 96, TPL's Mot. To Correct Preliminary Infringement Contentions, Ex. A-1) at 6 ("According to the laws of physics...the processing frequency of said central processing unit and the speed of said ring oscillator, because they are located on the same integrated circuit, vary together due to manufacturing variations, operating voltage and temperature.")).)

Therefore, reason Respondents, based on the claims, the specification, the prosecution history, the named inventor's testimony and TPL's prior actions, the "varying" limitations should be construed to mean "increasing and decreasing proportionally." (*Id.* at 41.)

As for TPL's proposed construction in this investigation, Respondents point to the fact that the second named inventor of the '336 patent, Charles Moore, himself rejected such a construction

as meaningless. (*Id.* at 41-42 (citing RXM-9 (Moore Dep., Vol. 1) at 138).) He also testified then that the term "corresponding" was unhelpful with respect to the relationship between the clock speed and the CPU frequency because the term has no technical meaning, saying, "Corresponding is—is perhaps a legal term, but it's not a technical term." (*Id.* at 42 (citing RXM-9 at 137-138).)

Respondents point out that in the Texas case, TPL itself argued that its opponents' proposed interpretation of the "varying" limitations was improper because the word "commensurately" had no technical meaning, and a person of ordinary skill would not know how to quantify this requirement, nor think to do so. (*Id.* (citing RXM-12 (TPL's Claim Construction Reply Brief, April 9, 2007, E.D. Tex., at 9)).) Now, contrary to TPL's past arguments and the testimony of Mr. Moore, who is a paid consultant to Complainants, TPL seeks to "encumber" the "varying" limitations with another non-technical and unusable interpretation, argue Respondents, and this effort should be rejected. (*Id.*)

## Staff's arguments in support of its proposed construction

Staff notes that in the Texas court litigation the judge construed the term "varying" to mean "increasing and decreasing proportionally." (SMBr. at 13.) Staff points out that TPL later agreed with this construction in another case pending in the Northern District of California. (*Id.* at 13-14.) However, notes Staff, TPL now proposes a similar but slightly different construction. (*Id.* at 14.) Staff reasons that unless TPL provides compelling reasons to do otherwise, Staff believes that the construction adopted by the Texas district court should also be applied here: "increasing and decreasing proportionally." (*Id.*)

## Complainants' reply to Respondents' and Staff's arguments

Complainants say they oppose Respondents' and Staff's proposed constructions because of their use of the term "proportionally," which could be misunderstood to introduce a mathematical

relationship between the variations in the processing frequency or processing frequency capability of the CPU and the speed of the oscillator clock due to the PVT parameters. (CRMBr. at 25.) Complainants argue that the Respondents' proposed construction is ambiguous because the term "proportionally" is often used to describe a particular fixed mathematical relationship between two variables, such that a change in the one is accompanied by a change in the other and the changes are always related by use of a constant. (*Id.*) Thus, for example, the circumference of a circle is proportional to its diameter. (*Id.*) If the size of the circle's diameter increases, the circle's circumference increases by a mathematical certainty. However, such a relationship is not recited in the '336 patent's claims, argue Complainants; nor is it taught in the patent's specification. (*Id.*)

According to Complainants, Respondents Acer and HTC sought a claim construction which introduces such a mathematical functional relationship in the Northern District of California case by focusing on the larger phrase "varying...in the same way as a function of parameter variation." However, the presiding judge rejected any construction that imposed a mathematical relationship and found that no further construction was needed. (*Id.* at 26 (citing JXM-0007 (Ware Order) at 18).) However, argue Complainants, Respondents are now covertly seeking to obtain that same rejected mathematical restriction through the importation of the term "proportionally" in the construction of the terms "varying together" and "varying in the same way." Complainants argue that such mathematical proportionality is not part of the '336 patent invention and should not be permitted by means of claim construction. (*Id.*) At the very least, argue Complainants, if the word "proportionally" is included in the construction of the "varying" terms, there should be an explicit clarification saying that a mathematical relationship is not required. (*Id.*) Complainants acknowledge that the district court judge in the Texas case adopted the term "proportionally" and that later, in the Northern District of California case, Complainants agreed to a construction

incorporating the term "proportionally" to construe "varying together" and "varying in the same way"; however, Complainants say they did not expect or intend by their agreement that that construction would be used to limit the claims of the '336 patent to require a predetermined relationship between variations in the oscillator clock and the CPU processing frequency, and because that possibility exists here, oppose such a construction unless it is specified that a mathematical relationship is not required. (*Id.* at n. 4.)

Complainants argue that if the inventors of the '336 patent had intended to limit their invention to a microprocessor system in which the processing frequency capability of the CPU and the speed of the clock varied "proportionally" in a mathematical relationship, they could, and would, have used that term in the claims and specification, but they did not. (*Id.* at 27.) They could and would have used other terms that indicate a constant relationship with certain mathematical precision in the rate of change between the two variables, but they did not. (*Id.*)

Complainants argue that the words chosen by the inventors, "varying together", "varying...in the same way," and "varying in the same way," do not invoke a mathematical relationship. (*Id.*) The inventors chose terms that are sufficient to convey that the '336 invention takes advantage of the laws of physics in that the transistors of the CPU and those of the clock change in a similar manner because they are formed on the same semiconductor substrate, argue Complainants. (*Id.*) Because nothing in the claims supports a construction that would introduce a requirement of mathematical proportionality as part of "varying together" or "varying in the same way," Respondents' and Staff's constructions should not be adopted, argue Complainants. (*Id.*)

Complainants argue that none of Respondents' citations to the specification teach that the CPU processing frequency and the clock will vary proportionally or in a specific mathematical relationship to one another. (*Id.* at 27-28.) Respondents point to teachings in the specification that

only loosely define the relationship, such as the disclosure that the ring oscillator's speed "tracks the parameters which similarly affect all other transistors on the same silicon die." (*Id.* at 28 (citing JXM-0001 at 16:59-67).) The phrase "similarly affect" is far from synonymous with the certainty that is associated with a mathematical "proportionality," argue Complainants. (*Id.*)

As for the testimony of the inventors that Respondents have cited, Complainants argue that it is entitled to no weight for purposes of claim construction. (*Id.* (citing *Howmedica Osteonics Corp. v. Wright Medical Tech, Inc.*, 540 F.3d 1337, 1347 (Fed. Cir. 2008)).)

With respect to the prosecution history discussed by Respondents, Complainants say there is nothing in the statement that "the clock frequency and the frequency capability of the driven device will automatically vary together" that requires mathematical proportionality. (*Id.*) Nor is there anything in the statement that the CPU's processing frequency capability "tracks" the speed of the clock, because the transistors of both are on the same substrate, which requires mathematical proportionality simply because they vary in response to variations in temperature, voltage, and processing. (*Id.*)

Complainants argue that judicial estoppel is not applicable because compelling reasons exist for their changed position from the one they took in the claim construction discussion in the Northern District of California case, understanding that Respondents in this investigation are seeking to import a mathematical proportionality in respect to construction of the term "varying," whereas in the prior case Respondents were seeking to do that through the construction there of the term "as a function of parameter variation." Complainants say they opposed the efforts of the defendants to introduce a mathematical requirement in the California case, and the judge agreed with them and declined to adopt a claim construction that would have that effect. (*Id.*) But in this investigation, argue Complainants, Respondents appear to be adopting a more covert means to

improperly narrow the "varying" limitations. (*Id.*) Rather than seeking construction of the phrase "as a function of parameter variation" that would require a mathematical relationship and face inevitable rejection in the face of the district court judge's ruling on that point in the California case, Respondents now appear to be seeking to achieve that objective through their proposed construction of the term "varying." Complainants argue that for judicial estoppel to apply, the party's later position must be "clearly inconsistent" with its earlier position, and the party must be deriving an unfair advantage or imposing an unfair detriment on the opposing party by taking inconsistent positions. (*Id.* at 30-31.) Complainants argue that they have consistently maintained that the '336 patent claims are not limited in a way that imposes a mathematical-type functional relationship on the "varying" limitations. (*Id.*) In fact, say Complainants, the judge in the Northern District of California case agreed with them on this point and they prevailed; thus, the evidence does not establish that Complainants are being inconsistent for purposes of judicial estoppel. (*Id.* at 31.) Complainants argue that if Respondents get their way on this point, it is they who will obtain an unfair advantage and Complainants who will suffer unfair detriment. (*Id.*)

In sum, Complainants maintain that the "varying" terms require no construction and that attempts to more precisely define the terms through claim construction will result in substituting foreign terms that themselves need separate constructions, but if a construction is deemed necessary, that construction should be this: "changing in a corresponding manner." (*Id.*)

#### Administrative Law Judge's findings and construction

The Administrative Law Judge finds that the intrinsic evidence does not disclose that the inventors meant anything more by the term "varying" than what is denoted by its plain and ordinary meaning in each instance in which the term appears in the asserted claims of the '336 patent. Therefore, no claim construction is necessary. The Administrative Law Judge concludes

that judicial estoppel does not apply, for the reasons given by Complainants. Further, the Administrative Law Judge finds the word "proportionally" as it is employed in the constructions proffered by Respondents and Staff adds a limitation that is not supported by the language of the claims, the specification, or the prosecution history. The word "proportionally" denotes a mathematical relationship that is not denoted or connoted by the term "varying." The latter word indicates change generally, but not necessarily by the same degree or ratio. Something may vary in the same manner, such as faster or slower, but not necessarily to the same degree, ratio, or proportion. Nothing that Respondents or Staff have pointed to in the intrinsic record evidences that the invention is limited to proportional variations.

Accordingly, the Administrative Law Judge finds that the term "varying" requires no construction and would have been understood by a person of ordinary skill in the art at the time of the invention according to its plain and ordinary meaning.

**8.** Claims 11, 13, 16—"wherein said central processing unit operates asynchronously to said input/output interface"

The parties' proposed constructions are as follows:

Term	Proposed Constructions		
	Complainants	Respondents	Staff
"wherein said	the timing control of	the timing control of	the timing control of
central processing	the central processing	the central processing	the central processing
unit operates	unit operates	unit operates	unit operates
asynchronously to	independently of (not	independently of and is	independently of and is
said input/output	derived from) the	not derived from the	not derived from the
interface" (claims	timing control of the	timing control of the	timing control of the
11, 13, 16)	input/output interface	input/output interface	input/output interface
	such that there is no	such that there is no	such that there is no
	readily predictable	readily predictable	readily predictable
	phase relationship	phase relationship	phase relationship
	between them	between them	between them

(CMBr. at 23; RMBr. at 30; SMBr. at 12.)

## Complainants' arguments in support of their proposed construction

Complainants argue that the prosecution history makes clear that "not derived from" is incorporated into the definitions of "asynchronously" and "independently" and therefore this phrase is definitional and is not an additional limitation. (CMBr. at 23.) Complainants argue that because the words "not derived from" are merely explanatory and do not add a limitation that is different from "independently," their proposed construction, not Respondents' or Staff's, should be adopted. (*Id.* at 24.)

## Respondents' arguments in support of their proposed construction

Respondents note that the "asynchronous" limitation was the subject of a Markman hearing in the ongoing Northern District of California case, in which the judge construed the term to mean "the timing control of the central processing unit operates independently of and is not derived from the timing control of the input/output interface such that there is no readily predictable phase relationship between them." (RMBr. at 30 (citing RXM-0005 (June 12, 2012 Markman Order) at 21).) Respondents' say that its proposed construction, and Staff's too, is identical to the construction of the judge in the California case and should be adopted here. (*Id.*)

Respondents argue that although Complainants' proposed construction appears similar it deviates in one major and problematic way and that is by replacing the phrase "operates independently of and is not derived from" with "operates independently of (is not derived from)." (*Id.*) This departure, argue Respondents, appears to be motivated by one of two reasons: to define "operates independently of" as "not derived from" in the hopes of effectively reading out "operates independently of" from the interpretation and thereby collapsing the two requirements into one, or else making "not derived from" appear superfluous in the hope of having it dropped from TPL's construction. (*Id.* at 30-31.) Regardless of the reason, argue Respondents, the prosecution history

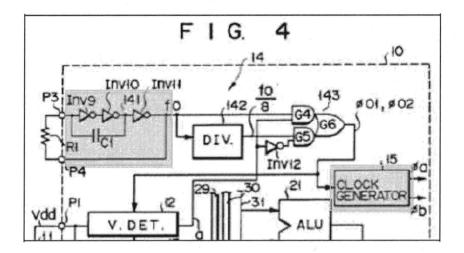
confirms that the "asynchronously" limitation separately requires both of these phrases. (*Id.* at 31.)

According to the '336 patent, "[m]ost microprocessors derive all system timing from a single clock." (Id. (citing JXM-0001 at 17:12-13).) However, this is disadvantageous because "different parts of the system can slow all operations." (Id. (citing JXM-0001 at 17:13-14).) To overcome this problem, the '336 patent teaches the use of a dual-clock scheme in which a variable speed ring oscillator clocks a CPU and a separate fixed-speed crystal is connected to an I/O interface. (Id.) As shown in Figure 17 of the '336 patent, the ring oscillator variable speed system clock 430, which provides timing control for the CPU, and the crystal clock 434, which provides timing control for the I/O interface, are not connected; wherefore, neither clock is derived from the other. (Id.) In other words, argue Respondents, Figure 17 shows that the CPU and I/O interface clocks operate asynchronously. (Id.) In fact, the specification of the '336 patent makes clear that "by decoupling the variable speed of the CPU 70 from the fixed speed of the I/O interface 432, optimum performance can be achieved by each." (Id. at 31-32 (citing JXM-0001 at 17:32-34).) Respondents argue that their construction is consistent with this decoupling because it requires that the timing controls for the CPU and the I/O interface both operate independently of the other and not be derived from one another. (Id. at 32.)

In contrast, Complainants' construction ignores that the clocks need to be decoupled and instead requires only that the CPU's timing control not be derived from the I/O interface's timing control, thus ignoring the teaching of the patent. (*Id.*)

Respondents say the reexamination history of the '336 patent confirms that the proper interpretation of the "asynchronous" limitation separately includes the phrases "operates independently of" and "not derived from." (*Id.*) When the reexamination began, claims 11, 13,

and 16 required independent clocks but did not include the "asynchronous" limitations. (*Id.* at 32-33 (citing JXM-5 (September 8, 2008 Amendment) at 2-8).) During the course of the reexamination, the examiner rejected these claims based on the Kato reference. (*Id.* (citing RXM-0006 (U.S. Patent No. 4,766,567 ("Kato") at FIG. 4)).) Figure 4 of Kato is reproduced in part here:



Respondents say the examiner concluded that Kato shows two independent clocks because clocks 141 and 15, highlighted in the figure reproduced above, are "physically independent," and clocks 141 and 15 "can never possibly be at the same frequency." (*Id.* (citing JXM-5 (March 17 2009 Office Action) at 29).) Because the named inventors were not able to convince the examiner that Kato does not show two independent clocks, the inventors distinguished Kato by amending the claims to add the "asynchronous" limitation and pointing to a passage in Kato that states that the two clock signals are "in synchronism with" each other. (*Id.* (citing JXM-5 at 18-19).) Specifically, the inventors argued that the clock signals in Kato were synchronous because they were derived from one another, as quoted here:

The clock signals øa and øb are produced in synchronism with the signal from clock (14), and so the clock signals themselves are in synchronism with each other .... Since the input-output (27) is a component of the data processing circuit,

it would be understood by one of ordinary skill in the art that the input-output (27) operates in synchronism with the other components of the data synchronism with each other) being supplied to the components of the data *processing circuit*.... Kato does not disclose asynchronous operation among the components of his data processing circuit.

(*Id.* at 33-34 (emphasis added by Respondents).) Further, the named inventors cited the following passage from a textbook establishing that clocks in an asynchronous system are not independent and are also not derived from one another:

An asynchronous system is one containing two or more independent clock signals. So long as each clock drives independent logic circuitry, such a system is effectively a collection of independent synchronous systems. *The logical combination of signals derived from independent clocks*, however, poses difficulty because of the unpredictability of their phase relationship.

(*Id.* at 34 (citing Ex. A ("Computational Structures") at 93 (emphasis added by Respondents)).)

Respondents note that the district court in the California case, in construing the "asynchronous" limitation based on this passage, explained that "[a] person of ordinary skill would understand that the inventors acted as their own lexicographers to define the term 'asynchronously' such that clocks must be both independent *and* not derived from one another." (*Id.* (citing *Acer, Inc. v. TPL* 2010 U.S. Dist. LEXIS 81322 at \*46 (N.D. Cal. June 12, 2012).) In so doing, the inventors made it clear that asynchronously requires two separate characteristics, independence and non-derivation from the other signal. (*Id.*)

Respondents argue that Complainants ignore these two separate requirements and attempt to collapse them into the same word, and in the process, contradict their own representations to the patent examiner that a signal can be independent while still being synchronous with another signal:

As will be explained, the term "independent" (recited in Claim 6) and the term "synchronously" (recited in Claim 8) are not inconsistent, or otherwise in conflict, with each other....The original clock can be both independent of the oscillator, as required by Claim 6, and comprise a fixed-frequency clock which operates

synchronously relative to the oscillator, as required by Claim 8.

(Id. at 34-35 (citing JXM-5 (September 2, 2009 Remarks) at 21-22).) Therefore, independence alone is not enough to define "asynchronous," according to Respondents; something more is required. (Id. at 35.) To be truly "asynchronous," based on the inventors' position during reexamination, the signal must be more than just independent; the signal must also not be derived from the other signal at issue. (Id.) Complainants' proposed construction fails to capture this representation to the patent examiner, and for these reasons, Respondents' and Staff's constructions capture this concept and are therefore correct. (Id.)

## Staff's arguments in support of its construction

Staff says it is unclear whether the private parties have an actual substantive dispute and absent a compelling explanation from Complainants for their proposed construction, Staff agrees with Respondents and proposes that this term be construed consistently with the construction of the district court judge in the California case. (SMBr. at 12.) Staff submits that the phrase "wherein said central processing unit operates asynchronously to said input/output interface" should be interpreted to mean "the timing control of the central processing unit operates independently of and is not derived from the timing control of the input/output interface such that there is no readily predictable phase relationship between them." (*Id.* at 13.)

#### Administrative Law Judge's findings and construction

The Administrative Law Judge finds that the difference between the opposing constructions is syntactical: Complainants enclose the phrase "not derived from" within parenthesis, signifying that the phrase is appositional to the clause "operates independently of." The Administrative Law Judge disagrees that this is a proper construction and agrees with the district court's construction in the California case, which is the exact construction being proposed

by Respondents and Staff here. While the difference in the proposed constructions appears subtle, it is significant. For the reasons set out by Respondents in their brief, the Administrative Law Judge concludes that "asynchronous" as employed by the inventors in the asserted claims of the '336 patent connotes that the timing control of the central processing unit operates not just independently of but is also not derived from the timing control of the input/output interface. Respondents' and Staff's constructions make this point clear; whereas, Complainants' construction does not. As the inventors argued to the patent examiner, "An asynchronous system is one containing two or more independent clock signals. So long as each clock drives independent logic circuitry, such a system is effectively a collection of independent synchronous systems." (See RMBr. at 34 (citing Ex. A ("Computational Structures") at 93).)

Therefore, the Administrative Law Judge concludes that the term "wherein said central processing unit operates asynchronously to said input/output interface" means this: "the timing control of the central processing unit operates independently of and is not derived from the timing control of the input/output interface such that there is no readily predictable phase relationship between them."

#### IV. EXPERTS

Each party may file one supplemental expert report of no more than 20 pages by April 26, 2013 that addresses those final claim constructions, if any, discussed above in this Markman Order that substantively differ from the constructions proposed by any party. No other issues may be discussed. Each party may submit a rebuttal expert report of no more than 15 pages responding to only those issues raised in the opposing party's supplemental expert report, if any, by May 3, 2013. No additional discovery will be permitted. The Administrative Law Judge will not consider any

requests to change the dates of the hearing based on the issuance of this Markman Order or any supplemental or rebuttal expert reports relating thereto.

#### V. SETTLEMENT.

The Administrative Law Judge recommends, but does not order, that the parties engage in renewed settlement talks in order to resolve all or portions of this Investigation.

#### VI. STREAMLINING THE INVESTIGATION.

To the extent that this Markman Order will enable the parties to streamline the remaining portions of this Investigation, such as through the elimination of asserted claims or asserted prior art, the Administrative Law Judge expects the parties to notify the Administrative Law Judge in writing as soon as practicable. The parties should use their best efforts to remove extraneous, unduly repetitive, or unsupported claims or defenses in the period before the hearing.

Within seven days of the date of this document, each party shall submit to the Office of the Administrative Law Judges a statement as to whether or not<sup>7</sup> it seeks to have any portion of this document deleted from the public version. Any party seeking to have any portion of this document deleted from the public version thereof must submit to this office a copy of this document with red brackets clearly indicating any portion asserted to contain confidential business information.

The parties' submissions may be made by facsimile and/or hard copy by the aforementioned date. In addition, an electronic courtesy copy is required pursuant to Ground Rule

<sup>&</sup>lt;sup>7</sup> This means that parties that do not seek to have any portion redacted are still required to submit a statement to this effect.

1.3.2. The parties' submissions concerning the public version of this document need not be filed with the Commission Secretary.

SO ORDERED.

E. James Gildea

Administrative Law Judge

Efames Gildes

) Other:

## CERTAIN WIRELESS CONSUMER ELECTRONICS DEVICES AND COMPONENTS THEREOF

1601 K Street, NW

Washington, DC 20006-1600

## PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served by hand upon, the Commission Investigative Attorney, Whitney Winston, Esq., and the following parties as indicated on MAY \_ 7 2013 Lisa R. Barton, Acting Secretary U.S. International Trade Commission 500 E Street, SW, Room 112 Washington, DC 20436 On Behalf of Complainants Technology Properties Limited LLC and Phoenix Digital Solutions LLC: James C. Otteson, Esq. ) Via Hand Delivery AGILITY IP LAW, LLP ) Via Overnight Delivery Via First Class Mail 149 Commonwealth Drive Menlo Park, CA 94025 ) Other: On Behalf of Complainant Patriot Scientific Corporation: Charles T. Hoge, Esq. ) Via Hand Delivery KIRBY NOONAN LANCE & HOGE, LLP ) Via Overnight Delivery 350 Tenth Avenue, Suite 1300 ) Via First Class Mail San Diego, CA 92101 ) Other: On Behalf of Respondents Acer Inc., Acer America Corporation, Amazon.com Inc. and Novatel Wireless, Inc.: Eric C. Rusnak, Esq. ) Via Hand Delivery ) Via Overnight Delivery **K&L GATES LLP** ) Via First Class Mail

Via First Class Mail

) Other:

## CERTAIN WIRELESS CONSUMER ELECTRONICS DEVICES AND COMPONENTS THEREOF

2000 University Avenue

East Palo Alto, California 94303

#### On Behalf of Respondents Garmin Ltd., Garmin International, Inc. and Garmin USA, Inc. : ( ) Via Hand Delivery Louis S. Mastriani, Esq. ADDUCI, MASTRIANI & SCHAUMBERG LLP ) Via Overnight Delivery 1133 Connecticut Avenue, NW, 12<sup>th</sup> Floor ( ) Via First Class Mail Washington, DC 20036 ( ) Other: On Behalf of Respondent Barnes & Noble, Inc.: Paul F. Brinkman, Esq. ) Via Hand Delivery **QUINN EMANUEL URQUHART & SULLIVAN LLP** ( ) Via Overnight Delivery Via First Class Mail 1299 Pennsylvania Avenue NW, Suite 825 Washington, DC 20004 ) Other: On Behalf of Respondent Huawei Technologies Co., Ltd., Huawei Device Co., Ltd., Huawei Device USA Inc., and Futurewei Technologies, Inc.: Timothy C. Bickham, Esq. ) Via Hand Delivery STEPTOE & JOHNSON LLP ( ) Via Overnight Delivery ( Via First Class Mail 1330 Connecticut Avenue, N.W. ( ) Other: Washington, DC 20036 On Behalf of ZTE Corporation and ZTE (USA) Inc.: Jay H. Reiziss, Esq. ) Via Hand Delivery ) Via Overnight Delivery BRINKS, HOFER, GILSON & LIONE ) Via First Class Mail 1775 Pennsylvania Avenue, NW Suite 900 ) Other: Washington, DC 20006-2219 On Behalf of Samsung Electronics Co., Ltd. and Samsung **Electronics America, Inc.:** ) Via Hand Delivery Aaron Wainscoat, Esq. ) Via Overnight Delivery **DLA PIPER LLP (US)**

# CERTAIN WIRELESS CONSUMER ELECTRONICS DEVICES AND COMPONENTS THEREOF

On Behalf of HTC Corporation; HTC America; Nintend	do Co.,
Ltd. and Nintendo of America, Inc. :	
Stephen R. Smith, Esq.  COOLEY LLP  11951 Freedom Drive  Reston, Virginia 20190	<ul><li>( ) Via Hand Delivery</li><li>( ) Via Overnight Delivery</li><li>( ) Via First Class Mail</li><li>( ) Other:</li></ul>
On Behalf of Kyocera Corporation and Kyocera	
Communications, Inc.:	
M. Andrew Woodmansee  MORRISON & FOERSTER LLP  12531 High Bluff Drive  San Diego, CA 92130	<ul><li>( ) Via Hand Delivery</li><li>( ) Via Overnight Delivery</li><li>( ) Via First Class Mail</li><li>( ) Other:</li></ul>
On Behalf of LG Electronics, Inc. and LG Electronics U Inc. :	.S.A.,
Scott Engold, Esq.  FISH & RICHARDSON PC  1425 K Street, N.W., Suite 1100  Washington, D.C. 20005	<ul><li>( ) Via Hand Delivery</li><li>( ) Via Overnight Delivery</li><li>( ) Via First Class Mail</li><li>( ) Other:</li></ul>
Public:	
Angela Ruby  LEXIS-NEXIS  9443 Springboro Pike  Miamisburg, OH 45342	<ul><li>( ) Via Hand Delivery</li><li>( ) Via Overnight Delivery</li><li>( ) Via First Class Mail</li><li>( ) Other:</li></ul>
Kenneth Clair <b>THOMSON WEST</b> 1100 13 <sup>th</sup> Street, NW, Suite 200  Washington, DC 20005	<ul><li>( ) Via Hand Delivery</li><li>( ) Via Overnight Delivery</li><li>( ) Via First Class Mail</li><li>( ) Other:</li></ul>