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**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, DC**

**Before the Honorable David P. Shaw
Administrative Law Judge**

In the Matter of

**CERTAIN AUDIOVISUAL COMPONENTS
AND PRODUCTS CONTAINING THE SAME**

Investigation No. 337-TA-837

**FUNAI RESPONDENTS'¹ REPLY TO COMPLAINANTS BRIEF IN RESPONSE TO THE
NOTICE OF COMMISSION DETERMINATION TO REVIEW A FINAL INITIAL
DETERMINATION FINDING A VIOLATION OF SECTION 337 IN ITS ENTIRETY**

Paul Devinsky
Joel M. Freed
Ray V. Lupo
Christopher L. May
McDERMOTT WILL & EMERY
The McDermott Building
500 North Capitol Street, Northwest
Washington, DC 20001
Telephone: (202) 756-8000
Facsimile: (202) 756-8087

Christopher D. Bright
McDERMOTT WILL & EMERY
4 Park Plaza, Suite 1700
Irvine, CA 92614-2559
Telephone: (949) 851-0633
Facsimile: (949) 851-9348

*Counsel for Respondents Funai Corporation, Inc., Funai
Electric Co., Ltd., P&F USA, Inc., and Funai Service
Corporation*

¹ Funai Electric Co., Ltd., Funai Corporation, Inc., P&F USA, Inc. and Funai Service Corporation.

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Exhibit	Full Name	Abbreviation
	LSI's Initial Brief on Liability	Comp. Brf.
	LSI's Initial Brief on Remedy	Comp. Brf. Rem.
	Funai's Initial Brief on Liability	Init. Brf.
	Funai's Initial Brief on Remedy	Init. Brf. Rem.
	Judge Shaw's Final Initial Determination on Liability	ID
	Judge Shaw's Recommendation on Remedy	RD
	Hearing Transcript from this Investigation	Hg. Tr. (Witness)
	Complainants' Demonstrative Exhibit	CDX
	Complainants' Physical Exhibit	CPX
	Complainants' Exhibit	CX
	Joint Exhibit	JX
	Respondents' Demonstrative Exhibit	RDX
	Respondents' Physical Exhibits	RPX
	Respondents' Exhibit	RX
	Question and Answer	QA
JX-0001	U.S. Patent No. 5,870,087	'087 patent
JX-0003	U.S. Patent No. 6,452,958	'958 patent
JX-0005	U.S. Patent No. 6,707,867	'867 patent
JX-0007	U.S. Patent No. 6,982,663	'663 patent

I. Question 1

There is no dispute that the downstream products accused of infringing the '087 patent contain multiple memories. Rather, the parties dispute whether the '087 patent covers devices that contain multiple memories. First, the parties dispute whether the claim term “single memory” should be construed to cover multiple memories. Second, if the patent does cover multiple memories, the parties dispute whether the multiple memories of the accused devices “function as a unit.” As demonstrated by the record evidence, even if the '087 patent covers devices that use multiple memories functioning as a unit, the accused produces do not have such memories. Therefore, the accused products do not infringe the '087 patent.

A. The '087 patent does not cover decoders that use multiple external memories.

Complainants contend that the term “single memory,” which appears in all three asserted independent claims of the '087 patent, should be construed to cover decoder devices that use multiple external memories. But, to support its contention, Complainants rely solely on the legally untenable and factually unconvincing opinion of their expert, Dr. Acton. On the other hand, with the exception of Dr. Acton’s conclusory testimony, the entirety of the intrinsic and extrinsic evidence demonstrates that the '087 patent only covers devices that use a single external memory. Accordingly, the Commission should find that decoders using multiple external memories are not within the scope of the '087 patent.

1. Figures 3 and 4 of the '087 patent do not depict the use of multiple memories.

Under Complainants’ strained reading of the '087 patent, the alleged invention relates to “the functional coordination of memory pieces of the video decoder system, rather than the physical arrangement of those pieces.” (Comp. Brf. at 1.) But the *only* intrinsic evidence Complainants point to in support of their contention is the depiction of memory component 212 in Figs. 3 and 4 of the '087 patent. (*Id.* at 1-2.) Complainants assert that memory component 212 depicts “a memory

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configuration of four ranks” and that “[a] memory ‘rank’ is ‘an individual chip used in a multiple chip memory.’” (*Id.*) This is wrong. As in detailed in Funai’s opening brief, nowhere does the ‘087 patent ever describe memory component 212 as representing four-memory “ranks” or “chips.” Init. Brf. at 8. Rather, the ‘087 patent describes the memory component 212 as being a single memory, such as a “1Mx16 SDRAM” that is used “to store decoded reference frames or anchor frames.” (JX-0001 at col. 9:11-20, col. 12:57-60; RX-2814C at QA 11 at RX-2814C.0014.)

Indeed, the *only* support for Complainants’ litigation induced reading of Figs. 3 and 4 is the conclusory testimony of Complainants’ expert, Dr. Acton. (Comp. Brf. At 1-2) Specifically, Complainants cite to “CX-1594C at 8.” (Comp. Brf. at 2.) The complete testimony on page 8 of Dr. Acton’s witness statement is as follows:

Q: And what is this description?

A: The ‘087 Patent discloses that the unified memory may be comprised of one or more memory chips. For example, FIG. 3 of the ‘087 Patent, which is reproduced in CDX-0001, depicts a 16 Mbit SDRAM (item 212). The depiction of the memory 212 is consistent with a memory configuration of four ranks (*i.e.*, chips). I should note that I do not believe the memory of the ‘087 patent is limited to any particular configuration, so long as the resulting memory functions as a unit.

In addition, Fig. 4, which is reproduced in CDX-0002, depicts frame store memory 212. The depiction of the memory 212 is consistent with a memory having more than one memory chip or bank.

(CX-1594C at 8.) But Dr. Acton provides no support for his conclusion that memory component 212 shows “four ranks (*i.e.*, chips).” He provides no support from the ‘087 patent written description. He does not refer to the understanding of a person of skill in the art at the time of the invention. He does not cite to any secondary sources. In other words, the entirety of Complainants’ infringement case against Funai for the ‘087 patent rests on a single conclusory statement by Dr. Acton that, in his opinion, memory component 212 as depicted in Figs. 3 and 4 represents multiple memories.

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In contrast, Dr. Schonfeld, relying on the written description, the understanding of person of skill in the art, as well as the only disclosed embodiment for the memory component 212, explained that memory component 212 represents multiple *banks* or *frames* within a single memory—not multiple memories. Dr. Schonfeld’s opinion is consistent with the intrinsic evidence. The claims at issue themselves recite that the memory is a “single memory.” (JX-0001 at col. 17:15-20:6.)

Throughout the written description, the ‘087 patent describes the memory used by the alleged invention as a “single” memory (RX-2814C at QA 11) and repeats over and over that the memory is “single.” (JX-0001 at Abstract; col. 5:3-6; col. 5:6-7; col. 5:7-10; col. 5:24-26; col. 6:24-27; col. 7:48-51; col. 11:15-18; col. 17:2-5.) The only disclosed memory embodiment describes a single memory. (JX-0001 at Abstract; col. 5:6-7; col. 8:44-46; col. 12:57-60.) Given this overwhelming intrinsic evidence, Dr. Acton’s conflicting but unsupported opinion is simply implausible.

Without exception, every reference to memory component 212 in the written specification describes a single memory, not multiple memories. The single memory, *inter alia*, stores multiple *anchor frames* (hence the depiction in Fig. 4). For the only disclosed memory embodiment, the ‘087 patent explicitly states that memory component 212 in Fig. 3 is a single memory, “such as Samsung KIVI416S1120AT-12.”² (JX-0001 at col. 12:57-60.) Nowhere does the patent ever describe memory component 212 as representing multiple memories. Moreover, the ‘087 patent explicitly explains that, among other things, the single memory 212 also functions as the frame store memory during motion compensation (JX-0001 at col. 11:56-58) and therefore Fig. 4 depicts multiple frames, not multiple memories: “As is well-known in the art, the MPEG A/V decoder **224** uses *the external memory 212 to store decoded reference frames or anchor frames which are used during motion*

² As Dr. Schonfeld explained, the “single memory” in the preferred embodiment (*i.e.*, “Samsung KIVI416S1120AT-12”) is a single 4-bank (*i.e.* partition) memory chip. *See* Hg. Tr. (Schonfeld) at 1680:15-1688:9; RX-2814C at QA 11 at RX-2814C.0008-0017. This understanding is also consistent with the 4 banks used to form a single memory chip as depicted in Figure 3.

compensation or reconstruction of temporally compressed frames.”³ JX-0001 at col. 9:11-20 (emphasis added). Accordingly, memory component 212 in Figure 4, does not depict multiple memories but, rather, multiple reference frames stored in the single memory.

Not once in the ‘087 patent specification does any mention of “rank” or multiple memories appear. If the inventor of the ‘087 patent had meant for his invention to cover multiple memories (or, if he had meant to depict multiple memories in Figs. 3 or 4), there should be some mention of multiple memories or multiple ranks in the specification, or how such memories should function together. *Halliburton Energy Services, Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008) (“[T]he patent statute requires that the scope of the claims be sufficiently definite to inform the public of the bounds of the protected invention, *i.e.*, what subject matter is covered by the exclusive rights of the patent. Otherwise, competitors cannot avoid infringement, defeating the public notice function of patent claims.”). There is none.

2. The ‘087 Patentee disclaimed the use of multiple memories.

In addition to the intrinsic and other record evidence that Figs. 3 and 4 do not depict multiple memories, the patentee also explicitly relied on the use of a single memory to distinguish over the prior art: “The *present invention* thus requires only a single memory, and thus has reduced memory requirements compared to prior art designs.” (JX-0001 at 5:7-10 (emphasis added).) By distinguishing the use of multiple memories as being in the prior art, the patentee disclaimed use of multiple memories from the scope of the claims. *SafeTCare Mfg., Inv. v. Tele-Made, Inc.*, 497 F.3d 1262, 1270 (Fed. Cir. 2007) (“The inventor makes clear that this attribute of the invention is

³ Dr. Schonfeld also explained that the single memory is used to store up to two anchor frames during a video decoding process known as motion compensation. *See* RX-0007C at QA 16 at RX-0007C.0014-0018, QA 51 at RX-0007C.0065-0066, QA 102 at RX-0007C.0134-0135, QA 151 at RX-0007C.0206-0207, QA 200 at RX-0007C.0282-0284; QA 252 at RX-0007C.0354-0356; RX-2814C at QA 11 at RX-2814C.0014; *see also* Respondents Brief On Discrete Issues at 8-9. It is therefore not surprising that the depiction of the single memory in Figure 4 highlights the use of two frames in its illustration of the single memory chip (and, more specifically, the video frame information stored in the single memory).

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important in distinguishing the invention over the prior art. Thus, we are persuaded by the language used by the patentee that the invention disclaims motors that use pulling forces against lift dogs.”). Complainants may not now disavow that disclaimer and seek to recover against products containing multiple memories.

In the written description, the patentee also described the “*present invention*” as using only a single memory. Describing the “present invention” as limited to a particular structure are words of manifest exclusion representing a clear disavowal of claim scope. *SciMed Life Sys., Inv. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343 (Fed. Cir. 2001) (“The characterization of the coaxial configuration as part of the “present invention” is strong evidence that the claims should not be read to encompass the opposite structure.”). Furthermore, “[w]here the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent...” *Id.* at 1341.

This is not a situation where two experts have submitted contradictory testimony and the ALJ determined that one expert was more credible than the other. Rather, this is a situation where one expert has submitted conclusory testimony and the other expert has submitted testimony based on multiple citations to the intrinsic evidence as well as the understanding of a person of skill in the art. “[A] court should discount any expert testimony that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history.” *SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1195 (Fed. Cir. 2013). In light of the copious support in the intrinsic record for his opinion, the testimony of Dr. Schonfeld should be given far more weight than the unsupported conclusion of Dr. Acton; whose testimony is inconsistent with the overwhelming weight of the intrinsic evidence. Indeed, even if Figs. 3 and 4 are ambiguous (which they are not), such ambiguity cannot overcome the language of the claims themselves and the written description, as well as the clear distinctions the patentee made over the prior art’s use of multiple memories. *See 01 Communique Laboratory, Inc. v. LogMeIn, Inc.*, 687 F.3d 1292, 1297 (Fed. Cir.

2012) (“Even if we were to conclude that the specification is ambiguous on this point, such ambiguity hardly is evidence of the clear intent necessary to overcome the effect of the general rule of claim construction applicable here.”). Accordingly, the Commission should reverse the ALJ’s determination that the claim term “single memory” should be construed to cover video decoders that use multiple memories.

B. Even if the ‘087 patent covers decoders using multiple memories, the evidence demonstrates that the multiple memories of the accused products are not a “single memory” and do not “function as a unit.”

Even if the ‘087 patent covers decoders that use multiple memories (which it does not) Complainants have failed to put forth evidence that the multiple memories in the accused products operate as a “single memory” or “function as a unit.”

1. The accused memories [REDACTED].

The parties agree that multiple memories that “function as a unit” would require, at a minimum, “identical addressing mechanisms, identical word sizes, non-overlapping addresses, and distinct address ranges.”⁴ (RX-2814C.0032-35; CX-1640C.0074.) Indeed, in their initial brief, Complainants assert that these aspects alone would show that multiple memories function as a unit:

[REDACTED]

[REDACTED] (Comp. Brf. at 6-7.) Complainants’ overstated “irrefutable evidence” argument, however, falls far short of meeting their burden of proof. Nothing in Complainants’ initial brief supports the conclusion that the multiple memories used in the accused products meet Dr. Acton’s criteria of having “identical addressing mechanisms, identical word sizes, non-overlapping addresses, and distinct address ranges.” In fact, as set forth in detail

⁴ As noted above, the ‘087 patent specification is silent concerning multiple memories functioning as a unit. Thus, assuming *arguendo* Complainants’ construction regarding the term “single memory” to include multiple memories is correct, a person of skill in the art at the time of the invention would be left to guess what criteria the ‘087 inventor had in mind for the multiple memories to qualify as the claimed single memory. This is additional compelling evidence that the ‘087 patent was never meant to, and does not, cover decoder systems using multiple memories “functioning as a unit.”

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below, in their initial brief to the Commission, Complainants cited only to a single [REDACTED] service manual (Comp. Brf. at 2-3) which actually shows the exact opposite of what Complainants contend, and to statements by their expert which simply describe the code, but make no mention of an addressing scheme that meets the above requirements. Thus, because Complainants have not submitted any evidence (let alone “irrefutable evidence”) to show that the accused multiple memory decoders meet Dr. Acton’s “unified memory” requirements, they have not met their burden of proving infringement.

As an initial matter, Complainants have misstated the burden of proving infringement.

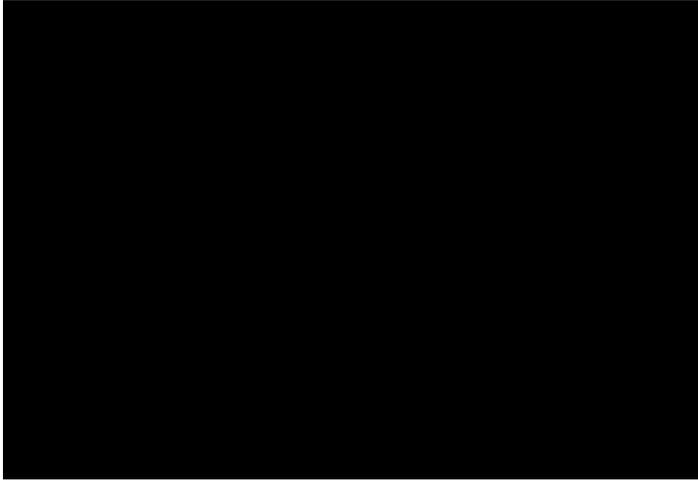
Complainants state, [REDACTED]

[REDACTED] (Comp. Brf. at 6.) But it is not Funai’s burden to prove non-infringement; it is Complainants’ burden to prove infringement. *Smithkline Diagnostics, Inc. v. Helena Laboratories Corp.*, 859 F.2d 878, 889 (Fed. Cir. 1988) (“The burden is on SKD, as the patent owner, to prove infringement by a preponderance of the evidence.”). Complainants have not done so.

Complainants rely heavily on the [REDACTED] Service Manual to support their contention that the accused decoders operate with “identical addressing mechanisms, identical word sizes, non-overlapping addresses, and distinct address ranges.” (Comp. Brf. at 2-3.) But a single diagram from a single service manual for a single product is clearly not proof of infringement for all the accused products. At most, it is relevant to whether or not the [REDACTED] infringes.⁵ More

⁵ For example, with respect to the [REDACTED] Products, Complainants contend, [REDACTED] (Comp. Brf. at 7.) But Complainants provide no citation for this “irrefutable evidence.” The service manual for the [REDACTED] which does not even contain a [REDACTED] chip, cannot be such evidence. Complainants have also never contended that the [REDACTED] is representative of all of Funai’s products.

importantly, Complainants misrepresent the diagram they present. Complainants highlight the following in their brief:



(Comp. Brf. at 3 (red outlining in Complainants' brief).) Complainants inaccurately describe the diagram as follows: [REDACTED]

[REDACTED]

[REDACTED] (*Id.*) Complainants are dead wrong. As is evident from the portion highlighted in red by Complainants, it is **not** the case that [REDACTED]

[REDACTED] as Complainants state. Rather, [REDACTED]

[REDACTED]

[REDACTED] Thus, this diagram shows *overlapping* addressing schemes; the exact opposite of what Complainants represent.⁶ Furthermore, based on the testimony of Complainants' own expert, this demonstrates that the multiple memories do **not** function as a unit. As set forth in Funai's opening brief, Complainants' expert Dr. Acton provided sworn testimony that overlapping address ranges are evidence of being outside the scope of the '087 patent. (CX-1640C.0074; RX-2814C.034-

⁶ Tellingly, Dr. Acton never opined that the diagram now referenced by Complainants provides evidence of non-overlapping address ranges. For good reason. If anything, the diagram is evidence that the multiple memories represented have overlapping address ranges and therefore do not function as a unit according to Dr. Acton's concocted criteria.

36.) Specifically, Dr. Acton testified that the C-Cube prior art reference did not anticipate the '087 claims because it contained three memories, and "[t]hese three memories have different addressing mechanisms, different word sizes, and *overlapping addresses* (and overlapping address ranges – not distinct ranges)." (CX-1640C.0074 (emphasis added).) Complainants cannot have it both ways. "It is axiomatic that claims are construed the same way for both invalidity and infringement." *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003). Therefore, Complainants' own expert's invalidity analysis conclusively confirms that at least with regard this accused downstream product, with overlapping addressing schemes, the multiple memories do not "function as a unit."

2. Dr. Acton's conclusory testimony is not evidence that the source code shows that the multiple memories of the accused products are a "single memory."

In addition to this single [REDACTED] document, Complainants rely on Dr. Acton's source code analysis to support their infringement allegations. (*See* Comp. Brf. at 4-5.) But an expert's mere statement does not suffice if the evidentiary record he relies on does not support the expert's conclusion. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005) ("[C]onclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court."). Here, neither Complainants nor Dr. Acton have pointed to any source code that actually demonstrates that the accused memories are a "single memory" or "function as a unit." Nothing in the code relied on by Dr. Acton illustrates "identical addressing mechanisms, identical word sizes, non-overlapping addresses, and distinct address ranges," *i.e.*, the litigation-induced requirements imposed by Complainants and their expert, Dr. Acton.

a. Funai [REDACTED] Products

Complainants contend that there is "convincing support in the record" that the [REDACTED] products include a single memory. (Comp. Brf. at 5-7.) Complainants point to the following statements from Dr. Acton's witness statement:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Nowhere in any of these statements is there any evidence of “identical addressing mechanisms, identical word sizes, non-overlapping addresses, and distinct address ranges.” Although the evidence to which Complainants cite is Dr. Acton’s description of some code, the code citations do not address Dr. Acton’s criteria for memories that “function as a unit.” The fact that the cited code [REDACTED] says nothing about whether these multiple memories are a “single memory” or “function as a unit.”⁷ (RX-2814C.034-36) In fact, each and every one of the cited statements speaks to various functions possibly related to other limitations in the asserted claims, but not to the issue at hand: whether or not the multiple memories are a “single memory” or “function as a unit.” Complainants never explain how these descriptions of code by Dr. Acton support their contentions. Such statements,

⁷ Because the ‘087 patent specification is really directed to a single memory, it provides no criteria for multiple memories “functioning as a unit” Complainants take the liberty of essentially pointing willy nilly to anything that strikes their fancy, regardless of whether it actually demonstrates multiple memories “functioning as a unit.” In any event, considered in light of Dr. Acton’s criteria for memory functioning as a unit, Complainants’ cited evidence does not prove anything that supports their “unified memory” theory of infringement.

unconnected to the infringement issue for which they are cited, coupled with unsupported conclusory opinion by their expert, are not sufficient to support a finding of infringement.

In contrast, Funai submitted evidence that the multiple memories used by the accused decoder products do not operate as a single memory or function as a unit during actual operation.

For example, Mr. Chen, the engineer for the software system structure for the [REDACTED], described [REDACTED],

[REDACTED] (JX-0018C at 27:9-17; 42:15-19.)⁸ [REDACTED]
[REDACTED]
[REDACTED].

Mr. Chen further testified that [REDACTED]. (JX-0018C at 32:1-9.) As Dr. Schonfeld opined, [REDACTED]
[REDACTED]. (RX-2814C.0034-36.)

b. Funai [REDACTED] Products

As with the [REDACTED] products, Complainants contend that the “evidence in the record fully supports” a conclusion that the [REDACTED] products include a single memory. (Comp. Brf. at 7-8.) Once again, Complainants point to nothing more than Dr. Acton’s statements describing some cited code, but make no mention of how the multiple memories either operate as a single memory or function as a unit:

[REDACTED]

[REDACTED]

⁸ As set forth in Funai’s opening brief, Complainants have frequently cited to Mr. Chen’s discussion of how the products might *theoretically* work, not how they *actually* work. (Comp. Brf. at 5.) This, too, is insufficient evidence to show infringement. *Ball Aerosol & Specialty Container, Inc. v. Limited Brands, Inc.*, 555 F.3d 984, 994-995 (Fed. Cir. 2009).

[REDACTED]

[REDACTED]

Just as with the [REDACTED] products, Complainants fail to point to any evidence that the accused products use “identical addressing mechanisms, identical word sizes, non-overlapping addresses, and distinct address ranges.” All that Complainants do is describe some code and quote a conclusory statement by Dr. Acton that is not related to the so-called evidence. In contrast, as described above, Funai has submitted spot on and un rebutted evidence to the contrary, *i.e.*, that the multiple memories in these products do not meet Dr. Acton’s proclaimed criteria for multiple memories that functions as a unit. (RX-2814C.184-187.)

c. Funai [REDACTED] Products

Once again, Complainants contend that [REDACTED]

[REDACTED]

[REDACTED] (Comp. Brf. at 8.) But Complainants again fail to cite to any evidence in the record to support their assertion. Instead, they once again simply provide Dr. Acton’s description of snippets of source code but not a scintilla of evidence that the source code uses the multiple memories as a “single memory”:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]
Complainants thus conclude that [REDACTED]

[REDACTED] (*Id.*) The cited evidence, however, proves nothing of the sort. Rather, this evidence says that [REDACTED]

[REDACTED]. There is no mention of or evidence of any “single addressing scheme,” which even Complainants agree is the minimum necessary to show that the multiple DRAMs function as a single memory. Nor did Complainants ever submit any such testimony at the time of the evidentiary hearing. (RX-2814C.250-255)

d. Funai [REDACTED] Products

Finally, Complainants put forth the same insufficient statements by Dr. Acton for the Funai [REDACTED] Products and urge the same unsupported contention:

[REDACTED]

This statement shows nothing more than that the code [REDACTED]. It does not show that the multiple memories have a single addressing scheme (or meet Dr. Acton’s other criteria for memory functioning as a unit). Indeed, Complainants also once again pointed to the service manual for the [REDACTED]. But, as described above, this service manual demonstrates the exact opposite of Complainants’ contention – it shows that the multiple memories do not function as a unit. And, as above, Complainants, at the time of the evidentiary hearing, never submitted any

testimony in support of their present contention that the Funai [REDACTED] Products have multiple memories with a single addressing scheme. (RX-2814C.319-324)

In sum, Complainants have failed to cite to any evidence that the multiple memories of the accused products operate as a “single memory” or “function as a unit.” For all of these reasons, the Commission should reverse the ALJ’s finding that the accused downstream products infringe the ‘087 patent.

3. The flash memory should not be ignored.

Complainants conveniently assert that the flash memory used in the accused decoder products is not relevant to the claimed memory operations and should be ignored. (Comp. Brf. at 10.) Complainants are wrong—the flash memory is part of the memory used by the MPEG decoding system identified by the claims. The necessary use by these video decoder products of the flash memory is further proof the accused products include multiple memories working separately.

First, there is no dispute that the video decoders in the accused Funai products necessary require and use a flash memory in addition to the multiple DRAMs. (Hg. Tr. (Acton) at 534:20-25.) Because the flash memory [REDACTED], but performs a distinct function from the DRAMs, it does not “function as a unit” with the DRAMs. (RX-2814C.0054-55.) For example, with respect to the [REDACTED] downstream products, Mr. Chen, [REDACTED], testified that [REDACTED] (JX-0018C at 38:19-23.) Mr. Chen further explained that [REDACTED] [REDACTED] (Id. at 38:24-39:6.) Because [REDACTED] [REDACTED]. Thus, the flash memory is [REDACTED] [REDACTED], and its use is further evidence that the accused products use multiple distinct memories that do not function as a unit. Complainants’ attempt to ignore this evidence (and the use of yet another external memory for the decoders in the accused products) merely because the flash memory does

not fit into their infringement theory (in the sense that Complainants concede its use cannot be reconciled with Dr. Acton's criteria for "unified" memory) should be rejected.

II. Questions 2, 3, and 7[A]

A. Complainants Have Failed to Prove Indirect Infringement of the '087 Patent

1. Complainants Have Failed To Show Direct Infringement By Third Party Users of the Funai Products or that Funai Actively and Knowingly Aids Users to Practice Method Claims 10-11 of the '087 Patent

Complainants candidly admit that they have no direct evidence of infringement by Funai's customers. Therefore they must rely on circumstantial evidence to attempt to show direct infringement of the '087 patent by third party users. Comp. Brf. at 12. Complainants argue that other courts have found direct infringement of a method claim based on sales of the product, dissemination of instruction manuals, and corroborating expert testimony. *Id.* at 13. In those cases, however the instruction manuals actually taught the method recited in the claims. *See Moleculon Res. Corp. v. CBS, Inc.*, 793 F.2d 1261, 1272 (Fed. Cir. 1986) ("the district court held that Moleculon had met its burden of showing infringement under section 271(b) with circumstantial evidence of extensive puzzle sales, dissemination of an instruction sheet *teaching the method of restoring the preselected pattern with each puzzle*, and the availability of a solution booklet on how to solve the puzzle."); *i4i L.P. v. Microsoft Corp.*, 598 F.3d 831, 850 (Fed. Cir. 2010) (joint stipulation and interrogatory response confirmed particular use of products). In contrast, where there is a question as to whether or not practice of the claim is inevitable, proof that a third party has actually practiced the claim is required. *See ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 521-22 (Fed. Cir. 2012) (vacating a denial of JMOL of no infringement as to two method claims since the patentee had only presented evidence that the accused system had the capability to perform the claimed method by using UNSPSC codes, but had not presented any direct or circumstantial evidence that anyone had actually used those codes in the system; *see also ACCO Brands, Inc. v. ABA Locks Mfr. Co.*, 501 F.3d 1307, 1313 (Fed. Cir. 2007).

Complainants have provided no such evidence. Complainants' expert, Dr. Acton, opines that "it is not possible to use the video decoder system in each of these products without infringing claims 10 and 11 of the '087 patent." CX-1594C at QA 403. The testimony is remarkable considering Complainants have never claimed that the '087 patent is essential to the practice of any standard. Yet, as so-called proof of Funai's knowledge, Dr. Acton points to nothing more than Funai's marketing materials demonstrating that Funai's products support 1080p picture signals and can playback video in a variety of formats. *Id.* at QA 406. Given that Complainants admit that it is possible to perform these functions without infringing the '087 patent⁹, the cited statements in Funai's advertising materials is insufficient to demonstrate that Funai actively and knowingly aids users to practice the claims of the '087 patent. The Commission should therefore find that LSI has not proven direct infringement for the '087 patent.

2. Complainants Have Failed To Demonstrate Funai Knew of, or Was Willfully Blind to, Infringement of the '087 Patent

Complainants acknowledge, as they must, that prior to filing this lawsuit, [REDACTED]

[REDACTED]. Comp. Brf. at 34-35.

LSI does not claim [REDACTED]. CX-1599C at QA 90-127.

LSI does not claim [REDACTED]

[REDACTED]. All LSI can show is that Funai found out Complainants believed the '087 patent was infringed at the same time everyone else in the world did – when Complainants filed their Complaint in this investigation.

Curiously, Complainants' initial brief does not even cite *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2068 (2011), the leading Supreme Court case on induced infringement. This is

⁹ Indeed, video playback can be achieved simply using the admitted (multiple memory) prior art presented in the '087 patent (JX-0001 at col. 1:35 to col. 4:58), as well as much of the prior art to the '087 patent developed in this investigation.

because under *Global Tech's* requirements, Complainants simply cannot prove induced infringement.

See Init. Brf. at 22-24. [REDACTED]

[REDACTED], is plainly insufficient to charge Funai with the requisite “knowledge” of the ‘087 patent or that Funai had a subjective belief there was a high likelihood that infringement existed and avoided learning that fact. Absent this proof, Supreme Court precedent confirms that Funai did not induce infringement of the ‘087 patent.

III. Question 4

Complainants’ initial briefing not only distorts the facts of this case and the record evidence, it also contradicts Complainants’ own interpretation of claims 1 and 11 of the ‘663 patent. As noted in Respondents’ initial brief (Init. Brf. at 24), the ALJ correctly found that not even a single claim of the ‘663 patent was infringed (ID at 135-55) and not even a single limitation of independent claims 1 and 11 was practiced by the accused Funai downstream products, either literally or under the doctrine of equivalents (ID at 139-147, 154-55). Complainants’ initial brief ignores the sound bases of the ALJ’s findings and instead focuses on a severely strained and overly broad interpretation of the claims and a legally unsound analysis under the doctrine of equivalents. Because a person of ordinary skill in the art would not interpret the claims in the manner advanced by Complainants, the Commission should affirm the ALJ’s finding of non-infringement.

A. Step (A) of Claim 1 and Element (i) of Claim 11 is Not Infringed

Step (A) of claim 1 recites “setting said index value to a threshold in response to a first portion of said codeword having a first pattern.” Claim 11 recites the parallel system limitation of a circuit configured to “set an index value to a threshold in response to a first portion of said codeword

having a first pattern.”¹⁰ Complainants’ initial brief only highlights why the accused Funai downstream products do not meet this limitation. For instance, the parties agree that a plain reading of the subject limitations requires an *action to be completed* (i.e., “setting said index value to a threshold”) in response to a *condition being satisfied* (i.e., “a first portion of said codeword having a first pattern”). Complainants are now relegated to describing this requisite relationship as a *cause* and *effect*. See Comp. Brf. at 16.

Complainants cannot escape the fact that under either of these two characterizations (action/condition or cause/effect), the accused Funai downstream products do not practice this limitation. These products simply do not execute the recited *effect* (i.e., setting the index value to the threshold) “in response to” the recited *cause* (i.e., detecting the first pattern), as required by a plain reading of claims 1 and 11. The source code, specification, and prosecution history all support Respondents’ interpretation—that the entire first pattern must be received and detected *before* the index value is set—which is consistent with how a person of ordinary skill in the art would interpret step (A) of claim 1 and element (i) of claim 11.

1. Contrary to Complainants’ Contention, the Source Code Confirms that the Accused Funai Downstream Products Do Not Meet This Limitation

Complainants include what superficially appears to be a detailed source code analysis in their briefing with respect to this limitation. Comp. Brf. at 17-19. Complainants fail to point out, however, the actual operations that are described by the source code excerpts they cite. These operations are undisputed: [REDACTED]

¹⁰ The ALJ construed “setting said index value to a threshold”/“set an index value to a threshold” to mean “setting the index value to an initial number representing the point at which unary to exp-Golomb switching occurs.” (ID at 123).

[REDACTED] . RX-2814C at QA 178.

Complainants seem to acknowledge the shortcomings in their source code analysis when they admit that [REDACTED]

[REDACTED] Comp. Brf. at 18 (emphasis added). While [REDACTED]

[REDACTED] as plainly required by the claims.

Complainants appear to argue that so long as the index value is “ultimately” incremented to the correct value (*i.e.*, the threshold), the timing and way in which the threshold is set is irrelevant to the infringement inquiry. *See* Comp. Brf. at 17 (“the scope of the claim is broad enough to cover any method of detecting whether the codeword contains ‘a first portion of said codeword having a first pattern,’ as well as any method of ‘setting said index value to a threshold’ as a result of the first pattern being detected.”). As described in Respondents’ initial brief, however, this overly broad interpretation of the claims is simply not supported by the intrinsic evidence and therefore would not be the interpretation given to step (A) of claim 1 and element (i) of claim 11 by a person of ordinary skill in the art.¹² *See Phillips*, 415 F.3d at 1313; *Innova/Pure Water, Inc. v. Safari Water Filtration Sys.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004) (“A court construing a patent claim seeks to accord a claim the meaning it would have to a person of ordinary skill in the art at the time of the invention.”).

¹¹ Complainants’ expert, Dr. Reinman, admitted at the evidentiary hearing that the accused products [REDACTED] Hg. Tr. (Reinman) at 629:3-9; *see also* CX-1597C; CX-0501C at 2.

¹² Even under this overly broad interpretation, the accused products do not infringe the asserted claims because the alleged setting of the index value to a threshold is not “as a result of the first pattern being detected.”

The source code confirms that the accused Funai downstream products are different from and superior to the alleged invention as claimed. By [REDACTED]

[REDACTED]

[REDACTED]. This permits faster decoding because, as admitted by

Complainants' expert Dr. Reinman at the evidentiary hearing, [REDACTED]

[REDACTED]. (Hg. Tr. (Reinman) at 627:2-10).

2. Respondents are Not Importing New Restrictions into the Claims; Rather Respondents' Interpretation is the Only Interpretation (i) Supported by the Intrinsic Evidence and (ii) Consistent with How One of Ordinary Skill in the Art Would Construe Step (A) of Claim 1 and Element (i) of Claim 11

Complainants' suggestion that Respondents' interpretation "improperly attempt[s] to import new restrictions and limitations" into the claims is misplaced. As discussed above, the proper interpretation of the claims is the interpretation of a person of ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1313 ("We have made clear, moreover, that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application"). Respondents have cited no intrinsic evidence that a person of ordinary skill would interpret the claims so broadly. Rather, Complainants largely ignore and misconstrue the intrinsic record.¹³

a. Complainants' Initial Brief Ignores the Intrinsic Evidence

The '663 patent specification is directed to an encoding binarization process. (See RX-0007C at RX-0007C.0554.) Complainants ignore that the '663 patent specification fails to include a

¹³ Complainants allege that Respondents do not dispute that the claimed "cause" and "effect" take place in the accused Funai downstream products. Comp. Brf. at 19. This is false. As discussed above, there is no causal relationship between setting the index value to the threshold and receiving the first pattern as required by the claims. Rather the parties at least agree that [REDACTED]. [REDACTED]. Init. Brf. at 40.

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description of the decoding operation corresponding to the detailed encoding algorithm provided in column 6 of the specification. *See* Init. Brf. at 25. According to Complainants, one of ordinary skill in the art should mechanically “reverse[] the steps applied by [the] encoder” or mechanically “reverse[] the binarization” process. (Hg. Tr. (Reinman) at 661:8-662:4). In the encoding process, an initial test comparing the index value to the threshold is required before *any* encoding takes place because the result of this test determines the coding format of the resultant codeword (*i.e.*, a hybrid unary plus exp-Golomb code or a unary-only codeword). (CX-1597C at CX-1597C.0025, 0027). In order to *decode* the encoded codeword, therefore, there is a “predicate” that the entire first pattern must be completely received and detected so that the decoder can determine the format of the codeword. (Hg. Tr. (Reinman) at 631:10-22). Accordingly, the entire first pattern must be received and detected before any part of the decoding steps of claim 1 to be performed.¹⁴

The claims must be construed consistently with the written description. *See Phillips*, 415 F.3d at 1316 (*en banc*) (“The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.”); *see also Abbott Laboratories v. Sandoz, Inc.*, 566 F.3d 1282, 1288 (Fed. Cir. 2009) (“By the same token, the claims cannot ‘enlarge what is patented beyond what the inventor has described as the invention.’”) (*Biogen, Inc. v. Berlex Labs., Inc.*, 318 F.3d 1132, 1140 (Fed. Cir. 2003) quoting *Netword, LLC v. Centraal Corp.*, 242 F.3d 1347, 1352 (Fed. Cir. 2001)). Here, as described above, the written description of the decoder (or decoding process) only supports, at best, a mechanical reversal of the encoding process and the claims therefore must be interpreted consistent with this disclosure. *Phillips*, 415 F.3d at 1316; *Abbott*, 566 F.3d at 1288.

¹⁴ *See E-Pass Technologies, Inc. v. 3Com Corp.*, 473 F.3d 1213, 1222 (Fed. Cir. 2007) (explaining that because the language of most of the steps of its “method claim refer to the completed results of the prior step, [patent owner] must show that all of those steps were performed in order.” (citing *Mantech Environmental Corp. v. Hudson Environmental Services, Inc.*, 152 F.3d 1368, 1376 (Fed. Cir. 1998) (holding that “the sequential nature of the claim steps is apparent from the plain meaning of the claim language and nothing in the written description suggests otherwise”).

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Complainants also ignore the prosecution history. Consistent with the '663 patent applicant's expressly distinguishing the claimed invention over the Examiner cited and applied *Peng* (prior art) reference (JX-0008.0096-105), one of ordinary skill in the art reviewing the intrinsic record (including the prosecution history) would conclude that that the entire first pattern must be received and processed before the decoding process begins. *See E-Pass*, 473 F.3d at 1222. This interpretation is consistent with a mechanical reversal of the steps of the encoding algorithm given in column 6 of the specification (JX-0007 at JX-0007.0011, col. 6:50-63) and would therefore be the only interpretation given to the claims by a person of ordinary skill in the art. *See Init. Brf.* at 27-31.

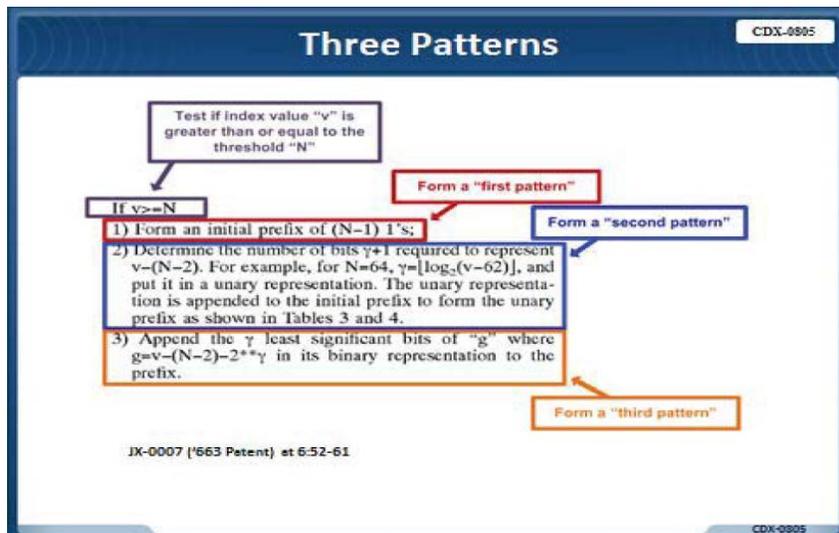
b. Complainants' Opening Brief Also Misconstrues the Intrinsic Evidence

In a desperate attempt to find some support in the intrinsic record for coverage of a "bit-by-bit" processing of the first pattern, Complainants rely on references within the '663 patent specification of receiving data in a "stream" over the Internet or other transmission medium. *Comp. Brf.* at 20. Although codewords that are received in a "stream" might be *received* as the bits come in, this still does mean they are *processed* or *decoded* as they come in. Receiving bits in a stream also does not change the fact that step (A) of claim 1 and element (i) of claim 11 require the entire first pattern to be received and detected *before* the index value is set to the threshold. There is nothing inconsistent about receiving a codeword in a stream and waiting until the entire first pattern is received before setting the index value to the threshold. In fact, a common implementation might receive bits in a stream and then wait until some reception buffer equal to the size of the first pattern is filled with bits from the stream before beginning the decoding process. *Init. Brf.* at 26-31; *RX-0007C* at *RX-0007C.0544-0554 QA* 365. While such an implementation might satisfy the claims, the implementation in the accused Funai downstream products does not.

Complainants also appear to suggest that because a codeword can vary in length, the decoder "necessarily" must perform a bit-by-bit analysis of the incoming codeword. *Comp. Brf.* at 20. In a

related argument, Complainants contend that the use of variable-length fourth patterns “strongly suggests” the use of an incremented counter to set the index value to the threshold. Comp. Brf. at 21. Both of these arguments are without merit and unsupported by the intrinsic evidence.

The ALJ found that the term “threshold” should be construed as “an initial number representing the point at which unary to exp-Golomb switching occurs.” (ID at 123). This construction is consistent with *Complainants’* demonstrative (below), where the threshold ‘N’ is known in advance of the encoding process and used as the initial “test” to determine the type of codeword to form (*i.e.*, a hybrid unary plus exp-Golomb code or a unary-only codeword).



(CX-1597C at CX-1597C.0025). Because the threshold value “N” is known in advance of the encoding and decoding processes, the decoder need not process incoming codewords bit-by-bit just because the incoming codewords can be variable in length; rather, the decoder can receive *up to* N+1 bits and then determine whether a first pattern has been detected. If the received bits corresponds to a first pattern (*i.e.*, the received codeword contains at least N+1 bits and all these bits are ‘1’), then the decoder knows a first pattern was received and a hybrid unary plus exp-Golomb code is incoming in the stream. If the received bits do not correspond to a first pattern (*i.e.*, the received codeword contains less than N+1 bits and the last bit is a “0”), then the decoder knows a

fourth pattern was received and a unary only code is incoming in the stream. Neither the use of variable codewords or the use of variable-length fourth patterns mandates (or even suggests) processing incoming codewords bit-by-bit or the use of an incremented counter, as Complainants contend. Complainants' alleged support for bit-by-bit processing in the specification is therefore illusory.¹⁵

B. Steps (B) and (C) of Claim 1 and Elements (ii) and (iii) of Claim 11 Are Not Infringed

The second step of claim 1 recites “adding an offset to said index value based on a second pattern in a second portion of said codeword following said first portion in response to said first portion having said first pattern.” The third step of claim 1 recites “adding a value to said index value based on a third pattern in a third portion of said codeword following said second portion in response to said first portion having said first pattern.”¹⁶

As described above in connection with step (A), these steps are also performed “in response to said first portion having said first pattern.” For the same reasons discussed in paragraph A.2.b above, receiving the entire first pattern is therefore a “predicate” to adding the “offset” to the index value (step (B) of claim 1 and element (ii) of claim 11) and adding the “value” to the index value (step (C) of claim 1 and element (iii) of claim 11). (Hg. Tr. (Reinman) at 631:10-22)). Complainants acknowledge that in the accused Funai downstream products, the alleged addition steps are performed by inspecting [REDACTED] [REDACTED] (CX-1597C; CX-0501C at 2). Thus, the accused products do not perform these two addition steps “in response to” a first portion of said codeword having a first pattern. (RX-2814C at QA 177).

¹⁵ Complainants never alleged that the decoders in the accused Funai downstream products perform this step under the doctrine of equivalents and have consequently waived any such argument. (Order No. 64, G.R. 7.)

¹⁶ Claim 11 recites the parallel system limitations of a circuit “configured to” perform the identical addition steps.

1. The Source Code Confirms that the Accused Funai Downstream Products Do Not Literally Perform Either of These Steps (in Any Order)

Complainants, in their opening brief, present what superficially appears to be a source code analysis for steps (B) and (C) of claim 1 and elements (ii) and (iii) of claim 11. Comp. Brf. at 23-28. What Complainants tellingly fail to mention in their source code analysis is that the accused Funai downstream products never actually perform *either* step B or step C. Rather, it is not until Complainants' rebuttal of Respondent's non-infringement arguments when Complainants finally acknowledge that the accused Funai downstream products [REDACTED] [REDACTED]. Comp. Brf. at 29-30. In other words, the claimed "offset" is never added to the index value, as required by step (B) and element (ii), nor is the claimed "value" ever added to the index value, as required by step (C) and element (iii).

According to Complainants, the accused Funai downstream products literally infringe these two steps because they perform them "*simultaneously*" or "*at the same time.*" *Id.* at 29. But the source code confirms this is not the case; [REDACTED] [REDACTED]. *See* Comp. Brf. at 23-28. It is axiomatic, therefore, that neither step (B) nor step (C) is ever literally performed in the accused Funai downstream products. For instance, [REDACTED] [REDACTED]. There can be no doubt, therefore, that the accused Funai downstream products do not literally perform either of these two limitations. *See Joy Techs., Inc. v. Flakt, Inc.*, 6 F.3d 770, 775 (Fed. Cir. 1993) ("A method claim is directly infringed only by one practicing the patented method"); *accord Akamai Techs., Inc. v. Limelight Networks, Inc.*, 692 F.3d 1301, 1307 (Fed. Cir. 2012) ("In the context of a method claim, that means the accused infringer must perform all the steps of the claimed method, either personally or through another acting under his direction or control").

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Complainants' "simultaneous" interpretation of steps (B) and (C) of claim 1 (and elements (ii) and (iii) of claim 11) also conflicts with the plain language of the claim, which separates those steps. Complainants are asking this Commission to re-write the claim by combining steps (B) and (C) of claim 1 (and elements (ii) and (ii) of claim 11) into a single step. This is improper.

The testimony of Dr. Schonfeld, cited on page 29 of Complainants' initial brief, (i) does not support Complainants simultaneous performance theory and (ii) is taken out of context. Dr. Schonfeld testified at the evidentiary hearing that under *Respondents' interpretation* of the claims, the claimed index value would be equal to a "predetermined constant." (Hg. Tr. (Schonfeld) at 1598:4-15). Under this construction, *which was not adopted by the ALJ (see ID at 123-130)*, the index value used in steps (B) and (C) is the same. (Hg. Tr. (Schonfeld) at 1600:14-24). The "offset" in step (B) would be added to the index value from step (A), but the "value" in step (C) would be added to the *same index value* from step (A). In other words, the outcome of step (B) would be the addition of the threshold and the "offset," whereas the outcome of step (C) would be the addition of the threshold and the "value." Although this interpretation is consistent with the antecedent basis and plain language of the claim, the ALJ declined to adopt it.

Complainants' reliance on Dr. Schonfeld's testimony is misplaced because it refers to an interpretation of the claims ultimately not adopted by the ALJ, not to Complainants' interpretation of the claims that was adopted by the ALJ.¹⁷ (ID at 123-130.) Under the construction adopted by the ALJ, the outcome of step (C) is the addition of the outcome of step (B) and the "value." As confirmed by Dr. Schonfeld, under this interpretation, the order of the steps cannot be reversed because step (C) must take into account the "updated" index value from step (B). (RX-2814C at RX-2814C.453-455).

¹⁷ As noted in Respondents' opening brief, although Respondents disagree with the ALJ's constructions, for purposes of this briefing Respondents will discuss infringement in view of the ALJ's constructions.

2. The Simultaneous Performance of Steps (B) and (C) is Inconsistent Even with Complainants' Interpretation of the Claims

Furthermore, performing these two steps simultaneously contradicts even Complainants' interpretation of the claims. According to Complainants, the phrase "adding an offset to said index value" of step (B) means "increasing the initial index value by a discrete amount." (CX-1597C at CX-1597C.0020). Also according to Complainants, the phrase "adding a value to said index value" of step (C) should be given its plain and ordinary meaning: increasing the *updated* index value by an additional value. *Id.* at CX-1597C.0020-21.

In other words, the claimed index value is iteratively changed through each step: the claimed index value is first set to the threshold in step (A), updated in step (B) by adding the claimed "offset," then updated again in step (C) by adding the claimed "value" to the result of step (B).¹⁸ This interpretation requires step (B) to occur before step (C); otherwise step (C) could not take into account the updated index value resulting from step (B). Simply put, under Complainants' interpretation, performing step (C) requires the updated index value obtained as a result of step (B). Under this interpretation, steps (B) and (C) cannot be performed simultaneously. Complainants' simultaneous performance theory does not even meet Complainants' own interpretation of the claims.

3. The Doctrine of Equivalents Does Not Save Complainants' "Simultaneous" Infringement Theory

Complainants briefing highlights why the accused Funai downstream products also do not infringe under the doctrine of equivalents. It is black letter law that "the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole." *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 29 (1997); accord *Deere & Co. v. Bush Hog, LLC*,

¹⁸ This interpretation was in contrast to Respondents' interpretation where the index value was assigned to a predetermined constant and did not change once it had been set. (RX-0007C at RX-0007C.0567-69).

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703 F.3d 1349, 1356 (Fed. Cir. 2012) ("the doctrine of equivalents must be applied to the claims 'on an element-by-element basis,' so that every claimed element of the invention—or its equivalent—is present in the accused product").¹⁹ As explained in Respondents' opening brief, the accused products perform a method with a substantially different "function, way, and result" than what is recited in each of steps B and C of claim 1 and elements (ii) and (iii) of claim 11. *Warner-Jenkinson*, 520 U.S. at 40.

For instance, Complainants allege that "the accused decoders perform the exact same *function* as step (B) (and element (ii)) by increasing the threshold "index value" from step (A)/element (i) by the claimed "offset." Comp. Brf. at 30. This is false. As explained above and in Respondents' opening brief, the accused decoders never perform this function. Init. Brf. at 41-43. Complainants also inaccurately allege that the "accused decoders do this in substantially the same way as step (B) (and element (ii)), *i.e.*, by adding an "offset" calculated "based on a second pattern in a second portion of said codeword." Comp. Brf. at 30-31. Complainants conveniently fail to mention what the alleged "offset" is added to in the accused products; [REDACTED]. Complainants further allege that "the accused decoders produce the exact same *result* as step (B) (and element (ii)), *i.e.*, the magnitude of the threshold 'index value' has been increased by the value of the added 'offset.'" Comp. Brf. at 31. This is false. As discussed above, in the accused Funai downstream products, [REDACTED]. At no time is the offset added to the index value as required by step (B).

Complainants make the same false allegations concerning step (C) of claim 1 (and element (iii) of claim 11). But the accused Funai downstream products perform a substantially different *function* in a substantially different way than the claimed step. [REDACTED]

¹⁹ Complainants failed to perform a doctrine of equivalents analysis on a limitation-by-limitation basis, as determined by the ALJ, and Complainants consequently waived the ability to make any such argument, particularly at this late stage. (Order No. 64, G.R. 7.)

[REDACTED] In contrast, Step (C) of claim 1, recites the wholly different step of adding the value to the index value. And contrary to Complainants' allegations, the accused decoders never produce the same result as step (C) of claim 1 (and element (iii)) of claim 1. To the contrary, the accused decoders never separately add the "value" of step (C) to the threshold index value.

Even under the ALJ's and Complainants' original interpretation of this step²⁰, which Complainants seem to abandon in their doctrine of equivalents analysis, the accused products perform a different function in a different way. Under the ALJ's interpretation of step (C), the "value" is added to the updated index value obtained from step (B). But in the accused products, [REDACTED]

[REDACTED]

[REDACTED]

IV. Questions 5, 6, and 7[B]

A. Complainants Have Failed to Prove Indirect Infringement of the '663 Patent

1. Complainants Have Failed To Show Third Parties Practice Each Step of Claims 1-9 of the '663 Patent

Complainants' argument that third party users of Funai's products perform every step of claims 1-9 of the '663 patent is completely dependent on Dr. Reinman's opinion that the accused Funai products necessarily infringe when playing H.264-encoded Blu-Ray discs or when streaming H.264-compliant videos. Comp. Brf. at 32-33. As explained in Funai's initial brief (Init. Brf. at 45-47), Dr. Reinman did not however, compare the claims of the '663 patent to the H.264 standard itself. Rather, he compared the claims to the H.264.2 Reference Software; software which the ALJ explicitly found was optional. ID at 138. The ALJ also found that there was no evidence that any Funai product (or any product of any manufacturer) actually uses the ITU's reference software. *Id.* Complainants have offered nothing to refute these findings. In view of the disconnect between the

²⁰ See ID at 129.

ITU reference software and the accused products, Dr. Reinman's mere observation that a Funai downstream product can play H.264-compatible media is insufficient to prove that a third party practices any step of the claims of the '663 patent, let alone each step of the asserted method claims (1-9), as is necessary for a finding of induced infringement.

Complainants simply do not respond to Funai's argument that the products at issue are capable of operating without ever decoding H.264-compliant encoded data streams. Init. Brf. at 47. Without H.264 decoding being an inevitable result of the operation of the accused products, Complainants cannot rely on a feature of a product to show infringement of a method claim. Rather, Complainants must demonstrate that a third party has actually practiced the claim, which they have utterly failed to do. *See ePlus*, 700 F.3d at 521-22 (vacating a denial of JMOL of no infringement as to two method claims since the patentee had only presented evidence that the accused system had the capability to perform the claimed method by using UNSPSC codes, but had not presented any direct or circumstantial evidence that anyone had actually used those codes in the system)²¹; *see ACCO Brands*, 501 F.3d at 1313.

Complainants' failure to show that any third party practices each step of claims 1-9 of the '663 patent is fatal to their claim of induced infringement, and the Commission should so hold.

2. Complainants Have Failed To Show Funai Actively and Knowingly Aids Users to Practice Claims 1-9 of the '663 Patent

As with the '087 patent, Complainants base their argument that Funai actively and knowingly aids users to practice the claims of the '663 patent on Funai's marketing, technical support and warranty functions. To the extent that Complainants' position is based on the ability of Funai's

²¹ Where an apparatus claim recites a present ability (as opposed to a mere capability) to perform a function, it can only be directly infringed by a device that has the present ability to perform that function. *Cross Medical Prods. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1311 (Fed. Cir. 2005). However, insofar as method claims (such as claims 1-9 of the '663 patent) are concerned, there is no occasion to even consider a present ability vs. capability analysis. In the case of method claim, if and only, a device actually performs the claimed method steps, can there be infringement. *Southwest Software, Inc. v. Harlequin, Inc.*, 226 F.3d 1280, 1291 (Fed. Cir. 2000).

products to decode H.264-compliant data streams, as explained above, the ALJ correctly found that Complainants case was improperly based on an examination of the H.264.2 reference software which, even assuming *arguendo* it met all of the elements of the ‘663 patent claims, was insufficient to prove infringement of a product that decodes H.264-compliant data streams, because the reference software is optional. ID at 138. Moreover, Complainants totally fail to address the requisite knowledge requirement for inducement. *Akamai Techs.*, 692 F.3d at 1308 (*en banc*). Complainants nowhere address the fact that in the case of each product Complainants accuse of infringement, Funai

[REDACTED]

[REDACTED]

[REDACTED]. JX-0042C at 40:1-42:10; JX-0039C at 14:3-13; JX-0037C at 16:7-11, 22:19-23:9. When, during discussions with LSI (described in opening Funai’s brief on remedy and bonding, (Init. Brf. Rem. at 12, n.4)). Funai [REDACTED]

[REDACTED]

[REDACTED]. See, e.g., CX-1147C.0004-0005. When Funai suggested to LSI that [REDACTED]

[REDACTED]

[REDACTED]. Complainants have not met their burden and cannot show that Funai actively and knowingly aided users to practice the asserted claims.

3. Complainants Have Failed To Demonstrate Funai Knew of, or Was Willfully Blind to, Infringement of the ‘663 Patent

Funai does not dispute that it was aware of the ‘663 patent in [REDACTED]. That, however, is not sufficient to prove induced infringement. Rather, Complainants must show “pre-suit knowledge that the induced acts constitute infringement of ... the ‘663 patent.” Complainants’ response simply ignores this portion of the Commission’s question, because the record reflects that Funai had no belief that the accused acts actually infringed the ‘663 patent. See *Commil USA, LLC v. Cisco Sys.*, 720 F.3d 1361, 1367-68 (Fed. Cir. 2013); *DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1307 (Fed.

Cir. 2006), overruled on other grounds, *Global Tech Appliances, Inc.*, 131 S. Ct. at 2060. While Funai and LSI [REDACTED], Init. Brf. Rem. at 5-15 (*passim*) (Response to Question 2). Funai always believed and maintained, [REDACTED], that it did not infringe the '663 patent. See, e.g., CX-1147C.0004, 0005; CX-1515C; CX-1397C. "While evidence of intent is not required to prove infringement, it is required to prove induced infringement." *Ecolab, Inc. v. FMC Corp.*, 569 F.3d 1335, 1351 (Fed. Cir. 2009). Funai [REDACTED] that the '663 patent was not infringed (see CX-1147C.0004-0005), and [REDACTED] non-infringement. CX-1097C. [REDACTED]. Proof of any intent is simply absent here, and therefore Complainants cannot prevail on an inducement claim with respect to the '663 patent.

V. Question 8

A. The Named Inventor Did Not Conceive of the Subject Matter of the '958 Patent Until [REDACTED].

The asserted claims of the '958 patent are not entitled to the July 30, 1996 priority date of U.S. Patent No. 5,862,182 ("the '182 patent"), which (in turn) resulted from the '574 application. There is no dispute that the test is whether "the inventor had possession at that time of the later claimed subject matter." Comp. Resp. to Comm. Dec. at 36 (citing *Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1369 (Fed. Cir. 2009)). In other words, it is Complainants' burden to show that the named inventor "Dr. van Nee had possession of those claim elements at the time of the disclosure" of the application for the '182 patent in July 1996. *Id.* at 37; *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1305-06 (Fed. Cir. 2008).

It is a simple matter to see that Dr. van Nee, the sole named inventor of the '958 patent, did not have possession of the asserted claims at that time.²² Dr. van Nee [REDACTED] [REDACTED] the '182 patent is directed to OFDM,

²² Consistent with Agere's stipulation in the *Sony* case, the priority date of the asserted claims of the '958 patent is no earlier than April 22, 1998, the filing date of the '188 application. JX-0003 at 1.

a different type of technology than the '958 patent. *See* RX-1788C at 58:21-59:23. [REDACTED]

[REDACTED] . RX-1816C, at 1. Finally, [REDACTED]

[REDACTED] RX-1788C at 27:22-31:20, 34:9-19.

Complainants argue that there was nothing procedurally improper about the '958 patent claiming priority to the '182 patent. *Comp. Resp. to Comm. Dec.* at 35-36. On April 22, 1998, Complainant Agere (then Lucent) filed the application for the '958 patent, which did not claim priority to the '574 application, nor did it mention or incorporate by reference the '574 application. Compare JX-0004 at JX-0004.0008 with JX-0003 at col. 1:4-10. Only years later, in January 2002, [REDACTED], did Agere's attorneys (in a litigation-inspired move) amend the '958 patent application to claim priority to the '574 application and incorporate it by reference. JX-0004 at JX-0004.0124, 136, 143, 145; RX-1788C at 53:17-54:4, 54:19-58:20. Between 1998 and 2002, the IEEE adopted the 802.11b standard, which refers to a formula in the '182 patent (RX-0019C at 837RALINK000002663, 2712; CX-0878 at col. 2:21-22). Effectively, Complainants amended the '958 patent application *ex post facto* to try to make it relevant to the new standard.

B. Not All Claim Elements Are Disclosed in the '182 Patent.

Complainants bear the burden, but have failed, to show that the '182 patent discloses *all* of the elements of the asserted claims of the '958 patent. In addressing priority, Complainants only addressed five elements of the asserted claims: “serial-to-parallel converter,” “M>N,” “autocorrelation sidelobes,” “QPSK,” and “scrambler.” *Comp. Resp. to Comm. Dec.* at 35-43; CX-1641C at QA 128-44. Complainants presented no evidence that the '182 patent describes the remaining claim limitations, such as “a mixer that modulates the phase of at least one carrier signal in accordance with the selected code,” as recited in claim 24. This is especially important because Complainants have switched horses in midstream and now assert M=4096 despite previously

asserting that $M=8$ in the '182 patent. *Compare* Comp. Resp. to Comm. Dec. at 39 *with* Comp. PostHRB at 96. Complainants thus fail to show all of the elements of the '958 patent claims are disclosed in the '182 patent assuming $M=4096$.

In any event, Respondents have shown, by clear and convincing evidence, that the '182 patent lacks adequate written description support for all elements of the asserted claims. Resp. PostHB at 51-54; Resp. PostHRB at 9-13.

C. $M>N$ Is Not Disclosed in the '182 Patent.

Each independent claim of the '958 patent requires “a code having N chips in response to the group of data bits, the code being a member of a code set that includes M codes, wherein $M>N$.” JX-0003 at col. 12:50-13:64. However, unlike the '958 patent, which explicitly teaches the use of an “extended code set,” the '574 application does not mention or describe an “extended code set” with the property $M>N$, and does not adequately describe “a code having N chips in response to the group of data bits, the code being a member of a code set that includes M codes, wherein $M>N$.” RX-0006C at QA 291-94.

Although Complainants refer to a “Matrix A” in the '182 patent, they also confirmed there is no evidence that “Matrix A” is a “code set” of M “codes” with N “chips” or that the '182 patent describes “a modulator that chooses a code” from Matrix A “in response to the group of data bits.” Comp. Resp. to Comm. Dec. at 38-39. Rather, Complainants argue that in the '182 patent, “the code set $M=4096$ and the code length $N=8$. Hence, a code set in which $M>N$ is disclosed in the '182 Patent.” *Id.* at 39. This is the only assertion by Complainants that $M>N$ in the '182 patent. *Id.* at 38-39. And it contradicts Complainants’ previous position that $M=8$ in Matrix A. Comp. PostHRB at 96.

However, the Complainants do not even attempt to show that Matrix A is even a code set (it is not). Complainants do not identify which of the 4096 possible “codes” are actually in a code set, such that the number of codes (M) is greater than $N=8$. Complainants’ make reference to a

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calculation of the number of “possible codes” by calculating 2^X , where X is the number of each bits in a code, but their calculation is of no moment. For all values $X > 1$, the number of binary “possible codes” would always be greater than the length of each code. But this is not a description of the number of actual codes in a code set, where the number of the codes in the set is greater than the length of each code.²³ Nor did Complainants show how Matrix A in the '574 application complies with the additional claim limitations associated with the “code set” in the claims, (as detailed directly below and *supra* in par. D). JX-0003 at col. 12:50-64.

Complainants also argue that “eight ‘output phases’ are the chips that make up each ‘complementary code.’” Comp. Brf. at 39. Complainants fail to show that the output phase elements of Matrix A are chips (which they are not). As construed by the ALJ, a “chip” in terms of the '958 patent claims, is a code “bit,” which is binary. See ID at 176-77. Complainants fail to show that each of the eight output phases is binary.

Complainants' expert cites nothing in the '182 patent beyond Matrix A itself to support his opinion that Matrix A satisfies “ $M > N$,” and his testimony on this point is entirely conclusory, devoid of explanation as to what is in Matrix A is allegedly a “code set” comprised of codes chosen “in response to the group of data bits,” or how M or N are calculated. CX-1641C at QA 134-36; Hg. Tr. (Katti) 1865:25-1866:5.

Neither Complainants nor their expert point to anything in the '182 patent (or corresponding '574 application) that describes either Matrix A as a “code set” or “a modulator that chooses a code” from Matrix A “in response to the group of data bits.” In fact, Matrix A is an “encoding matrix” that

²³ This is also illustrated by Complainants' effort to distinguish one embodiment in the Prasad prior art in which the number of actual codes in a code set $M=4$ is less than the length of each code $N=16$. In response to that embodiment, Complainants argue M is less than N. Yet if Complainants' theory of the number of “possible codes” for Matrix A in the '182 patent were applied to the Prasad prior art, there would be 2^{16} number of possible codes in Prasad, which is clearly greater than 4 or 16, and M would thus be greater than N in Prasad under Complainants' own theory.

is applied to an input vector containing four phases “ Φ_1 to Φ_4 .” CX-0878 at col. 4:34-59; *See* also Hg. Tr. (Katti) at 1865:18-24 (agreeing that Matrix A is “taking four phases as input” and producing a sequence of “eight complex chips”). Therefore, even if Matrix A could be viewed as a “code set” within the meaning of the ‘958 patent (which it cannot), the number of “codes” (M) in Matrix A would be 4 (one for each phase input), and each “code” would be 8 values in length. In other words, $M=4$ and $N=8$. Thus $M<N$; not the reverse. The ‘574 application contains no description of the claimed code set where “the number of codes in the set from which a selected code is chosen (M) must always exceed the number of bits in each code of the set (N).”

D. The Remaining Claim Elements Are Not Disclosed in the ‘182 Patent.

Further, Complainants’ expert, Dr. Katti, conceded at trial that the applications for the ‘574 patent application and ‘182 patent contained no specific disclosure of several other elements recited in the asserted claims, including:

- “a complementary code that provides autocorrelation sidelobes suitable for multipath environments” (claims 22, 32) (Hg. Tr. (Katti) at 1863:2-12);
- “at least one carrier signal is QPSK modulated in accordance with the selected code” (claim 25) (*id.* at 1860:9-16); and
- “a scrambler for scrambling the group of data bits” (claims 26, 32, 35) (*id.* at 1860:21-1861:2).

Taking each one of these concessions in turn, Complainants concede that the ‘182 patent is directed to complementary codes for an OFDM system. Comp. Brf. at 40-41. But the asserted claims are not directed to an OFDM system. Further, the ‘182 patent describes using complementary codes for a different purpose, “low PAP [peak-to-average power] ratio,” and does not mention the “autocorrelation,” “sidelobes,” or “multipath” of the ‘958 patent. CX-0878 at col. 1:34-38; RX-0006C at QA 295. Complainants argue that “a person of ordinary skill in the art would know that OFDM is suitable for multipath, and therefore would have been able to apply the teachings of the ‘182 Patent (specifically its code design) to the problem of communication in multipath

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environments.” Comp. Brf. at 41-42. But “the written description requirement is not a question of whether one skilled in the art *might* be able to construct the patentee’s device from the teachings of the disclosure. . . . Rather, it is a question whether the application necessarily discloses that particular device.” *PowerOasis*, 522 F.3d at 1306 (internal quotation marks omitted and emphasis in original). That OFDM in the ’182 patent may be suitable for multipath environments does not mean that the ’182 patent “necessarily discloses” that “the code set is derived from a complementary code that provides autocorrelation sidelobes suitable for multipath environments” as recited in ’958 patent claims. *Id.* Complainants cite nothing in the ’182 patent that is a code set that satisfies $M > N$ and is derived from a complementary code that provides autocorrelation sidelobes suitable for multipath environments.

Complainants argue that the ’182 patent includes a “general discussion of PSK.” Comp. Brf. at 42. Complainants are wrong. The ’182 patent does not disclose PSK generally; it only refers to “two variants,” 8-PSK and BPSK. *Id.* It contains no disclosure of QPSK whatsoever. CX-0878 (’182 Patent) at col. 7:39-43. Complainants’ conclusory expert testimony is that “a person of ordinary skill in the art would have understood” that a scrambler “could be incorporated” in the system described in the ’182 patent does not meet (or even address) the legal standard for written description. CX-1641C at QA 142-144; *PowerOasis*, 522 F.3d at 1310. Dr. Katti fails to explain how the disclosure of 8-PSK and BPSK would be representative of all PSK. *Hynix Semiconductor, Inc. v Rambus Inc.*, 645 F.3d 1336, 1352 (Fed. Cir. 2011). Complainants failed to show that a scrambler is inherent to every “digital communications system.”

Complainants also argue that a scrambler would be “pretty much” inherent in any kind of digital communication system. Comp. Brf. at 43. Even assuming *arguendo* some non-zero weight could be given to such a nebulous statement, something that is “pretty much” inherent (whatever that means), or even common, does not rise to something is actually inherent (*i.e.*, necessarily disclosed).

Dr. Heegard confirmed there is no such disclosure of a scrambler in the '182 patent. RX-0006C at QA 309.

In sum, because the asserted claims of the '958 patent are not entitled to the priority date of the '182 patent, they are invalid. Complainants' expert conceded that, unless the asserted claims are accorded a filing date earlier than April 22, 1998, Mr. van Nee's 1996 article, "OFDM Codes for Peak-to-Average Power Reduction and Error Correction" ("van Nee 1996," RX-0614), is prior art that would disclose or render obvious the asserted claims of the '958 patent. Hg. Tr. (Katti) at 1877:9-16.

VI. Question 9

A. Prasad Anticipates or Renders Obvious Every Asserted Claim of the '958 Patent.

Complainants make three arguments against Prasad. Comp. Brf. at 43-46. Complainants' first argument is that "Prasad does not anticipate any claim of the '958 Patent because Prasad does not disclose a code set in which the number of codes is greater than the code length ($M > N$)." *Id.*²⁴ Complainants also argue against obviousness on the same basis. *Id.* at 46.

Notwithstanding Complainants arguments, Prasad anticipates claims 22, 23 and 24 of the '958 patent. RX-0006 at QA 318-58. Prasad discloses a digital modulation system that maps a "sequence of information digits" to an "orthogonal set of complementary sequences." RX-0590 at 837MEDIATEK000023288. Prasad also describes a modulator that maps a sequence of k bits in length to one of $2M = 2^k$ complementary sequence sets, and then transmits the set in parallel over multiple frequency sub-carriers. *Id.* at 837MEDIATEK000023288-89. Each complementary sequence set is expressed as a matrix with variable dimensions – a set may have a "variable number of sequences" corresponding to the number of sub-channels, or the set may have "variable length" corresponding to the number of bits transmitted over each sub-channel. *Id.* For instance, for a code

²⁴ Complainants concede that Prasad is prior art and discloses all limitations of claims 22-24, except " $M > N$." Comp. Resp. to Comm. Dec. at 43-46.

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set where $M=16$, Prasad discloses that the length of each sequence and set “can vary in length from 2 bits to 32 bits.” *Id.* at 837MEDIATEK000023289, 837MEDIATEK000091 fig. 4(d); RX-0006C at QA 335. Therefore, Prasad discloses, among other code sets, a complex code set where $M = 16$ and $N = 2$, satisfying the claimed property of $M > N$. *Id.* at 335, 344. Complainants never addressed the evidence showing that Prasad discloses $M > N$ even without inversions. RX-0006C at QA 341-44.

Complainants’ reference to one “example” in Prasad in which $M=4$ and $N=16$ is of no moment; it is only one of the disclosed embodiments. Comp. Brf. at 45. Complainants further argue that “this is the only code set *clearly described* in Prasad.” *Id.* (emphasis added) Parsing the issue in terms of what is, or is not, “clearly described” is not the standard for anticipation. *Marrin v. Griffin*, 599 F.3d 1290, 1295 (Fed. Cir. 2010) (“The law of anticipation is clear: ‘A prior art reference anticipates a patent claim if the reference discloses, either expressly or inherently, all of the limitations of the claim.’”). More importantly Prasad expressly discloses a code set in which $M=16$, $N=2$. RX-0006C (Heegard WS) at QA 335, 344. For the same reason, Complainants are dead wrong that Prasad teaches away from $M > N$. Comp. Resp. to Comm. Dec. at 46.

Complainants’ expert admitted that Prasad discloses “ $M > N$ ” when the code set includes “inversions”.²⁵ Hg. Tr. (Katti) at 1807:24-1808:5; *see also* CX-1641C at QA 174, 177. Although they now take a different position, Complainants earlier conceded that Prasad discloses “ $M > N$ ” when including inversions: “There are M such codewords [in Prasad], and the number of sequences in a codeword is equal to the number of codewords. Prasad also teaches that $2M$ codewords can be generated by inverting the sequences in each codeword.” Comp. PostHB at 403.²⁶ In prior district court litigation, Complainant Agere admitted there was no disclaimer and took the same position Respondents take here, that the claims of the ’958 patent allow for including inversions. RX-0858 at LSI Agere 837-00004008-09.

²⁵ An “inversion” is a 180 degrees rotation. RX-2813C at QA 267.

²⁶ Respondents also previously showed why inversions were not disclaimed during prosecution. Init. Brf. at 55-56; Resp. PostHB at 40-47, 109.

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Complainants' second argument is that Prasad is a "multi-carrier system" and the '958 patent is a "single-carrier system." Comp. Brf. at 43-44. The '958 patent claims, however, do not recite a "single-carrier system." JX-0003 at 12:50-64. Complainants nowhere show how this irrelevant (single vs multiple carrier) observation has any bearing on the disclosure of the various possible code sets in Prasad, where $M > N$.

Complainants' third argument is that "Prasad does not render obvious the ABAB' claim limitation." *Id.* at 46. Complainants concede that the ABAB' "sequence[] existed in the art." Comp. Brf. at 55. Moreover, Complainants have presented no relevant information to rebut Dr. Heegard's analysis that a person of skill in the art would have found it obvious to combine the claim limitations with the system disclosed in Prasad, or any other digital modulation system. *See* RX-0006C at QAs 518-538.

At trial, Complainants' expert, Dr. Katti, agreed that the limitation of "a complementary code defined by the sequence ABAB'" simply referred to Marcel Golay's original "rule for length expansion" of complementary codes. Hg. Tr. (Katti) at 1818:20-1819:10. Dr. Katti also conceded that the '958 patent cited Golay's 1961 paper (RX-0563) as prior art, and that multiple other references had cited Golay's paper for the ABAB' expansion rule. Hg. Tr. (Katti) at 1822:11-19, 1823:6-12. Accordingly, Golay's rule that combining the complementary codes A and B in the form ABAB' (among other forms) would generate a new, longer complementary code was well known to persons of ordinary skill in the art at the time of the '958 patent. *See* RX-0563 at 837MEDIATEK000005404-05 (explaining as method of "general synthesis" that complementary series may be "formed by appending the series A and B, and the series A and B"). Thus, at the time of the alleged invention, the claimed limitation (and the claimed subject matter as a whole) would have been obvious because use of ABAB' was well known in the art (as taught by Golay), a predictable variation of complimentary codes and obvious to try. RX-0006C at QA 525-27.

In fact, Dr. Katti admitted at trial that the specification of the '958 patent does not even disclose the generation of new or longer complementary sequences using the ABAB' form. Hg. Tr. (Katti) at 1819:15-1820:3. Instead, the ABAB' form appears only as an incidental property of the complementary code {111-111-11111-1-1-11-1} disclosed in Table 3 of the patent, with no discussion of accompanying benefits or properties. JX-0003 at col. 6:17-20. Accordingly, because Prasad teaches a recursive procedure for generating code sets from any complementary code, it would be obvious for a person of ordinary skill in the art to implement the Prasad system using *any* complementary code word, including one of the form ABAB'. RX-0006C at QAs 525-527. In any event, as discussed above, although irrelevant to the teachings of the '958 patent, the fact that two short complementary sequences could be combined in the form ABAB' was well known in the art.²⁷

B. The Combination of the Harris Proposal in View of the van Nee article Renders the Asserted Claims of the '958 Patent Obvious.

As an initial matter, Complainants argue for an enhanced burden “in their attempt to prove invalidity of any kind based on the Harris Proposal.” Comp. Resp. to Comm. Dec. at 47. This is legally erroneous. Funai is presenting the combination of the Harris Proposal with the van Nee article, which was not before the PTO because the van Nee article was not cited.²⁸

After spending several pages attacking the Harris Proposal, Complainants finally get to the fundamental issue presented by this prior art combination: whether the van Nee article supplies any missing elements from Harris Proposal, and whether this combination was obvious, as argued by Funai. Init. Brf. at 60-63.

Complainants' only substantive argument against the combination of van Nee article and the Harris Proposal a legally erroneous one. Complainants argue that the van Nee article cannot be used

²⁷ Dr. Heegard's denigration of the ABAB' limitation at the hearing does not support the non-obviousness of the limitation. Dr. Heegard's testimony, asserting that the ABAB' limitation was “arbitrary,” does not make it a non-obvious addition. Hg. Tr. (Heegard) at 1145:3-6.

²⁸ No “enhanced burden” applies. *Tokai Corp. v. Easton Enters.*, 632 F.3d 1358, 1367 (Fed. Cir. 2011) (“An added burden of deference to the PTO is not required, however, with respect to invalidity arguments based on evidence that the PTO did not consider.”).

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to show obviousness because it is the inventor's own work. Comp. Resp. to Comm. Dec. at 47. Complainants brazenly distort legal precedent in doing so. In both cases relied upon by Complainants, the Federal Circuit cautioned against using the inventor's own teaching of the *patented invention* to arrive at a conclusion of obviousness. *Novo Nordisk A/S v. Caraco Pharm. Labs.*, 719 F.3d 1346, 1361 (Fed. Cir. 2013) ("obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor"); *Otsuka Pharm. Co. v. Sandoz, Inc.*, 678 F.3d 1280, 1296 (Fed. Cir. 2012) ("The inventor's own path itself never leads to a conclusion of obviousness; that is hindsight."). But that is not what Respondents are presenting here. Rather than a classic hindsight use the teaching of the patented invention, Funai is relying on the published van Nee prior art article, which is knowledge attributed to one of ordinary skill in the art.

The van Nee prior publication qualifies as prior art under 35 U.S.C. § 102(b). The article, Richard van Nee, "OFDM Codes for Peak-to-Average Power Reduction and Error Correction" ("van Nee 1996") (RX-0614) was published in *Global Telecommunications Conference*, 1996, and publicly available no later than December 6, 1996. RX-1352 ¶ 19. Accordingly, to the extent that the asserted claims are entitled to a priority date of 1998 and not 1996, van Nee 1996 is prior art to the asserted claims pursuant to 35 U.S.C. § 102(b).

The reason that Complainants retreat to a legally erroneous argument as their only response to the use of van Nee article for obviousness is apparent. Complainants concede that if van Nee 1996 is prior art to the '958 patent, it would disclose or render obvious every asserted claim limitation of the '958 patent, including the elements they claim are not disclosed in the Harris Proposal.

Complainants' expert, Dr. Katti, testified:

Q. Okay. Now, in your opinion, then, if the van Nee 1996 paper were prior art, it would disclose or render obvious every asserted limitation of the '958 patent asserted claims, right?

A. If the priority date -- if the date for the '958 patent was 1998, then this would be prior art and in that case, yes it would.

Hg. Tr. (Katti) at 1877:9-16.

Complainants argue that Funai's reliance on van Nee's own paper demonstrates the non-obviousness of the asserted claims because "no one else had developed" it. Comp. Brf at 48. But, even assuming *arguendo* that no one else had developed the ideas disclosed in the prior art van Nee article. Complainants argument is not legally relevant, since the van Nee's articler is public prior art with a 1996 publication date and is knowledge attributed to one of ordinary skill in the art.

C. The Combination of the Proakis Textbook in View of the Weathers Patent Renders the Asserted Claims of the '958 Patent Obvious.

Complainants make two arguments against the combination of the Proakis textbook in view of the Weathers Patent. Comp. Brf. at 52-54.

1. Discussion of Each of Proakis and Weathers

Complainants first argue that the only claim limitation missing from Proakis is "wherein the code set is derived from a complementary code that provides autocorrelation sidelobes suitable for multipath environments." Comp. Brf. at 52-53.²⁹

But the Weathers patent discloses precisely this so-called feature. Weathers describes its code sets as having "very low or zero temporal sidelobes in the autocorrelation function" (RX-0099 at col. 2:27-31)—language nearly identical to Complainants' own interpretation of the limitation as "low" autocorrelation sidelobes (Hg. Tr. (Katti) at 1846:7-18; CX-1641C at QA 87; CX-1596C at QA231). Complainants concede that "Weathers does reference complementary codes and autocorrelation." Comp. Brf. at 53. Weathers is directed at achieving "very low or zero temporal sidelobes in the autocorrelation function," and is entitled "complementary code sets" with "optimum aperiodic autocorrelation . . . properties." RX-0099 at cols. 1:2-6, 2:24-30. Weathers teaches that its

²⁹ Complainants also argue that "[i]t was the multipath issue that set Dr. van Nee's invention apart from the failed attempts of others in the field. Dr. van Nee solved the problem by applying a unique and novel technique involving complementary codes in which the code set is larger than the code length." Comp. Brf. at 54. Nowhere do Complainants dispute that the combination of Proakis and Weathers discloses codes in which the "code set is larger than the code length." Comp. Brf. at 52-54; Init. Brf. at 63-65.

code sets have reduced sensitivity to multipath effects because of their “reduced sensitivity to out-of-range clutter and multi-target returns [and] mutual interference.” RX-0099 at 10:32-44; RX-0006C at QA 597-98. Because Complainants’ own interpretation of the term “autocorrelation sidelobes suitable for multipath environments” requires only “low” autocorrelation sidelobes,” (Hg. Tr. (Katti) at 1846:7-18), Proakis and Weathers together disclose all asserted claim elements. RX-0006C at QA 433-54, 542-620.

Complainants argument that Weathers fails to disclose the limitation because “Weathers does not address indoor multipath issues because it is directed to radar technology” (Comp. Resp. to Comm. Dec. at 53) is easily disposed. According to Complainants, “Weathers fails to address the specific multipath problems addressed by the ‘958 Patent, namely, multipath issues that arise in indoor WLANs.” *Id.* But the asserted claims do not recite “indoor WLANs.” Rather, for example, asserted claim 22 of the ‘958 patent recites a “digital modulation system” and autocorrelation side lobes suitable for “multipath environments.” Complainants’ expert conceded at trial that “multi-path effects can exist both in indoor and outdoor scenarios.” Hg. Tr. (Katti) at 1853:5-9. The limitation at issue is about the code set, not whether the environment is indoors or outdoors. CX-1641C at QA 357. Complainants’ indoor/outdoor argument is not relevant to distinguish the Weathers patent (or the combination of Proakis and Weathers).

2. The Combination of Proakis and Weathers

Complainants next argue that “Weathers is directed toward a ‘pulse compression radar system’ and is therefore non-analogous art.” Comp. Brf. at 52. Complainants’ cursory statement in this regard is simply that Weathers is non-analogous because it teaches a “pulse compression radar system” (CX-1641C at QA 309). Complainants’ argument is not well founded. Weathers discloses a set of binary code words that are useful for modulating carrier waves because of their optimized autocorrelation and cross-correlation properties. *See, e.g.*, RX-0099 at col. 2:24-41. In other words, the very purpose for which the system of Weathers was designed was to improve coding performance

in multipath environments. *Id.* at 10:32-44 (summarizing “advantages of group-complementary code sets” as “reduced sensitivity to . . . multi-target returns through optimized autocorrelation” and “reduced sensitivity to mutual interference through orthogonal code sets”). “Because combining Proakis with any other set of block codes simply unites old elements with no change in their respective functions, . . . it would have been obvious for a person of ordinary skill in the art to combine the DS-QPSK modulator of Proakis with any other reference disclosing a specific linear block code, including the code disclosed in Weathers, to arrive at the limitations of the asserted claims.” RX-006C at QA 591.

Finally, Complainants argue that “the ABAB’ limitation would not be obvious from these references or any prior art reference as discussed above. Dr. Heegard denigrated this claim feature and stated that there would be no reason to look for it.” Comp. Brf. at 54. The limitation of a complementary code of the form “ABAB’” is merely an obvious form of a complementary code that provides no unexpected benefits. Because Weathers teaches multiple methods of generating group-complementary code sets from “seed” matrices (RX-0099 at 6:14-51), it would be obvious for a person of ordinary skill in the art to generate a code set according to the teachings of Weathers using any complementary code word, including one of the form ABAB’.³⁰ RX-0006C at QA 604; *id.* at 525-527, 572-74, 602-603.

3. Secondary Considerations Do Not Weigh In Favor of Nonobviousness.

With no citation to the record, Complainants also argue that “any showing of obviousness is overcome by secondary considerations of nonobviousness as set forth in Complainants’ prior submissions.” Comp. Brf. at 54. On the contrary, as the ID concluded, “[t]he evidence cited by Complainants, however, consists primarily of expert testimony from Dr. Negus, and fails to establish

³⁰ Contrary to Complainants’ characterization, Dr. Heegard did not “denigrate” this claim feature. Dr. Heegard’s testimony that the ABAB’ limitation was “arbitrary” does not make it a non-obvious addition. Hg. Tr. (Heegard) at 1145:3-6. Also see note 26, *supra*.

the requisite nexus between the alleged secondary considerations and the '958 patent.” ID at 217.

Complainants offer no new argument or evidence to contradict the ID’s conclusion, amply supported by the record. Init. Brf. at 66-68; Resp. PostHB at 120-22; Resp. PostHRB at 51.

VII. Question 10

Complainants concede that the '661 application was “deemed abandoned,” but argue that “the abandonment did not occur until March 7, 2002 at the earliest.” Comp. Brf. at 55.

Complainants also argue that “The Applicant did file a reply to the June 7, 2001 Office Action within the six-month statutory deadline. Specifically, the Applicant filed a notice of appeal ...” *Id.* These arguments are belied by the record.³¹

Complainants do not dispute that there was a statutory deadline of December 7, 2001 to respond to a June 7, 2001 Office Action. RX-1165 at RX-1165.0213. Comp. Brf. at 56 (“if the Applicant filed a petition for extension of time and a response on or before December 7, 2001, the Applicant duly responded.”).

The '661 prosecution history does not contain any reply to (or Notice of Appeal of) the June 7, 2001 Office Action rejecting all of the claims. Instead, Complainants rely on a postcard and other items to argue that the Notice of Appeal was submitted but is simply missing from the official PTO records. Comp. Brf. at 57-58. Curiously, Complainants were able to adduce a postcard “stamped by the PTO” and unidentified “other documents,” but no signed copy of any Notice of Appeal that was allegedly submitted to the PTO. *Id.* at 56-58.

There is no official record of any reply to (or Notice of Appeal of) the June 7, 2001 Office Action. The PTO Examiner subsequently issued a Notice of Abandonment for failure to respond to the June 7, 2001 Office Action:

³¹ Complainants argue that it was “not foreseeable that Respondents would seriously content the priority date of the ‘867 Patent.” Comp. Brf. at 58. Not foreseeable?! Respondents have contended throughout this investigation that the Diepstraten European Patent (RX-0299) anticipated the asserted claims because the '867 patent is not entitled to the priority date of the '661 application. *See, e.g.*, Resp. Joint PreHB at 202-03 (Mar. 22, 2013)).

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Notice of Abandonment	Application No.	Applicant(s)	
	08/155,661	DIEPSTRATEN ET AL.	
	Examiner	Art Unit	
	Tesfaldet Bocure	2631	
-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--			
This application is abandoned in view of:			
1. <input checked="" type="checkbox"/> Applicant's failure to timely file a proper reply to the Office letter mailed on <u>07 June 2001</u> .			
(a) <input type="checkbox"/> A reply was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply (including a total extension of time of _____ month(s)) which expired on _____.			
(b) <input type="checkbox"/> A proposed reply was received on _____, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection. (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).			
(c) <input type="checkbox"/> A reply was received on _____ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).			
(d) <input checked="" type="checkbox"/> No reply has been received.			

RX-1165 at RX-1165.0233 (Notice of Abandonment for failure to respond to the June 2001 Office Action). Complainants argue that this was a “ministerial error by the PTO.” Comp. Brf. at 59. But the applicants for the ’661 application did not seek to correct the Notice of Abandonment.³² Thus, the applicants did not dispute that the ’661 application was abandoned on December 7, 2001 for failure to respond to the June 7, 2001 application, and was therefore not co-pending with the ’867 application when it was filed on March 7, 2002.

Complainants argue that “the PTO explicitly accepted and acknowledged the claim of priority in the Notice of Allowability for the ’867 Patent, and thus the PTO determined that the ’661 Application was pending at the time the ’295 Application was filed. JX-0006 at 187.” Although the PTO acknowledged the claim of *foreign* priority, the PTO did not determine the *domestic* priority claim to the ’661 application. Indeed, the box (box #6) for a claim of domestic priority is *not* checked by the PTO.

³² Complainants argue that “substantive prosecution continued after December 2001” based on a petition for extension of time and an Examiner Interview Summary. Comp. Brf. at 60. The referenced Interview Summary was for the ’867 File History, but the Examiner inadvertently placed it in the ’661 File History, as the applicants later clarified. See Resp. PostHB at 133 n.26 (citing JX-0006 at JX-0006.0069). The Notice of Abandonment was the only action the PTO took on the ’661 application after the December 7, 2001 deadline. RX-1165 at REA837ITC00000627.

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Notice of Allowability	Application No.	Applicant(s)	
	10/092,295	DIEPSTRATEN ET AL.	
	Examiner	Art Unit	
	Tesfaldet Bocure	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to 8/13/03.
2. The allowed claim(s) is/are 53,54,56-65,67-74,80,81,83-88,90-135, renumbered as 1-74.
3. The drawings filed on 07 March 2002 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. 08/155,661.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

5. Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) The translation of the foreign language provisional application has been received.
6. Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

JX-0006 at 187. Complainants are thus simply flat out wrong that “the PTO determined that the claim of priority was proper,” and entitled to deference. Comp. Brf. at 60-61. There never was any such determination and Complainants’ reliance on “deference” is therefore a red herring. In fact, after the Notice of Allowability of the ’867 patent (dated September 8, 2003, *see* JX-0006 at 187-188), *the same PTO Examiner* examining that application issued a Notice of Abandonment for the ’661 application on October 27, 2003. RX-1165 at RX-1165.0232-233. This record strongly indicates that the PTO, in fact, did *not* determine that the ’867 patent was entitled to the domestic priority of the ’661 application, and that the ’661 application was abandoned in December 2001, before the application for the ’867 patent was filed in March 2002.

In view of the challenge to the priority claim, Complainants have failed to carry their burden to show that the ’867 patent is entitled to the priority date of the ’661 application. Thus, the asserted claims of the ’867 patent are invalid in view of RX-0299. Funai Pet. at 72. There is no dispute that if the Diepstraten European Patent qualifies as prior art, it is anticipatory. In fact the Diepstraten European Patent – having essentially the same disclosure as the ’867 patent – anticipates each and every asserted claim, because it does qualify as prior art. *Id.* (citing RX-0006C at QAs 989-998).

VIII. Question 11

A. The '663 Patent Is Not Essential To The H.264 Standard

Complainants urge the dubious proposition that the asserted claims of the '663 patent represent the only commercially feasible way to decode UEGk index values as required for compliant with the H.264 standard. In support, Complainants point to (i) the alleged lack of feasible commercial alternatives based on a review of theoretical alternatives to the asserted claims of the '663 patent; (ii) the adoption of the claimed methods into the H.264 reference software; and (iii)

[REDACTED]. These self-serving but erroneous conclusions find no support in the evidence of record.

Contrary to Complainants' allegations, there are many ways to decode the UEG(k) syntax elements under the H.264 standard without practicing the asserted claims of the '663 patent. RX-2814C at QA 172. As recognized by the ALJ, the accused products practice the H.264 standard but deviate substantially from the '663 asserted claims. Moreover, there are countless other ways to practice the standard without infringing the claims. For instance, as Dr. Schonfeld explained, the "setting" step of claim 1 might be replaced with an accumulation step so that the index value is never initially set to the threshold. RX-2814C at QA 172. For example, if the threshold N is 16, the decoding of the index value might be implemented using a counter starting at zero and incremented by one as bits are received until the threshold value is reached. One could also rely on "lookup tables" to generate some or all of an index value rather than setting an index value to a threshold and then adding different values to that index value corresponding to the codeword. *Id.* Other than conclusory assertions by Complainants' expert, Complainants failed to present *any* evidence to show why these alternatives would not be commercially feasible.

Furthermore, the H.264 reference software relied upon by Complainants is not relevant to the SEP analysis. The ID correctly recognized the use of the H.264.2 Reference Software is optional, and there is no evidence that any Funai downstream product incorporates the reference software. ID

at 138. In fact, there is no evidence that *any commercial decoder* has ever used the H.264 reference software. Finally, the ALJ correctly found that [REDACTED] decoders do not infringe the asserted claims of the '663 patent (ID at 140-155), which undercuts Complainants' argument that the standard-essential nature of the patent can be proven by [REDACTED]. And there is absolutely no evidence [REDACTED]. Comp. Brf. at 66-68. Complainants rely completely on circumstantial evidence in the form of a coincidence in timing to hypothesize [REDACTED]. *Id.* at 66. [REDACTED]. Cheng Dep. Tr. 84:12-85:6. Moreover, [REDACTED]. Complainants' unwarranted suggestion that [REDACTED].

In addition, [REDACTED] as alleged in Complainant's Petition. Comp. Brf. at 67-68. The only "evidence" Complainants cite is portion of Dr. Schonfeld's hearing testimony where he indicated that [REDACTED]. *Id.* at 67. The so-called [REDACTED] is therefore not probative of infringement in any way and certainly does not "confirm[] that there is no commercially feasible alternative," as Complainants allege.³³ *Id.* at 67-68.

B. The '958 and '867 Patents Are Not Essential To The 802.11 Standard

³³ Complainants admit that [REDACTED]—[REDACTED]—does not literally infringe any of the asserted claims of the '663 patent. *See* Comp. Brf. at 67, FN 16. And contrary to Complainants' allegation that the [REDACTED] practices one or more claims of the '663 patent under the doctrine of equivalents, Respondents' expert explained in detail the substantial differences between that product and the asserted claims. RX-2814C at QA 172, 191-208.

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As explained in Funai's initial submission, the evidence does not support Complainants' contention that the '958 and '867 patents are essential to the IEEE 802.11 standard.

With respect to the '958 patent, Complainants assert that "all products that claim to have an 11 Mb/s CCK transmit capability that are in compliance or interoperable with any of the IEEE 802.11b, 802.11g, or 802.11n standards are, at a minimum, more likely than not, and indeed highly likely to infringe at least Claims 32 and 35 of the '958 Patent." Comp. Brf. at 68. The ID correctly found otherwise. ID at 207. Notwithstanding Complainants' twisted interpretation, the term "code" in the '958 patent refers to "real" values, and is different from "complex" values generated from the CCK modulation according to the 802.11 standard. RX-2813C at QAs 142-44.

With respect to the '867 patent, Complainants self-servingly assert, based on their own proposed (but rejected) constructions, that "all products that claim compliance or compatibility with any of the IEEE 802.11 standards are, at minimum, more likely than not, and indeed highly likely, to infringe at least at least Claims 20, 23-24, 26-28, 32-35, 37-40, 47, 49- 52, and 58-61 of the '867 Patent." Comp. Brf. at 69. Aside from Complainants' fatally flawed "more likely than not" criteria advanced in support of meeting their burden of proof on infringement, the ID also correctly rejected this argument because the accused IEEE 802.11 timing synchronization is a substantially different paradigm for synchronizing transmitters and receivers. ID at 242-243. In contrast to the '867 patent, teaching by implementing 802.11, the accused products do not use a timestamp to inform the receiver of the expected time of the next transmission signal, so that the receiver need only wake up at the expected time of the next transmission signal. The 802.11 timestamp reflects a value that simply counts up from a number that is "chosen randomly" and does not cycle with each interval. Hg. Tr. (Negus) at 438:19-439:6. In 802.11, the Beacon interval (*i.e.*, transmission signal interval) is 2^{16} , but the timestamp is given the value of a transmitter counter that counts up to 2^{64} . CX-0116C at LSI Agere 837-01170257 (Section 7.3.1.3), LSI Agere 837-011700588 (Section 11.1.2). This is important because the standard timestamp is not within the Beacon interval, and does not inform the

receiver of the amount of delay, or even if there was a delay, or when to expect the next transmission signal. RX-2813C at QAs 351-57; RX-2811C at QA 238. The 802.11 standard therefore plainly describes a very different timestamp than the one taught by the '867 patent.

IX. Question 12

A. Complainants Flawed Interpretation Of The “Articles Protected By The Patent” Requirement Is Contrary To The Statute, And Finds No Support In The Legislative History, Or In Commission And Federal Circuit Precedent

Contrary to Complainants characterization in its initial submission to the Commission (Comp. Brf. at 69-74), the statutory language, the legislative history, as well as a proper reading of Commission and Federal Circuit precedent all support the conclusion that the statutory requirement of “articles protected by the patent” (*i.e.*, a technical prong) must be satisfied for a domestic industry based on licensing investments under 19 U.S.C. § 1337(a)(3)(C). To conclude otherwise would create a special exemption to the domestic industry requirement for non-practicing patent assertion entities (PAEs) that finds no support in the statute. At a time when the Commission should exercise caution about opening its doors to PAEs that do not have a legitimate domestic industry, the elimination of this critical requirement for only one type of domestic industry (licensing), while maintaining it for other types of domestic industries (plant and equipment, labor and capital, and engineering, research and development), would create a perverse incentive for PAEs to flock to the Commission with dubious claims while diverting Commission resources from other investigations brought by complainants with actual product-based domestic industries.

The statutory language plainly requires proof of “articles protected by the patent”—which must practice at least one claim of the asserted patent under license or authorization by the patentee—for *any* type of domestic industry. The Commission’s analysis should begin and end with this clear statutory language. Furthermore, that statutory language has recently been affirmed as a critical part of the domestic industry requirement by the Federal Circuit. *See Microsoft Corp. v. ITC*, 731 F.3d 1354 (Fed. Cir. 2013). Nonetheless, relying heavily upon an revisionist theory of the

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legislative history, Complainants assert that “the Commission and Federal Circuit have repeatedly and consistently upheld Congress’ goal in revising the statute in 1988 to include a licensing-based domestic industry.” Comp. Brf. at 69. However, there is no basis to suggest that the 1988 amendments eliminated the requirement of articles protected by the patent for a domestic industry based on licensing. Although Congress intended to “liberalize the domestic industry requirement” by including subparagraph (C), *see John Mezzalingua Assocs. v. ITC*, 660 F.3d 1322, 1327 (Fed. Cir. 2011), there is nothing in the legislative history to suggest that Congress altogether intended to eliminate the statutory requirement of articles protected by the patent when the alleged domestic industry is based on licensing. In fact, the legislative history suggests precisely the opposite. Even in the seminal *Gremlins* decision, which Congress sought to correct through the 1988 amendments, the complainant had licensed its intellectual property to others who produced articles protected by the copyrights at issue. *See Gremlins*, ITC Inv. No. 337-TA-201 (Sept. 12, 1985) (Initial Determination), 1985 ITC LEXIS 20, *27-28. The legislative history further notes that Congress sought to expand the domestic industry requirement to “encompass universities and other intellectual property owners who engage in extensive licensing of their rights to *manufacturers*,” which confirms that there must be some authorized production of articles protected by the patent by those licensed manufacturers. *See* H.R. Rep. No. 100-40 at 157 (1987); S. Rep. No. 100-71 at 129 (1987). As much as LSI might try to reimagine itself, the litigation-focused domestic industry that LSI has alleged in this investigation is markedly different from the type of licensing investments made by a university or technology start up that Congress sought to cover through the 1988 amendments to Section 337.

In *InterDigital v. ITC*, the Federal Circuit panel majority clarified in its rehearing opinion that “the research and development or licensing activities referred to in subparagraph (C) must also exist with respect to articles protected by the patent, such as by licensing protected products.” 707 F.3d 1295, 1298 (Fed. Cir. 2013). Ignoring this aspect of the court’s decision, Complainants rely instead

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upon the statement that “the required United States industry can be based on patent licensing alone; it does not require that the articles that are the objects of the licensing activities (*i.e.*, the ‘articles protected by the patent’) be made in this country.” Comp. Brf. at 72-73 (quoting *InterDigital v. ITC*, 690 F.3d 1318 (Fed. Cir. 2012)). The fact that the *InterDigital* court found that the “articles protected by the patent” need not “be made in this country” does not mean there need not be any such protected articles at all. Likewise, Complainants’ citation to the statement in the *InterDigital* rehearing opinion that “[i]t is not necessary that the party manufacture the product that is protected by the patent and it is not necessary that any other domestic party manufacture the protected article” is also a red herring. Comp. Brf. at 73 (quoting *InterDigital II*, 707 F.3d at 1303-04).³⁴

Complainants ignore that the articles can also be manufactured outside the United States by third party licensees, provided that those articles are authorized for sale in the United States, and thereby protected by the U.S. patent. The proper test is whether there are sufficient domestic investments in licensing activity related to the intellectual property and, if such investments exist, whether those activities are then linked to an article protected by the intellectual property, regardless of where that article is manufactured.

This interpretation is also consistent with the ITC’s construction of the rest of Section 337(a)(3). If a complainant shows either significant investment in plant and equipment or significant employment of labor or capital in the United States, it can satisfy the domestic industry requirement even if the articles protected by the patent are manufactured outside of the United States, provided the domestic investments are sufficiently significant in relation to the foreign articles protected by the patent. *See Certain Printing and Imaging Devices and Components Thereof*, Comm’n Op., ITC Inv. No. 337-TA-690, 2011 ITC LEXIS 2849, at *50-*52 (Feb. 17, 2011) (confirming that “in appropriate

³⁴ Misleadingly, Complainants suggest that “by denying *certiorari*, the Supreme Court declined to alter this interpretation” in *InterDigital* (Comp. Brf. at 69-70), but of course “[t]he denial of a writ of *certiorari* imports no expression of opinion upon the merits of the case, as the bar has been told many times.” *Missouri v. Jenkins*, 515 U.S. 70, 85 (1995) (*citing United States v. Carver*, 260 U.S. 482, 490 (1923)).

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circumstances, a complainant may satisfy the economic prong of the domestic industry by demonstrating that its [U.S. activities] and investments are significant with respect to the [foreign manufactured] articles protected by its intellectual property rights”); *cf. Certain Personal Data and Mobile Communications Devices and Related Software*, Order No. 102, ITC Inv. No. 337-TA-731, 2011 ITC LEXIS 731 (Apr. 6, 2011) (affirmed in relevant part) (finding subparagraph (C) domestic industry to exist based on domestic investments in research and development related to foreign-manufactured products). By the same reasoning, substantial domestic licensing investments relating to foreign-manufactured articles should be sufficient to satisfy the domestic industry requirement if the licensee’s article is imported and shown to have a connection to the license and the intellectual property.

Citing to the Commission’s opinion in *Certain Multimedia Display and Navigation Devices and Systems, Components Thereof, and Products Containing Same*, ITC Inv. No. 337-TA-694. (Aug. 8, 2011) (“Navigation Devices”), Complainants argue that “the Commission has consistently held that a domestic industry can consist of ‘licensing activities’ alone, as long as they are ‘substantial’ and ‘related to the asserted patent.’” Comp. Brf. at 71. Citing the same decision, LSI further asserts that the patent holder will be able to satisfy the domestic industry threshold “[a]s long as the licensing activities clearly relate (*i.e.*, have a nexus) to the asserted patents, occur in the United States, and are substantial.” *Id.* at 72. The Commission in *Navigation Devices*, however, specifically left for another day the question of whether the technical prong must also be satisfied, but nevertheless noted “if a licensee’s product is an ‘article protected by’ the patent, then the license is **by definition** connected to that patent.” *Navigation Devices*, Comm’n Op. at 10 (emphasis added). Complainants conveniently ignore this aspect of the Commission’s holding in *Navigation Devices*. Furthermore, contrary to Complainants’ assertion that “[t]he Commission has repeatedly explained and affirmed this interpretation for over a decade” (Comp. Brf. at 72), the full Commission has not clearly spoken on this issue. In support, Complainants only cite to ALJ orders and initial

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determinations rather than any Commission opinions. Comp. Brf. at 72 n.20. While some ALJs have misinterpreted the statutory requirement, their unreviewed determinations are not binding precedent on the Commission.

Although Complainants vehemently argue that satisfaction of the technical prong is not required for a licensing domestic industry, as an apparent fallback argument, Complainants nonetheless suggests that the statutory language is satisfied for a complainant that licenses its patents because “potential licensees either have products in the market that *may* practice the patent, or they *may* be entering the market with products that *may* practice the patent.” Comp. Brf. at 72 (emphasis added). However, the requirement of “articles protected by the patent” cannot hinge on the mere possibility that a licensee “*may*” eventually incorporate the patented technology into its licensed products. The mere fact that a license grants rights to produce articles protected by the patent cannot be sufficient to satisfy the technical prong. Because a manufacturer could obtain a license and not manufacture any product at all, or could manufacture a product that does not actually practice the patent, the license itself is not evidence of an article that is protected by the patent. Indeed, manufacturers frequently agree to nuisance settlements with nonpracticing entities to avoid or end costly litigation.³⁵ A manufacturer may even license an entire portfolio, but not admit that the license of any specific patent actually covers an article it is manufacturing. It is thus entirely possible that a patent holder could license its patents even though neither it nor its licensees manufacture products that actually implement the invention claimed in the patent.

³⁵ It is apparent that at least some of LSI’s prior license agreements were the result of nuisance settlement agreements to avoid litigation costs rather than based upon any legitimate belief that the licensee’s products actually practice any of the asserted patents. As noted by third party Barnes & Noble, if a target refuses to take a license, LSI’s strategy has been to “maximiz[e] the cost of litigation” by “assert[ing] as many patent infringement claims as possible, regardless of merit.” See Barnes & Noble’s Statement on the Public Interest at 2. “The revolving door of baseless allegations in this case against Barnes & Noble is just one example of LSI’s clear strategy to maximize the costs incurred by companies that have refused to take a license to patents that are invalid, unenforceable, and/or not infringed.” *Id.* at 3-4. Complainants inclusion in this investigation of the sacrificial ‘867 patent, which expires on February 23, 2014, (prior to the expiration of the PRP) is an example of LSI’s “license by litigation” harassment.

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Complainants also mischaracterize the Federal Circuit’s recent *Microsoft* decision, in which the court unequivocally stated that “[a] company seeking section 337 protection must therefore provide evidence that its substantial domestic investment—*e.g.*, in research and development—relates to an actual article that practices the patent, regardless of whether or not that article is manufactured domestically or abroad.” 731 F.3d at 1361. Complainants attempt to dismiss the significance of this case because it “does not relate to licensing under Section 337(a)(3)(C) and is, at most, dicta.” Comp. Brf. at 74. But the Federal Circuit never suggested the statutory requirement of “articles protected by the patent” was only applicable to a domestic industry based on R&D, but not licensing. To the contrary, the court broadly pronounced that “Section 337, though not requiring that an article protected by the patent be produced in the United States, unmistakably requires that the domestic company’s substantial investments relate to actual ‘articles protected by the patent.’” *Microsoft Corp.*, 731 F.3d at 1361. Thus, notwithstanding Complainants’ suggestion that the *Microsoft* decision “has no bearing on the instant investigation” (Comp. Brf. at 75), the Federal Circuit’s holding in that case is clearly applicable to this Investigation and binding on the Commission.³⁶

³⁶ Complainants cite to the oral arguments from the *Microsoft* case to state that “counsel for respondent/intervenor Motorola aptly argued that licensing under § 337(a)(3)(C) is different because one can tie the licensing activities to the patent directly by, for example, looking at the license and the negotiations that led to the license.” Comp. Brf. at 76. Complainants try to attribute those comments to Funai because the law firm of Quinn Emanuel Urquhart & Sullivan, LLP also represents the Funai Respondents in this investigation. But the fact that the same law firm represented Motorola in the *Microsoft* case does not mean that Motorola’s views can or should be attributed to Funai. See *e.g.*, *United States v. Saget*, 991 F.2d 702, 710 (11th Cir.1993) (“we conclude that a witness may not be impeached with a third party’s characterization or interpretation of a prior oral statement unless the witness has subscribed to or otherwise adopted the statement as his own.”) Moreover, Complainants conveniently ignore the position argued by the Commission attorney at oral argument before the Federal Circuit in the *Microsoft* case, in which the Commission took the position that investments under 337(a)(3)(C) must pertain to products covered by the patent, that there is no exemption to this rule for licensing, and that subsequently the court confirmed this rule for licensing investments in the *Motiva* decision. The Commission attorney further noted that there is no requirement for a complainant to show that it manufactures the articles under section 337(a)(3)(C), but there is still a requirement to show that articles protected by the patent actually practice the patent

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Moreover, to somehow treat licensing investments different from R&D investments would not only be contrary to the statutory text, it would be inconsistent with the court's pronouncement that "just as the 'plant or equipment' referred to in subparagraph (A) must exist with respect to articles protected by the patent, such as by producing protected goods, the *research and development or licensing activities referred to in subparagraph (C) must also exist with respect to articles protected by the patent*, such as by licensing protected products." *InterDigital*, 707 F.3d at 1298 (emphasis added). Additionally, the applicability of the technical prong requirement to licensing investments was also confirmed by the court's decision in *Motiva, LLC v. ITC*, where the court required proof of "production-ready technology that would have been *incorporated into domestic goods practicing the patents* through [complainant's] licensing activities in which it was engaged at the time it filed its complaint." 716 F.3d 596, 600 (Fed. Cir. 2013) (emphasis added). Complainants completely ignore the *Motiva* decision in their analysis.

Inexplicably, Complainants argue that even R&D investments under subparagraph (C) need not "be confined to the patented technology but can relate to other aspects of articles that eventually practice the asserted patent." Comp. Brf. at 75. But the court in the *Motiva* and *Microsoft* decisions clearly indicated that there must be actual articles protected by the patent that must result from the complainant's development and licensing efforts. *Microsoft Corp.*, 731 F.3d at 1361; *Motiva*, 716 F.3d at 600. This is not contrary to the statutory language stating that domestic industries can be "in the process of being established." To the extent that a complainant can establish that it took "necessary tangible steps" towards the development of articles protected by the patent (*e.g.*, prototypes), and further show a "significant likelihood that the industry requirement will be satisfied in the future," the statutory language can be met. *Certain Stringed Musical Instruments and Components Thereof*, ITC Inv. No. 337-TA-586, Comm'n Op. at 16, USITC Pub. 4120 (Dec. 2009). As established companies, however, LSI and Agere made no such efforts in this Investigation, nor could they have.

B. Complainants Have Failed To Prove Any Articles Protected By The Patents Asserted In This Investigation

Belatedly realizing their failure of proof with respect to this critical statutory requirement, Complainants attempt to muster up any evidence it can find to show that its licensing investments are actually related to articles protected by the patent, thus satisfying the technical prong. Complainants' showing is woefully inadequate.

First, Complainants argue that [REDACTED] [REDACTED] was found to infringe the '867 patent by a district court. Comp. Brf. at 77. However, that was only based on a stipulated judgment of infringement as to [REDACTED], and involved only one of the patents asserted here. See CX-1617. But Complainants have failed to establish that any of [REDACTED] current products, or any other licensee's products, meet the claim limitations of '867 patent. As explained above, the fact that [REDACTED] [REDACTED] [REDACTED] says nothing about whether [REDACTED] products actually practice any of the asserted patents.

Next, Complainants further rely upon the licensee [REDACTED] products that are in compliance with the IEEE 802.11 standards. The ALJ, however, correctly found that Complainants failed to prove that [REDACTED] products practice any of the claims. As noted in the ID:

Complainants, however, have not adduced evidence to show that the [REDACTED] products in question satisfy the technical prong with respect to the '958 and '867 patents. Complainants instead generally allege, without evidentiary support, that [REDACTED] has 802.11 compliant products that are "more likely than not" and "highly likely" to practice the Wi-Fi patents at issue. See Comp. Brf. at 573. Such a statement is not enough to prove that the [REDACTED] products practice the '958 and '867 patents. Therefore, it is determined that Complainants have not shown that the domestic industry requirement is satisfied based on [REDACTED] investments in the United States.

ID at 331. From a technical perspective, Complainants identified no specific [REDACTED] product that allegedly practices a valid claim of any asserted patent. Nor did they even identify a particular claim they allege is practiced. There is no testimony, fact or expert, linking any [REDACTED] product to a claim, which is not surprising in view of Complainants' failure to identify a claim or product in their brief to the ALJ. The ALJ correctly found that a product's mere compliance with the 802.11

standard is an insufficient basis to find that the product practices any claim of the '867 and '958 patent, and thus Complainants failed to show that [REDACTED] products satisfy the technical prong.

Finally, [REDACTED] [REDACTED]. However, the [REDACTED] identified by Complainants constitutes at best a biased and incomplete party allegation and does not constitute *evidence* that any of the licensee's products actually function in the manner alleged. Indeed, [REDACTED] [REDACTED]. For example, [REDACTED] [REDACTED] that Complainants asserts shows products that practice the '087 patent, [REDACTED] [REDACTED] [REDACTED] CX-1152C at 74; CX-1192C at 32; (emphasis added). Of course, Complainants failed to present any source code evidence for its licensees' products [REDACTED] [REDACTED]. Complainants also failed to present any expert or fact witness testimony to explain how any licensee's products actually work. To find that the technical prong is satisfied based on [REDACTED] would be analogous to finding that infringement can be proven based only on the infringement claim charts that a complainant includes with its complaint. Complainants failed to prove, based on any technical analysis of actual products, that its licensee's products practice the claims in the manner alleged.

Accordingly, Complainants have failed to satisfy the statutory requirement for "articles protected by the patent" for its licensing investments.

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Dated: November 12, 2013

Respectfully submitted,

/s/ Paul Devinsky

Paul Devinsky

Ray V. Lupo

Joel M. Freed

Christopher L. May

McDERMOTT WILL & EMERY

The McDermott Building

500 North Capitol Street, Northwest

Washington, DC 20001

Telephone: (202) 756-8000

Facsimile: (202) 756-8087

Christopher D. Bright

McDERMOTT WILL & EMERY

4 Park Plaza, Suite 1700

Irvine, CA 92614-2559

Telephone: (949) 851-0633

Facsimile: (949) 851-9348

*Counsel for Respondents Funai Corporation, Inc., Funai
Electric Co., Ltd., P&F USA, Inc., and Funai Service
Corporation*

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CERTIFICATE OF SERVICE

I, Carlos Goldie, certify that, on November 22, 2013, I caused the foregoing **PUBLIC VERSION OF FUNAI RESPONDENTS' REPLY TO COMPLAINANTS BRIEF IN RESPONSE TO THE NOTICE OF COMMISSION DETERMINATION TO REVIEW A FINAL INITIAL DETERMINATION FINDING A VIOLATION OF SECTION 337 IN ITS ENTIRETY** to be filed through EDIS and served upon the following parties in the manner indicated below:

The Honorable Lisa R. Barton
Acting Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112-A
Washington, D.C. 20436
202-205-2000

- Via Electronic Filing
- Via First Class Mail
- Via Hand Delivery
- Via Federal Express
- Via Electronic Mail

The Honorable David P. Shaw
Administrative Law Judge
U.S. International Trade Commission
500 E Street, SW, Room 317-O
Washington, D.C. 20436
Patricia.Chow@usitc.gov

- Via Electronic Filing
- Via First Class Mail
- Via Hand Delivery
- Via Federal Express
- Via Electronic Mail

Counsel for Complainants LSI Corporation and Agere Systems, LLC:

Jordan Trent Jones
Kilpatrick Townsend & Stockton LLP
1080 Marsh Road
Menlo Park, CA 94025
AgereLSI-837@kilpatricktownsend.com

- Via Electronic Filing
- Via First Class Mail
- Via Hand Delivery
- Via Federal Express
- Via Electronic Mail

Counsel for Respondent Realtek Semiconductor Corporation:

Elizabeth A. Niemeyer
Finnegan, Henderson, Farabow, Garrett &
Dunner, LLP
901 New York Avenue, N.W.
Washington, D.C. 20001
Realtek-837@finnegan.com

- Via Electronic Filing
- Via First Class Mail
- Via Hand Delivery
- Via Federal Express
- Via Electronic Mail

By /s/ Carlos Goldie

Carlos Goldie
IP Project Assistant
McDERMOTT WILL & EMERY LLP
500 North Capitol Street, NW
Washington, D.C. 20001