MINDGEEK, S.A.R.L., MINDGEEK USA, INC., and PLAYBOY ENTERPRISES, INC., PETITIONERS

V.

SKKY INCORPORATED PATENT OWNER

CASE IPR2014-01236 PATENT 7,548,875

PATENT OWNER'S RESPONSE TO PETITION FOR *INTER PARTES* REVIEW OF UNITED STATES PATENT NO. 7,548,875

TABLE OF CONTENTS

		172	age
I.	INT	I'RODUCTION	1
II.	BAG	CKGROUND	2
	Α.	Overview of U.S. Patent No. 7,548,875	2
III.	CLA	AIM CONSTRUCTION	
	A.	"Wireless Device Means"	5
		1. "Wireless Device Means" should be interpreted as a means-plus- function claim element	5
		2. If "wireless device means" is not a means-plus-function claim element, "wireless device means" should be construed as "a device capable of receiving data over a cellular communications network and having multiple processors wherein one or more processors is primarily dedicated to processing the compressed multimedia data."	. 15
		i. The intrinsic record of the '875 patent discloses that a "wireless device means" is a device capable of receiving data over a cellular communications network	. 16
		ii. The intrinsic record of the '875 patent discloses a "wireless device means" comprising of multiple processors	. 17
		iii. The intrinsic record of the '875 patent discloses that a "wireless device means" includes one or more processors primarily dedicated to processing the compressed multimedia data	. 23
	В.	"Segment of a Full Song, Musical Composition, or Other Audio Recording or Visual Recordings."	. 25
IV.	REI	FERENCES	. 26
	A.	U.S. Patent No. 7,065,342 ("Rolf")	. 26
	В.	MP3 Guide	. 27
	C.	OFDM/FM	. 27
V.	AR	GUMENT	. 28
	Α.	Petitioners have not provided sufficient evidence to demonstrate by a preponderance of the evidence that all claim elements of the i	

MINDGEEK S.A.R.L. et al. v. SKKY, INC. IPR2014-001236

	Peti	tioner	d claims are disclosed in the references relied upon by is in the Petition or that there is a motivation to combine the sas proposed by Petitioners	29
В.			eme Court and Federal Circuit Precedent Precludes the Use ght in an Obviousness Analysis.	30
C.	Petitioners' Ground 1: Rolf in View of MP3 Guide Does Not Render Claims 1-3, 5, 15-21, and 23 of the '875 Patent Obvious			
	1.		combination of Rolf and MP3 Guide does not disclose a less device means (Claim 1)	33
		i.	The combination of Rolf and MP3 Guide does not disclose multiple processors (Claim 1)	33
		ii.	Rolf and MP3 Guide do not disclose a "wireless device means" having one or more processors primarily dedicated to processing compressed multimedia data	35
		iii.	If the Board ultimately adopts Patent Owner's proposed means-plus-function claim construction for "wireless device means," then Rolf fails to disclose this limitation for the same reasons.	36
	2.	deliv devi	combination of Rolf and MP3 Guide does not disclose the very of a compressed audio and/or visual file to a "wireless ce means" independent of an Internet connection or other uputer based system (Claim 18)	37
	3.	The segn	combination of Rolf and MP3 Guide does not disclose a ment of a full song, musical composition or other audio ording or visual recordings (Claim 21)	
D.		tionei	rs' Ground 3: Rolf in View of MP3 Guide and OFDM/FM t Render Claim 22 of the '875 Patent Obvious	
	1.		Kotzin overstates the use of orthogonal frequency-division tiplexing at the time of invention.	42
	2.	Rolf OFI	f teaches away from using the method disclosed in DM/FM (Claim 22)	43
	3.	in C	Fin view of MP3 Guide modified according to the teachings OFDM/FM does not disclose a functioning method im 22)	44

		4. Choosing to modify Rolf in view of MP3 Guide with the teachings of OFDM/FM would require undue experimentation without a reasonable expectation of success (Claim 22)	7
		5. A person of ordinary skill would not be motivated to combine Rolf in view of MP3 Guide with OFDM/FM (Claim 22)4	8
	E.	Regardless of whether the Board decides that "wireless device means" is or is not a means-plus-function limitation, Claims 18, 21, and 22 are valid for the reasons set forth in Sections V(A-D)	2
	F.	The <i>Inter Partes</i> Review Initiated in Relation to U.S. Patent No. 7,548,875 Deprives Patent Owner of Its Right to a Jury Trial Pursuant to the Seventh Amendment of the United States	
		Constitution 5	3
771	CO	NICI LISION	R

TABLE OF AUTHORITIES

	Page
Cases	
02 Micro Int'l v. Beyond Innovation Tech., 521 F.3d 1351 (Fed. Cir. 2008)	4
Abbott Labs v. Cordis Corp., 710 F.3d 1318 (Fed. Cir. 2013)	56
AGA Med. Corp. v. W.L. Gore & Assocs., No. 10-3734, 2012 U.S. Dist. LEXIS 139989 (D. Minn. Sept. 28, 2012)	7
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Chi. Bd. Options Exch., Inc. v. Int'l Sec. Exch., LLC, 677 F.3d 1361 (Fed. Cir. 2012)	11, 14
Commodity Futures Trading Commission v. Schor, 478 U.S. 833 (1986)	53
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Statutes

35 U.S.C. § 103(a)	30
35 U.S.C. § 112 ¶ 6	6
35 U.S.C. § 316(a)(8)	1
Other Authorities	
37 C.F.R. § 42.121	55
37 C.F.R. § 42.220	1
37 C.F.R. § 42.73(d)(1)	55
Institution Decision, Paper No. 10	5
Preliminary Patent Owner Statement, Paper 8	5
U.S. Const. amd. vii	passim
U.S. Const. Art. I	52
II.S. Counct. Aut. III	50

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I. INTRODUCTION

Patent Owner Skky, Inc. ("Skky") provides this response under 35 U.S.C. § 316(a)(8) and 37 C.F.R. § 42.220. The Patent Trial and Appeal Board has instituted this *inter partes* review to consider whether claims 1-3, 5, 15-21, and 23 of U.S. Patent No. 7,548,875 ("the '875 patent") are obvious over Rolf and MP3 Guide and whether Claim 22 of the '875 patent is obvious over Rolf, MP3 Guide, and OFDM/FM. *See*, Paper 10 at 10.

Petitioners' proposed combinations do not disclose all of the claimed elements in the challenged claims. Independent Claim 1 claims a method of wirelessly delivering compressed audio and/or visual data to a "wireless device means." Petitioners' suggest that the data transmission method described in Rolf, modified by MP3 Guide, renders the claim obvious. However, Rolf does not teach the claim element "a wireless device means."

Similarly, Petitioners' prior art combination does not teach the inventive elements of dependent Claims 18, 21, and 22. For Claim 18, the prior art does not teach wireless delivery of compressed audio and/or video file to a "wireless device means" without an Internet connection or other computer based system. Nor have Petitioners provided any disclosure in the references that renders obvious transmitting a segment of a song or video as claimed in Claim 21. Further, Petitioners' suggested combination of Rolf and MP3 Guide modified by OFDM/FM does not render Claim

22 obvious because one of ordinary skill in the art would have no motivation to combine the references and such proposed combination would result in an inoperable system. For these reasons, and the reasons discussed in further detail below, Claims 1-3, 5, 15-21, 22, and 23 are nonobvious over the asserted reference and should be confirmed as valid.

II. BACKGROUND

A. Overview of U.S. Patent No. 7,548,875

John Mikkelsen and Dr. Robert Freidson invented the claimed method of the '875 patent at the turn of the century, anticipating growing consumer demand to obtain rich media files such as CD-quality music, video, and images on their mobile devices. At the time, Internet access via cellular devices was rudimentary, at best offering simplistic websites consisting of textand basic audio tones. In contrast, Mr. Mikkelsen and Dr. Freidson envisioned a mobile Internet much like we know today – in which high quality multimedia files are delivered wirelessly to cellular devices. The '875 patent details a method of accomplishing such a delivery of rich media files to a cellular device.

The '875 patent, granted on June 16, 2009, claims priority to a provisional application, U.S. Application No. 60/301,115. At the time of filing, cellular phones and other similar wireless devices were unable to receive and play back content rich media. Ex. 1002 at 8. Although some phones were capable of downloading and playing simple media, playback was limited to low quality images and simple chimes or

tones. Ex. 1001 at 1:34-38. The '875 patent sought to make content rich media available on wireless devices, teaching a method of compressing, storing, and transmitting content rich media, such as video files and MP3 audio files, to a particularly structured wireless device. *Id.* at Claim 1.

Rolf, the primary reference in this proceeding, was thoroughly considered by the Examiner during the prosecution of the '875 patent. Indeed, Rolf was cited as the primary reference in multiple rejections during the examination of the '875 patent.

E.g., Ex. 1029 at 4.; Ex. 1034 at 4. However, each rejection was traversed and the prior art, including Rolf, was distinguished.

Patent Owner met with the Examiner to discuss potential amendments to overcome Rolf and the other prior art that formed the basis of the Examiner's rejections. Ex. 1003. During that meeting, the Examiner suggested amending the claims to recite "means" language to traverse the prior art. *Id.* During a second meeting, Patent Owner discussed what specific language would be acceptable to the Examiner. Ex. 1004. As a result of this meeting, under the guidance of the Examiner, Patent Owner submitted amended language that included the term "wireless device means." *Id.*

The Notice of Allowance included an Examiner's Amendment inserting the same "wireless device means" language into the preamble of the independent claim. Ex. 1002 at 3-4. Further, the Examiner described Rolf as the closest prior art

reference to the allowed claims. *Id.* at 8. Accompanying the amendment, the Examiner included a very detailed explanation of Rolf, including what Rolf did and did not disclose. *Id.* Specifically, the Examiner stated that Rolf failed to disclose a "wireless device means" because it did not teach one of skill in the art the structure of the "wireless device means." *Id.* at 8. The Examiner noted that while Rolf did disclose a "mobile cellular telephone," it did not disclose a "wireless device means." *Id.* at 9. Distinguishing the two terms was their structure – specifically the structure disclosed in the '875 patent of "Figs. 2 and 3 (at least page 14, line 6 through page 15, line 4), and others, and inclusive of 'board 203' which includes the 'main blocks' recited in page 14, lines 23-25 and the following supporting disclosure." *Id.* at 2. Thus, the challenged claims were allowed after an extensive investigation of Rolf and the scope of the prior art.

III. CLAIM CONSTRUCTION

Claim construction involves "determining the meaning and scope" of the claims of a patent. *Markman v. Westview Instruments, Inc.*, 53 F.3d 967, 976 (Fed. Cir. 1995) (en banc). A claim term is generally afforded the meaning the term "would have to a person of ordinary skill in the art after reviewing the intrinsic record at the time of invention." *O2 Micro Int'l v. Beyond Innovation Tech.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008). Often, "meaning of a claim term as understood by persons of skill in the art is not readily apparent." *Id.* To facilitate this understanding, a patent applicant may act as

his or her own lexicographer by imparting special meaning to the term in the specification or file history. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Thus, by examining the intrinsic evidence, a person skilled in the art would be able to decipher the term's meaning.

A. "Wireless Device Means",

1. "Wireless Device Means" should be interpreted as a meansplus-function claim element.

While Patent Owner recognizes that the Board determined that a means-plus-function analysis does not apply to the term "wireless device means" should not considered using means-plus-function analysis, *see* Institution Decision, Paper No. 10 at 7, Patent Owner respectfully disagrees with the Board's decision. Patent Owner incorporates by reference in its entirety its discussion on claim construction of this term presented in its Preliminary Patent Owner Statement, Paper 8 at 5-17.

Nevertheless, Patent Owner sets forth again the argument below here in light of the Federal Circuit's holding that issues decided in the Institution Decision are not appealable. *In re Chozgo Speed Techs.*, *LLC*, 778 F.3d 1271, 1276 (Fed, Cir. 2015).

A means-plus-function claim allows a patentee to express a term as "a means or step for performing a specified function without the recital of structure, material, or

¹ Patent Owner is not waiving its right to propose a different construction, or constructions for other terms in the '875 patent, along with supporting arguments, in a different forum as appropriate in that forum.

acts in support thereof." 35 U.S.C. § 112 ¶ 6. Means-plus-function analysis follows a two-step process. First, the court must determine whether the claim invokes 35 U.S.C. § 112 ¶ 6. Robert Bosch, LLC v. Snap-On Inc., 769 F.3d 1094, 1097 (Fed. Cir. 2014). By using the word "means" the patentee creates a rebuttable presumption that the claim is a means plus function claim. *Id.* Here, Petitioners have not made any attempt to rebut this presumption. Pet. at 9. Indeed, Petitioners, Patent Owner, and the Examiner all agree that wireless device means invokes a means-plus-function limitation. Second, if the claim is a means-plus-function claim, a court construes the claim by identifying limiting structure, material, or acts in the specification. Robert Bosch, 769 F.3d at 1097.

The term "wireless device means" should be construed as a means-plus-function claim per 35 U.S.C. § 112 ¶ 6. The term is properly construed as having the following function and structure:

Function: To request, wirelessly receive, and process a compressed audio and/or visual file.

Structure: A device capable of receiving data over a cellular communications network and having multiple processors wherein one or more processors is primarily dedicated to processing the compressed audio and/or visual data and is operatively connected to non-volatile and volatile memory, bootstrap, analog interface, and a digital interface or equivalents thereof.

The term "wireless device means," added at the Examiner's urging during prosecution to overcome the prior art, first appears in the preamble of Claim 1, which forms the antecedent basis for subsequent uses of the term. Ex. 1004 at 1-3. Accordingly, the preamble breathes life into the claim and must be considered in any proper construction. *Pacing Techs.*, *LLC v. Garmin Int'l, Inc.*, 778 F.3d 1021, 1024 (Fed. Cir. 2015) (preamble terms found to be limiting because they "provide antecedent basis for and are necessary to understand the positive limitations in the body of claims").

The preamble also includes functional language of "wirelessly delivering" the compressed file to the "wireless device means." As such, the functional language of "wirelessly delivering" defines the function of the "wireless device means." Applying ordinary canons of claim construction, examination of the specification and prosecution history demonstrates that the meaning of "wirelessly delivering" the compressed audio and/or visual file to the "wireless device means" includes requesting, wirelessly receiving, and processing the compressed file. E.g., AGA Med. Corp. v. W.L. Gore & Assocs., No. 10-3734 (JNE/JSM), 2012 U.S. Dist. LEXIS 139989 at * 30-31 (D. Minn. Sept. 28, 2012). Thus, based on the language of the claim, a person of ordinary skill in the art would interpret the function of the wireless device means as requesting, wirelessly receiving, and processing a compressed audio and/or visual file. Ex. 2021 at ¶¶ 30, 32.

The specification is replete with support for Patent Owner's Construction of "wirelessly delivering" and, accordingly, "wireless device means." For example, the Abstract states that "[t]he files may be selected from and downloaded to the electronic device with or without the use of a worldwide network connection." Ex. 1001, Abstract. The remainder of the specification is also clear that the "wireless device means" functions by requesting, wirelessly receiving, and processing the compressed audio and/or visual files. Ex. 1001 at 2:49-58 ("An accessory attachment to standard telephones can however be incorporated to implement the delivery, storage, and playback capabilities of the present invention to existing landline and cellular telephones which have not been encoded at the time of manufacture, if necessary.")(emphasis added); 12:47-50 ("the purpose of the chip 104 is to store a selection of clips, allow for downloading of clips to be stored on the chip 104, and allow for playback of clips, either by the telephone or the chip 104.")(emphasis added); 32:51-54 ("It is a further object of the present invention to provide an accessory attachment for cellular telephones and for landline telephones which will enable the telephone to access and utilize sound files, including clips.")(emphasis added). See also, Ex. 2021 at ¶ 31.

The file history, as part of the intrinsic evidence, also supports Patent Owner's proposed function for "wireless device means." In response to the rejection based on Rolf, Patent Owner stated that "Rolf in particular does not teach or disclose how to

produce a wireless cellular device that could receive, wirelessly, digitally compressed rich media, as selected and on demand, for storage on the wireless cellular device for playback as desired." Ex. 1006 at 3 (emphasis added). Patent Owner then distinguished the claimed invention from the prior art because "[w]ithout any wireless cellular device extent, or teaching anywhere of how to produce one, applying the teachings of Breen to Rolf could not possibly yield predictable results of the delivery, wirelessly, of compressed, digital content to such a device." Id. at 4 (emphasis added). Patent Owner distinguished the Greenman reference by describing the "wireless device means" function as receiving "compressed master recordings, rich media, human voice, graphics, animations and other visuals sent over the air wirelessly to a cell phone or other electronic device, or otherwise compression of rich media data of any kind, as this technology which is described in Applicants' specification and claims was simply not available at the time of the Greenman article." Ex. 2002 at 11 (emphasis added). Similarly, Patent Owner explained that the prior art taught away from its claimed invention "of transmitting master recordings and other rich media, such as described above, over the air." Id. (emphasis added).

Likewise, Dr. Freidson's declaration, submitted during examination, describes a "wireless device means" that receives "compressed data wirelessly on demand from a server and play[s] back the received content" Ex. 1036 at ¶ 12. Thus, throughout the examination process, Patent Owner repeatedly and consistently made clear that

the function of the "wireless device means" is "wirelessly deliver," which should be construed as requesting, wirelessly receiving, and processing a compressed audio and/or visual file.

The intrinsic record, including the specification and file history describes in extensive detail the structure of the "wireless device means," linked to and performing the function, as "a device capable of receiving data over a cellular communications network and having multiple processors wherein one or more processors is primarily dedicated to processing the compressed audio and/or visual data and is operatively connected to non-volatile and volatile memory, bootstrap, analog interface, and a digital interface or equivalents thereof." *See also*, Ex. 2021 at ¶ 33.

First, the specification states that the base component for the "wireless device means" is a cellular phone 202. The specification describes the cellular phone 202 as "any commercially available cellular phone having capabilities for supporting a command set for general telephone control." Ex. 1001 at 14:27-29. This "commercially available cellular phone" was compatible with various telecommunications standards for processing data and making phone calls. *Id.* One of skill in the art would understand that the "commercially available cellular phone" described in the '875 patent would already include a processor to perform the various functions of a cellular phone, like performing general telephone controls. Ex. 2021 at ¶ 45. Indeed, one of skill would know that these phones needed to have a processor

to process the digital data in telecommunications. *Id.* At the time of the invention, almost all phones, cellular or landline, included a processor to handle the computational tasks associated with telecommunications. *Id.* at ¶ 46; Ex. 2017.

The specification then describes the cellular phone 202 as associated with a specialized board 203 "implementing all required function, similar to chip 104, [that] is incorporated in an accessory unit 204 attached to the cellular phone," or that "a chip performing the same functions of the board may instead be embedded in the phone itself." Ex. 1001 at 14:16-22. Figure 2 is consistent in showing that the board 203 is part of cellular phone 202. The specification discloses that board 203 includes various components, including a processor 300. Ex. 1001 at 14:46-63. Figure 3 provides box diagram of the components on board 203, including processor 300. This processor is an additional processor besides the processor already included in the commercially available cellular phone 202. Figure 3 illustrates how the additional processor is integrated with the other additional components of board 203. Thus, the specification clearly discloses that "wireless device means" is a cellular phone with multiple processors.

The file history is consistent with the disclosure in the specification that the structure of the "wireless device means" is a cellular device with multiple processors. See Chi. Bd. Options Exch., Inc. v. Int'l Sec. Exch., LLC, 677 F.3d 1361, 1367 (Fed. Cir. 2012) (stating that the prosecution history may be considered to determine if there is the requisite link with the disclosed structure in the specification). Dr. Freidson's declaration submitted during examination specifically described the prototype he created as including an additional processor dedicated to processing the data associated with the compressed audio and/or visual file. Dr. Freidson acknowledged that one of skill in the art knew that a cellular phone at the time of invention already contained a processor, but also knew that this processor was not powerful enough to process compressed audio and/or visual files. Ex. 1036 at ¶ 4. Dr. Freidson then explained how he developed an additional component, a wireless MP3 player with its own processor, "for use with cell phones to receive and play compressed digital music." *Id.* at ¶ 5. Thus, Dr. Freidson's declaration provides further evidence that the "wireless device means" of the claimed invention includes a cellular device with an additional processor beyond the general purpose processor already included in the cellular phone.

Accordingly, the specification and prosecution history clearly demonstrate that the "wireless device means" includes a cellular device with multiple processors.

The specification discloses one or more additional processors primarily dedicated to processing the data in the compressed audio and/or visual data. Specifically, the secondary processor in the preferred embodiments is a digital signal processor. Ex. 1001 at 14:46-47; 18:46-50; 22:21-26; 23:43-47. A Skilled Practitioner would appreciate that a digital signal processor is a type of specialized processor with

architecture designed for carrying out particular operations on data as opposed to general-purpose processors designed to merely rearrange stored data. Ex. 2021 at ¶ 55. Examples of specialized operations for which digital signal processors are well-suited include multimedia processing, such as audio and video coding and decoding, and multimedia storage and playback. *Id.* Additionally, digital signal processors are well-suited for mathematical-specific functions like the computation of Fast Fourier-Transforms as exemplified in a preferred embodiment of the invention to process OFDM modulated signals. *Id.*; Ex. 1001 17:22-24 ("To increase computation efficiency, a Fast Fourier Transform is employed to convert sub-channel symbols from frequency to time area.")

The additional processor, with the other components shown in Figs. 2 and 3, is described in the intrinsic record as being primarily dedicated to receiving and processing the compressed audio and/or visual file. For example, Patent Owner describes that processor 300, the additional processor described as part of board 203, requests and receives the compressed audio and/or visual file. Ex. 1001 at 14:51-63. Similarly, the purpose of this additional processor, sometimes referred to as a "microchip," is to "store a selection of clips, allow for downloading of clips to be stored on the chip 104, and allow for the playback of clips. . . ." Ex. 1001 at col 12:47-50. See also Ex. 2021 at ¶ 55. Chip 104, another reference to the microchip, is described as being responsible for requesting and receiving the compressed audio

and/or visual file. Ex. 1001 at 12:66-13:3. Thus, the specification clearly links the function to this additional processor that is primarily dedicated for processing the compressed audio and/or visual file.

Dr. Freidson's declaration describes a "wireless device means" containing a dedicated processor. See Chi. Bd. Options, 677 F.3d at 1367 n. 3 (referring to the prosecution history to determine the structure linked to the claimed function). As discussed above, due to a lack of adequate existing technology, Dr. Freidson had to create a prototype "wireless device means" to test the patented method. Ex. 1036 at ¶ 5. The prototype included a printed circuit board functioning as a wireless MP3 player associated with a cellular phone. *Id.* The processor in the circuit board compensated for the very slow processor found in conventional cellular phones at the time of invention, allowing the "wireless device means" to receive and play back a compressed audio/visual file. *Id.* at ¶ 4. In other words, the second processor is primarily dedicated to processing the mp3 file. Therefore, the specification and prosecution history link the function of the "wireless device means" with the structure of one or more processors primarily dedicated to processing the compressed audio and/or visual data.

2. If "wireless device means" is not a means-plus-function claim element, "wireless device means" should be construed as "a device capable of receiving data over a cellular communications network and having multiple processors wherein one or more processors is primarily dedicated to processing the compressed multimedia data."

"Wireless device means" must be construed because it is not a term of art normally used in the relevant field. In other words, "wireless device means" does not have a plain and ordinary meaning in the field of wireless data transmission. See O2 Micro, 521 F.3d at 1261 ("the 'ordinary' meaning of a term does not resolve the parties' dispute, and claim construction requires the court to determine what claim scope is appropriate in the context of the patents-in-suit"); Ex. 2021 at ¶ 36.

The term "wireless device means" should be construed as "a device capable of receiving data over a cellular communications network and having multiple processors wherein one or more processors is primarily dedicated to processing the compressed multimedia data." This construction finds support both in the specification and in the file history. *See Vitronics* 90 F.3d at 1582 ("It is well settled that . . . the court should look first to the intrinsic evidence of record, *i.e.*, the patent itself, including the claims, the specification, and, if in evidence, the examination history"). Patent Owner will discuss below the various components of this proposed construction.

i. The intrinsic record of the '875 patent discloses that a "wireless device means" is a device capable of receiving data over a cellular communications network.

The specification provides support that a "wireless device means" must be able to receive data over a cellular communications network. Figure 2 of the '875 patent details a system employing the patented method "using a cellular network infrastructure." Ex. 1001 13:33-34. The '875 patent describes one process of delivering a sound clip to the device, with the sound clip being transmitted "through the phone line of the network to the cellular service provider 208" and then "to the cellular phone 202." *Id.* 15:36-37. The plain language of the patent contemplates a cellular communications network, and, properly construed, a "wireless device means" is capable of accessing such a network and using it to receive data.

In the Notice of Allowance, the Examiner recognized that the "wireless device means" must be able to receive data over a cellular network. Indeed, the Reasons for Allowance stressed the importance of "such a wireless cellular device" and the unexpected "successful digital delivery of such compressed digital rich media, either through an audio channel or data channel." Ex. 1002 at 8 (emphasis added). In sum, viewing the intrinsic evidence as a whole, a person of ordinary skill would understand that a "wireless device means" is able to receive data using a cellular communications network. Ex. 2021 at ¶ 41. Thus, in light of the specification and the file history, a "wireless device means" must be construed as a device capable of receiving data over a cellular network.

ii. The intrinsic record of the '875 patent discloses a "wireless device means" comprising of multiple processors.

The intrinsic record is clear that a "wireless device means" must include multiple processors. First, the specification states that the base component for the "wireless device means" is a cellular phone 202. The specification describes the cellular phone 202 as "any commercially available cellular phone having capabilities for supporting a command set for general telephone control." Ex. 1001 at 14:27-29. A "commercially available cellular phone" is compatible with various telecommunications standards for processing data and making phone calls. *Id.* One of skill in the art would understand that a "commercially available cellular phone" would already contain a single processor that performs the various functions of a cellular phone, such as navigating the phone menu, inputting a phone number, and other general telephone controls. Ex. 2021 at ¶ 45. Indeed, one of skill would know that such a phone needs to use a processor to process the digital telecommunications data. *Id.*

For example, the Nokia 3210 Communicator, a popular cellular phone at the time of invention, contained only a Texas Instruments MAD2PRI microcontroller. Ex. 2021 at ¶¶ 45-46. Likewise, cordless phones contemporary with the patent application included processors for processing the digital telecommunications data. Ex. 2004 at 4. Without a processor, these devices would not be able to perform their advertised function. Ex. 2021 at ¶ 46. Because the "wireless device means" describes a modified "commercially available cellular phone," a person of ordinary skill would

recognize that a "wireless device means" includes a processor to perform these basic functions as provided in the "commercially available cellular phone."

Second, the specification then describes that the "wireless device means" has an additional processor in the device beyond the processor already provided in the "commercially available cellular phone." The specification states that a specialized board 203 "is incorporated in an accessory unit 204 attached to the cellular phone." Ex. 1001 14: 15-25. Figure 2 shows that board 203 is separate from the conventional cellular phone 202:

² However, the patent is not only limited to an accessory unit. The specification also discloses "a chip performing the same functions of the board [that] may instead be embedded in the phone itself." *Id*.

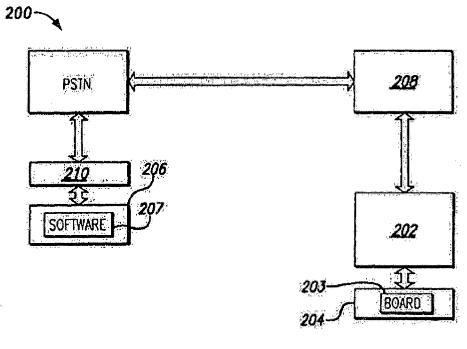
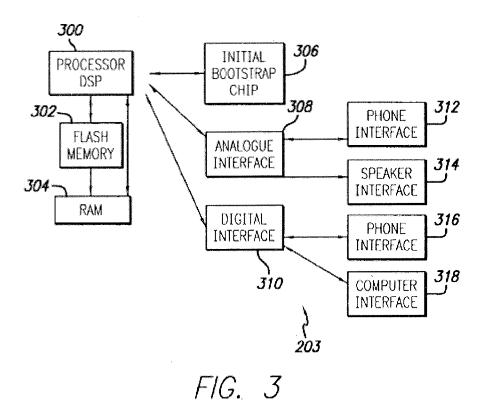


FIG. 2

Ex. 1001. Fig. 2. Board 203 is depicted containing various components, including processor 300. Ex. 1001 at 14:46-63. Figure 3, shown below, details the components of board 203, including processor 300, in a box diagram. Processor 300 is an additional processor beyond the processor included in a "commercially available cellular phone" at the time.



Ex. 1001. Fig. 3. Thus, the specification is clear -a "wireless device means" must include at least a second, discrete processor.

The file history is consistent with the specification's disclosure that a "wireless device means" contains multiple processors. During the prosecution of the '875 patent, Dr. Freidson submitted a declaration describing the prototype wireless device he created to test the patented method. Ex. 1036. That prototype contained a second processor dedicated to processing the data associated with compressed audio files. *Id.* at ¶ 5. Dr. Freidson acknowledged, as discussed above, that a person skilled in the art knew that a conventional cellular phone at the time of invention would already contain a single processor. *Id.* at ¶ 4. However, the skilled person would also know

that the conventional processor was not powerful enough to process a compressed audio and/or visual file. *Id.* To address this deficiency, Dr. Freidson explained that he developed an additional component, a wireless MP3 player with its own dedicated processor, "for use with cell phones to receive and play compressed digital music." *Id.* at ¶ 5. Thus, Dr. Freidson's declaration provides additional evidence that the "wireless device means" of the claimed invention includes a cellular device with at least a second processor in addition to the processor already included with the device.

The Notice of Allowance further supports the construction that the "wireless device means" includes multiple processors. There, the Examiner noted that the "wireless device means" was "an essential component of the system implementing the method." Ex. 1002 at 8. Rolf, the closest prior art, was distinguished because the patented method required the use of a new type of cellular device — one specifically "inclusive of 'board 203' which includes the 'main blocks' recited in page 14, lines 23-25 and the following supporting disclosure." *Id.* at 2. By focusing on the components of "wireless device means," the Examiner recognized the inventive structure, including the second processor, as a reason distinguishing the claimed invention over the prior art. Therefore, a "wireless device means" must include a cellular device with multiple processors.

Patent Owner's proposed construction is consistent with all embodiments disclosed in the specification, including the "iPodTM type listening device" disclosed in the '875 patent. Paper No. 10 at 8.

The '875 patent distinguishes from a conventional iPodTM, instead calling for an "I-PodTM type" device. *Id.* A person of ordinary skill in the art would recognize that any "I-PodTM type" device described by the patent would need to be implemented in a manner consistent with the remainder of the specification. Ex. 2021 at ¶¶ 51-52 That is, to be a "wireless device means," the device would necessarily contain the structure described in the specification and file history, including multiple processors, which is more than was included in an iPodTM at the time of invention. *Id.* at ¶¶ 49, 51; Ex. 2013. Indeed, this is made clear in the specification when the inventors describe the I-PodTM type embodiment s "us[ing] the **same** delivery method as described for the cellular phones." Ex. 1001 29:66-67 (emphasis added); Ex. 2021 at ¶ 51.

Apple's iPodTM was originally released in October 2001. Ex. 2021. at ¶ 49; Ex. 2012. At the time, in order to load music onto an iPodTM, the user need to tether the device to a computer running Apple's iTunesTM program. Ex. 2021 at ¶ 49. The original iPodTM did not have wireless capability; it required a FireWire wired connection in order to receive compressed digital audio files. *Id.*; Ex. 2013. This was a direct connection utilizing a cable, not a wireless or cellular network. Ex. 2021 at ¶ 49. Wireless capabilities for handheld music devices such as the iPodTM were not available

until the first iPod TouchTM was released in September 2007—roughly six years after the '875 invention was conceived. Ex. 2021 at ¶ 50; Ex. 2014. A person of ordinary skill at the time of the invention would understand that an additional processor, as described by the '875 patent, would be needed in order for the disclosed iPodTM type device to both process digital music and/or visual files and receive those files wirelessly. Ex. 2021 at ¶ 51-52. Thus, the specification's reference to an "I-PodTM type listening device" does not suggest that the patented method could be performed by a device with a single processor. Nor does it suggest that Patent Owner contemplated the patent method could be performed on a conventional iPodTM. Rather, the specification simply states that an iPodTM, properly modified to include the disclosed structure, could be a "wireless device means."

Accordingly, the specification and the prosecution history clearly demonstrates that the "wireless device means" is a device with multiple processors. A person of ordinary skill, reviewing the intrinsic records, would come to the same conclusion. *Id.* at ¶ 53.

iii. The intrinsic record of the '875 patent discloses that a "wireless device means" includes one or more processors primarily dedicated to processing the compressed multimedia data.

The specification of the '875 patent discloses that one or more additional processors is primarily dedicated to processing compressed multimedia data. For example, processor 300, a part of board 203, is a dedicated digital signal processor

found within the "wireless device means." Ex. 1001 Fig. 2; 14:46-47; 18:46-50; 22:21-26; 23:43-47. One of skill would know that a digital signal processor is a type of specialized processor with architecture that is designed for carrying out particular operations on data as opposed to general-purpose processors designed to merely rearrange stored data. Ex. 2021 at ¶ 55. Digital signal processors are well-suited for multimedia processing, such as audio and video coding and decoding, and multimedia storage and playback. *Id.* Additionally, digital signal processors are well-suited for mathematical-specific functions like the computation of Fast Fourier-Transforms as exemplified in a preferred embodiment of the invention to process OFDM modulated signals. *Id.*; Ex. 1001 17:22-24 ("To increase computation efficiency, a Fast Fourier Transform is employed to convert sub-channel symbols from frequency to time area.").

The additional, dedicated processor, described with the other components show in Figures 2 and 3, requests and receives the content rich media data. *Id.* at 14:51-63. Similarly, the purpose of this additional processor, sometimes referred to as a "microchip," is to "store a selection of clips, allow for downloading of clips to be stored on the chip 104, and allow for the playback of clips. . . ." *Id.* at 12:47-50. In one embodiment, board 203 performs the same required functions as chip 104. *Id.* at 14:16-18. Chip 104, in turn, is described as being responsible for requesting and receiving the compressed audio and/or visual file. *Id.* at 12:66-13:3. Thus, the

specification clearly defines that this additional processor is primarily dedicated for processing the compressed multimedia data.

Dr. Freidson's declaration also describes a "wireless device means" containing a dedicated processor. Ex. 1036 at ¶ 5. As discussed above, because adequate technology did not exist at the time of invention, Dr. Freidson was required to create a prototype "wireless device means" to test the patented method. *Id.* The prototype included a printed circuit board functioning as a wireless MP3 player for a cellular phone. *Id.* The processor in this circuit board performed the function of receiving and playing back a compressed multimedia data. *Id.* at ¶ 4. In light of the intrinsic record, one of skill would understand that at least one of the processors in the "wireless device means" is primarily directed to processing the compressed multimedia data. Ex. 2021 at ¶¶ 54-55. Therefore, properly construed, the specification and prosecution history demonstrate that the wireless device means contains one or more processors is primarily dedicated to processing the compressed multimedia data.

B. "Segment of a Full Song, Musical Composition, or Other Audio Recording or Visual Recordings."

The term "segment of a full song, musical composition, or other audio recording or visual recording," found in Claim 21, should be construed as a "playable portion of a song, musical composition, or other audio recording or visual recording."

The specification of the '875 patent discloses that a segment is simply a shorter, playable portion of a full song, musical composition, or other audio or visual

recording. For example, the specification states "[s]ound clips, which are segments of whole songs, musical compositions or other records, will be used mostly with telephones." Ex. 1001 11:3-6. The specification further discloses that multiple "clip segments" may be obtained "from a single song, musical composition, or other sound recording." *Id.* 11:46-49. These sound clips are disclosed as being able to be played on the device. *Id.* 11:39-41 ("Additionally, the telephone may allow the user to determine how many times a clip is repeatedly played for each ring...."); 2:1-3; 2:20-23; 4:58-68; 5:18-22; 5:38-41; 11:49-53. Thus, the term "segment of a full song, musical composition, or other audio recording or visual recording," should be construed as a "playable portion of a song, musical composition, or other audio recording or visual recording."

IV. REFERENCES

A. U.S. Patent No. 7,065,342 ("Rolf")

U.S. Patent. No. 7,065,342, titled "System and Mobile Cellular Telephone Device for Playing Recorded Music," was applied for by Devon Rolf on November 22, 2000 and issued on June 20, 2006. Ex. 1017 Rolf discloses a method of transmitting data to a wireless communication device. *Id.* In its Figure 4, Rolf describes a "block diagram of a conventional wireless communication device utilized in accordance with the principles of the present invention." *Id.* at 4:65-67 (emphasis added). Rolf's specification acknowledges that the structure of the wireless communication device it describes, including a cellular phone, was "well known" in the art. *Id.* at 7:59-60. Rolf 26

MINDGEEK S.A.R.L. et al. v. SKKY, INC. IPR2014-001236

then describes various transmission methods utilizing the "well known" structure depicted in Figure 4. *See generally*, Ex. 1017.

B. MP3 Guide

MP3: The Definitive Guide ("MP3 Guide") is copyrighted in 2000. MP3 Guide touts itself as "a guide to MP3 creation and playback principles in general." Ex. 1009 at pg. viii. MP3 Guide also describes various ways to create and play back mp3 formatted data *See generally* Ex. 1009. Additionally, MP3 Guide discusses some portable devices capable of playing back mp3 files. Ex. 1009 at 227, Table 6-1. However, the devices disclosed are unable to connect wirelessly to a network to receive the mp3 files. Instead, the devices all use a cable, either serial, USB, or parallel, to connect to a computer as part of the "upload connection type." *Id.* Moreover, none of the devices described in MP3 Guide are cellular phones; there is only a mention that Ericsson had plans to release a cellular phone in the future. *Id.* at 230. However, the reference does not contain any discussion relating to the structure or capabilities of the potential Ericsson phone.

C. OFDM/FM

OFDM/FM Frame Synchronization for Mobile Radio Data Communication ("OFDM/FM") is an article by William D. Warner and Cyril Leung from August 1993. Ex. 1015. The article details the results of a series of experiments conducted using OFDM over a mobile analog radio channel in a pure ALOHA network to transmit signal data wirelessly. *Id.* at 302. Because the testing utilized a pure ALOHA

independently." *Id.* at 304. Further, the bandwidth overhead for transmission must be small because the available spectrum in a pure ALOHA environment is limited. *Id.*The experiment resulted in acceptable bit error rate performance for the purposes of the experiment, but not acceptable for large scale application. *Id.* at 312; Ex. 2021 at ¶ 78.

V. ARGUMENT

The grounds of institution rest primarily on Rolf, a prior art patent that was heavily vetted during the prosecution of the '875 patent. Indeed, in the Notice of Allowance, the Examiner recognized that Rolf was the closest prior art to the application that would become the '875 patent. Ex. 1002 at 9. However, because Rolf did not teach a "wireless device means," the Examiner distinguished Rolf and allowed the claims. *Id*.

Rolf and MP3 Guide do not teach a "wireless device means," even if that term is not considered a means-plus-function claim element. Rolf and MP3 Guide do not teach transmitting multimedia data without an Internet or computer based network nor transmitting a segment of a full song or other multimedia data. Further, nothing in Rolf or the OFDM/FM article suggests that a person of ordinary skill in the art would have either been motivated to combine the reference or have a reasonable expectation of success that the proposed combination would work to transmit

compressed audio and/or visual files to a device. As such, the Board should affirm the validity of the claims.

A. Petitioners have not provided sufficient evidence to demonstrate by a preponderance of the evidence that all claim elements of the challenged claims are disclosed in the references relied upon by Petitioners in the Petition or that there is a motivation to combine the references as proposed by Petitioners.

Petitioners bear the burden of proof by a preponderance of the evidence that each and every claim element is disclosed in the references cited and relied upon by Petitioners in the Petition. 35 US.C § 316(e). The Board, as the trier of fact in this proceeding, may deny the Petition because Petitioners failed to present sufficient evidence to overcome their burden of proof based on any claim element in any claim, beyond those that are specifically discussed in Patent Owner's Response below. Thus, the fact that Patent Owner does not set forth an argument that a particular claim element is not disclosed in the references or that Petitioners have not made sufficient showing that one of skill in the art would be motivated to combine the references and/or have a reasonable expectation of success regarding the proposed combination does not preclude the Board from independently finding that the Petition should be denied based on such conclusion. Indeed, Patent Owner disputes that Petitioners have satisfied their burden as to all elements, including those discussed in more detail below.

The Institution Decision did not determinatively conclude that Petitioners have proven by a preponderance of the evidence that any or all claim elements are

disclosed in the references or that proposed combinations are proper. Indeed, the threshold for institution, reasonable likelihood, is a lower threshold than preponderance of the evidence. As such, the Board has not made a final decision as to the ultimate question, and is thus free to determine that Petitioners have not satisfied the higher burden of preponderance of the evidence. For the reasons set forth below and any reason that may be identified by the Board, Petitioners have not satisfied their burden that the challenged claims are invalid in view of Rolf/MP3 Guide as modified by OFDM/FM.

B. The Supreme Court and Federal Circuit Precedent Precludes the Use of Hindsight in an Obviousness Analysis.

Hindsight by necessity must be excluded from an obviousness analysis. Since KSR, the Federal Circuit has reiterated that courts "be careful not to allow hindsight reconstruction of references to reach the claimed invention without any explanation as to how or why the references would be combined to produce the claimed invention." Innogenetics, N.V. v. Abbot Labs., 512 F.3d 1363, 1374 n.3 (Fed. Cir. 2008). See also KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1742 (2007) (stating that "[a] factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant on expost reasoning"). Rather, one must judge the patentability of the claimed invention at the time of the invention and from the viewpoint of a person of ordinary skill in the art. 35 U.S.C. § 103(a).

A flexible application of the TSM test "remains the primary guarantor against a non-statutory hindsight analysis. . . ." Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc., 520 F.3d 1358, 1364 (Fed. Cir. 2008). Some articulated reasoning with some underlying rational underpinning must support the legal conclusion of obviousness. Innogenetics, 512 F.3d at 1373 (citing KSR, 127 S. Ct. at 1741). This is especially important because "filnventions usually rely upon building blocks long since uncovered, and claimed discoveries almost necessarily will be combinations of what, in some sense, is already known." KSR, 127 S. Ct. at 1741. When done flexibly, identifying a reason that someone of skill in the art would make the combination assures that the obviousness test proceeds on the basis of evidence – like teachings, suggestions or motivations – that arise before the time of invention. Id. The Federal Circuit echoed the importance of identifying a reason why someone of ordinary skill in the art would start with a particular reference. In Takeda Chem. Indus., Ltd. v. Alphapharm Pty., Ltd, 492 F.3d 1350, 1357 (Fed. Cir. 2007), the Federal Circuit affirmed the district court's finding that one of ordinary skill in the art would not have selected a prior art chemical as a starting point to make the claimed invention because, in part, the prior art taught away from starting with that compound to solve the problem addressed in the patent. In Ortho-McNeil, the Federal Circuit similarly affirmed a finding that the claimed invention was not obvious in the absence of evidence that one of ordinary skill in the art would have

started with the asserted prior art to attempt to solve the problem. *Ortho-McNeil*, 520 F.3d at 1364-65.

To invalidate a claim as obvious, Petitioners must also show "that the skilled artisan would have had a reasonable expectation of success from doing so." Proctor & Gamble Co. v. Teva Pharms. USA Inc., 566 F.3d 989, 994 (Fed. Cir. 2009) (citations omitted). See also In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig., 676 F.3d 1063, 1070 (Fed. Cir. 2012) (reversing a district court's obviousness determination was appropriate because "there is nothing to indicate that a skilled artisan would have had a reasonable expectation that such an experiment would succeed in being therapeutically effective"); Broadcom Corp. v. Emulex Corp., 732 F.3d 1325,1335 (Fed. Cir. 2013) (ruling that "[a]n invention is not obvious just because all of the elements that comprise the invention were known in the prior art; rather a finding of obviousness at the time of invention requires a plausible rationale as to why the prior art references would have worked together" and noting that the rejected prior art combination "would not have worked for its intended purpose"). A lack of a reasonable expectation of success defeats Petitioners' proposed combinations.

In light of these controlling principles, Petitioners' proposed combinations are only obvious by improperly using hindsight. Instead of focusing on the relevant inquiry – the state of the art at the time of invention and the understanding of a person of ordinary skill at that time – Petitioners attempt to modify Rolf with

inapposite prior art in ways that are only obvious due to the developments of the cellular industry in the years subsequent to invention. Moreover, Petitioners have not demonstrated that one of skill would have a reasonable expectation of success that the proposed combinations would work. In fact, the proposed combination would not work. These arguments, while alluring to a modern mindset, are inapplicable to the obviousness analysis. The shortcomings of Rolf and the other asserted references are discussed in greater detail below.

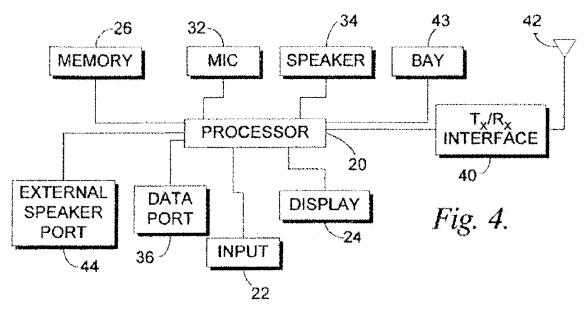
- C. Petitioners' Ground 1: Rolf in View of MP3 Guide Does Not Render Claims 1-3, 5, 15-21, and 23 of the '875 Patent Obvious.
 - 1. The combination of Rolf and MP3 Guide does not disclose a wireless device means (Claim 1).

Rolf does not disclose a "wireless device means" for several reasons. First, Rolf does not disclose a device having multiple processors. Second, Rolf does not disclose a device having one or more processors primarily dedicated to processing the compressed multimedia data. Thus, the Petition should be denied.

i. The combination of Rolf and MP3 Guide does not disclose multiple processors (Claim 1).

Claim 1 of the '875 Patent requires a "wireless device means" consisting of multiple processors. *See* Section II(A)(2)(ii), *supra*. As the Examiner recognized, Rolf does not disclose the structure included in "wireless device means," particularly multiple processors. Ex. 1002 at 8-9. Because Rolf lacks this aspect of the "wireless device means," it does not render the '875 patent obvious.

Petitioners' own evidence supports the fact that Rolf does not disclose multiple processors. Petitioners allege that Figure 4 of Rolf discloses the structure of the "wireless device means" claimed in the '875 patent. Pet. at 18. Figure 4 illustrates Rolf's "wireless communications device," which, importantly, only contains a single processor 20:



Ex. 1017 at Fig. 4.

Nothing in Rolf describes or contemplates a multiple processor system for its "wireless communications device." In fact, Rolf states that a conventional wireless communications device is nothing more than a conventional cellular phone, the components of which were well known in the art. *Id.* at 7:59-60. One of skill would understand that a conventional cellular phone would only have a single processor in light of Rolf's disclosure. Ex. 2021 .at ¶ 84.

The MP3 Guide does not remedy Rolf's deficiencies. Nothing in MP3 Guide discloses structure of a device, much less the multiple processor design of the claimed "wireless device means." *Id.* at ¶ 87. Accordingly, the combination of Rolf and MP3 Guide remains insufficient to render the claims of the '875 patent obvious because they do not disclose the "wireless device means" limitation.

ii. Rolf and MP3 Guide do not disclose a "wireless device means" having one or more processors primarily dedicated to processing compressed multimedia data.

As Rolf does not disclose multiple processors, Rolf cannot and does not disclose a device having one or more processors primarily dedicated to processing multimedia data. Rolf only discloses a device with a single processor, processor 20. Ex. 1017, Fig. 4. This processor is responsible for many of the tasks disclosed in Rolf. *Id.* 7:49-60; 10:53-57; 13-:38-40. Accordingly, and consistent with the disclosure in Rolf and one of skill's understanding of Rolf, this processor functions as a general purpose processor within the device. Ex. 2021 at ¶ 84. Indeed, this processor would be responsible for handling telecommunications, such as phone calls, requesting, receiving, and transferring data received by the device, processing selections from the user for the device to perform various functions, and other processes generally performed by a device disclosed in Rolf. *Id.*

However, as a general purpose processor, processor 20 is not primarily dedicated to any particular function in the device. *Id.* at ¶ 85. Thus, it is not primarily dedicated

to processing compressed multimedia data as required by the proper construction of "wireless device means." *Id.* As such, Rolf does not disclose this claim element.

MP3 Guide does not disclose any structure of any device that may play or process an MP3 file, nor do Petitioners rely on any such device in the petition.

Accordingly, the references relied upon by Petitioners do not disclose the claim element "wireless device means," and the validity of the claims must be upheld.

iii. If the Board ultimately adopts Patent Owner's proposed means-plus-function claim construction for "wireless device means," then Rolf fails to disclose this limitation for the same reasons.

Again, Patent Owner acknowledges that the Board has preliminarily decided that "wireless device means" is not a means-plus-function claim limitation. If, in a final decision, the Board decides that "wireless device means" is a means-plus-function limitation and is construed as presented by Patent Owner, then Rolf does not disclose this limitation for the same reasons articulated in Sections V(C)(1)(i-ii). In other words, Patent Owner's proposed construction of "wireless device means" as a means-plus-function term includes the limitations of multiple processors, and one or more processors primarily dedicated to processing multimedia data. As the references do not disclose these elements, the Petitioner's arguments should be rejected.

2. The combination of Rolf and MP3 Guide does not disclose the delivery of a compressed audio and/or visual file to a "wireless device means" independent of an Internet connection or other computer based system (Claim 18).

Claim 18 of the '875 patent requires that the method of Claim 1 be performed without an Internet connection or connection to another computer based system. Support for this claim limitation can be found in the specification. For example, the patent describes a method of accessing the download service without an Internet service provider. Ex. 1001 16:54-57 ("A customer does not need to use a Wireless Internet Service Provider. A user can simply place a regular call to a specific number . . . to gain access to the server."). Instead, a user may connect to the server using the voice channel of his or her phone. *Id.* 16:39-49, 16:60-17:12.

Data transmission under Rolf, on the other hand, requires an Internet connection. Ex. 1017 3:17-21 ("the wireless communications link established between the wireless communications device and the central facility is a cellular communications link and, more particularly, is an Internet link"); Ex. 2021 at ¶ 89 Rolf does not disclose any other means of establishing the wireless communications link. *Id.* Indeed, Petitioners do not even cite to Rolf for this element. Thus, Rolf is not sufficient to render the claim obvious.

Instead, Petitioners cite to MP3 Guide, which references the use of file transfer protocol (FTP) servers to download MP3s. Pet. at 31. However, MP3 Guide does not teach a method of wireless delivery without access to the Internet or *other computer*

based system and thus does not remedy this deficiency. Indeed, as discussed above, MP3 Guide does not disclose a wireless device means and accordingly does not teach wireless delivery to such a device. *Id.* at ¶ 90.

Petitioners' argument is flawed for at least two additional reasons. First, MP3 Guide explicitly teaches that an FTP server uses the Internet. Ex. 1009 at 368 ("File Transfer Protocol. One of the simplest (and oldest) methods of distributing data on the Internet.") (emphasis added). *See also Id.* at 89 ("FTP, or file transfer protocol, is the Internet's most basic means of making files available for transfer between a server and a client. . .") (emphasis added); Ex. 2021 at ¶ 91. MP3 Guide does not suggest that the MP3 file is accessible without an Internet connection and, in fact, requires such a connection.

Second, even if an Internet connection was not required, a FTP server is a "computer based system" for file transfer. Ex. 2021 at ¶ 91. Petitioners' expert Dr. Kotzin recognized this fact in his declaration. Ex. 1008 at ¶ 74 ("an FTP server for stored MP3 files could reside on a separate **personal computer/network** which is not connected to the Internet") (emphasis added). In other words, Petitioners' expert admits that using FTP requires a "computer based system." Thus, Petitioners' expert admission is fatal to their argument. The use of FTP servers as disclosed in the MP3 Guide and described by Petitioners' expert does not disclose the elements in Claim 18. Ex. 2021 ¶¶ 89-91. Accordingly, the Board should uphold the validity of Claim 18.

3. The combination of Rolf and MP3 Guide does not disclose a segment of a full song, musical composition or other audio recording or visual recordings (Claim 21).

Rolf does not disclose transmitting a segment of a full song, musical composition or other audio recording or visual recording. Properly construed, the term "segment of a full song, musical composition, or other audio recording or visual recording," means a "playable portion of a song, musical composition, or other audio recording or visual recording." *See* Section III(B).

Petitioners identify two portions of Rolf in support of their position on this claim. Neither actually discloses this claim element. First, Petitioners cite to portions of Rolf that disclose that a single full length song may be distributed rather than an entire album. Pet. 32-33 (citing Ex. 1017 4:11-17; 7:8-16). A single full length song is not a segment of a song. Ex. 2021 at ¶¶ 93-94. Rather, an entire song is a portion of an album. *Id.* However, the claim does not claim transmitting an entire single song from an entire album. The plain language of the claim limits the transmission to a segment of a song, or a playable portion of the song. As such, Petitioners' reliance on Rolf does not support the Petition.

Second, Petitioners cite to a portion of Rolf that discloses that a "portion of the recording, such as the title and memory (e.g., address) storage location of the recording" may be transmitted. Pet. at 33. The title and memory storage location data are not the same as the "segment" claimed by the '875 patent.

The memory storage location data is simply metadata about the file describing the location of the file. Ex. 2021 at ¶ 94. This metadata is not a playable portion of the file. *Id.* Indeed, the metadata's purpose is to identify the "address" of the recording in a digital storage locker. Pet. at 33. Similarly, the "title" information Rolf references is just additional, separate metadata, and not the audio and/or visual file itself. Ex. 2021 ¶ 94. This information would not enable a "wireless device means" to play back a portion of the rich media file. *Id.* Further, a person of ordinary skill would not recognize this metadata as a playable "segment" of a file. *Id.* Rolf does not contain any other disclosure relating to a playable segment of a full audio and/or visual file. *Id.* Thus, Rolf does not disclose this element.

Petitioners attempt to backdoor an argument related to this claim that is not discussed or described in the Petition. In particular, Petitioners' cite two paragraphs in Dr. Kotzin's declaration in their claim chart for this claim. Pet. 32-33. One of these paragraphs provides an argument based on the MP3 Guide, which is not discussed at all, or even cited, in the Petition. Such attempts to circumvent the prescribed page limitations and to rely on conclusory, unsupported statements are improper and those arguments should not be considered by the Board. *Conopco, Inc. v. Proctor & Gamble Co.*, Case No. IPR2013-00510, Paper No. 9 at 8 (PTAB Feb. 12, 2014) ("We decline to consider information presented in a supporting declaration, but not discussed in a petition, because, among other reasons, doing so would encourage

the use of declarations to circumvent the page limits that apply to petitions.").

Nevertheless, this argument does not disclose this claim limitation.

MP3 Guide does not address this deficiency in Rolf's method. Ex. 1008 at ¶80. In particular, MP3 Guide does not disclose altering an audio file to create a segment of a song. Rather, MP3 Guide states that, when creating an MP3 "bits from an audio CD must be transferred to [the] system as uncompressed audio." Ex. 1009 at 4. Next, "[t]he uncompressed audio is then run through an MP3 encoder to create an MP3 file." *Id.* The reference does not indicate that the encoding process involves segmenting the audio file into a smaller, playable portion. Ex. 2021 at ¶96. MP3 Guide simply teaches that uncompressed audio files from a compact disc can be compressed, or encoded, in MP3 format. Ex. 1009 at 4. In other words, one uncompressed audio file emerges from the encoding process as one compressed MP3 file. Ex. 2021 at ¶96. Nowhere in the MP3 Guide does it disclose or discuss creating playable segments from the uncompressed file during the encoding process. Accordingly, the Board should uphold the validity of Claim 21.

D. Petitioners' Ground 3: Rolf in View of MP3 Guide and OFDM/FM Does Not Render Claim 22 of the '875 Patent Obvious.

For Claim 22, Petitioners' argument is that one of skill would modify the device of Rolf to utilize the OFDM modulation scheme presented in OFDM/FM for "transmitting data over a cellular network." Pet. 56. Indeed, Petitioners state "[a] skilled person considering how to transfer data over a cellular network, as

described in Rolf, would certainly have considered and likely **used OFDM** as a tool to facilitate the **transfer of data**." *Id.* (emphasis added). For the reasons set forth below, one of skill would neither have been motivated to combine these references nor have a reasonable expectation of success that such combination would work.

1. Dr. Kotzin overstates the use of orthogonal frequency-division multiplexing at the time of invention.

Orthogonal Frequency-Division Multiplexing ("OFDM") modulation is a method of transmitting data in parallel, over a series of sub-channels that overlap without interfering. Ex. 2021 at ¶ 73. Although, as Dr. Kotzin noted in his declaration, OFDM was used by some wireless applications at the time of invention, it was not used in cellular networks. *Id.* Indeed, Dr. Kotzin's declaration overstates the use of OFDM in the cellular field at the time of invention, especially when compared to other, early applications of OFDM, such as ADSL and wireless LANs. *Id.* At the time of invention, the use of OFDM on cellular networks was anything but routine and would not create predictable results. *Id.*

A key distinction between these early applications of OFDM and cellular networks is that cellular phones are mobile receivers – they move, sometimes at great speeds, during operation. *Id.* at ¶¶ 74 For example, an individual may be sitting in a vehicle and talking on a cellular phone while also traveling at speeds in excess of 60 miles per hour. *Id.* at ¶75. Once the receiver becomes mobile, the signal sent by the transmitter becomes subject to a Doppler shift. *Id.* at ¶ 74. In other words, the

frequency of the received signal at the cellular phone receiver will either be shifted higher or lower, depending on whether the user is traveling towards the transmitter or away from it. *Id.* Thus, the cellular phone receiver must compensate for the Doppler shift. *Id.* As the complexity of the modulation scheme increases, more complex methods of compensation must also be employed. *Id.*

Around the time of invention, OFDM was considered for implementation by cellular network standard setting bodies, but was ultimately rejected. *Id.* at ¶75. At the time, OFDM was also subject to variety of other problems, such as high power consumption, frequency jitter, and the high price point of digital signal processors to implement OFDM. *Id.*

2. Rolf teaches away from using the method disclosed in OFDM/FM (Claim 22).

One of skill would not be motivated to combine Rolf and OFDM/FM because the references teach away from each other. A prior art reference teaches away from another reference "when 'a person of ordinary skill upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *Pozen Inc. v. Par. Pharm., Inc.*, 696 F.3d 1151, 1164-65 (Fed. Cir. 2012)(citing *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994)). The prior art need not foresee "the specific invention that was later made, and warn[] against taking that path." *Spectralytics, Inc. v. Cordis Corp.*, 649

F.3d 1336, 1343 (Fed. Cir. 2011). Rather, prior art may teach away if the prior art suggests a different solution than the patent. *Id.*

The teachings in Rolf are similarly inconsistent with the teachings of OFDM/FM. For example, Rolf explicitly teaches the use of 3G modulation protocols instead of OFDM. Ex. 1017 7:59-60; Ex. 2021 at ¶ 103. Indeed, the standards setting organization that created the 3G standard considered, and ultimately rejected, using OFDM in 3G. Id at ¶ 103. Because 3G does not use an OFDM modulation scheme, Rolf teaches away from the process in OFDM/FM. Id. In other words, the devices taught by Rolf incorporated and used a modulation scheme, a different solution than the one proposed in the '875 patent. Id. There is nothing in OFDM/FM that suggests using OFDM over the modulation scheme adopted and implemented in 3G would be advantageous or beneficial. Id. at ¶ 101. See also Ex. 2011. Given that the modulation schemes of OFDM and 3G were not compatible and that OFDM was rejected during the creation of 3G, these references teach away from the proposed combination by Petitioners.

3. Rolf in view of MP3 Guide modified according to the teachings in OFDM/FM does not disclose a functioning method (Claim 22).

A person of ordinary skill in the art would not think to combine Rolf in view of MP3 Guide with the teachings of OFDM/FM because, at the time of invention, the combination would not function. Here, modifying Rolf in view of MP3 Guide with

the method taught by OFDM/FM would result in a nonfunctional device incapable of performing the patented method.

For example, structurally, the cellular device taught in Rolf would require dramatic changes to utilize OFDM transmission as taught by OFDM/FM. Ex. 2021 at ¶ 81. OFDM/FM performed its testing in a theoretical, idealized pure ALOHA environment. Ex.1015 at 302; Ex. 2021 at ¶¶ 79-80, 106. Data resulting from experiments performed in a pure ALOHA environment would have no bearing on real world data transmission. *Id.* at ¶ 78. Indeed, the ALOHA experiment in OFDM/FM was conducted in idealized conditions using simple signals. Ex. 1015 at 302, 308-09; However, even then, OFDM/FM reports a bit error rate far above the threshold of transmitting human speech, let alone a complex audio or visual file. *Id.* at 312; Ex. 2021 at ¶ 81; Ex. 2020 at 170.

A skilled practitioner would not modify the device disclosed by Rolf with the teachings of OFDM/FM because the Rolf device is a conventional cellular phone that operates using a "next- or third generation network." Ex. 1017 3:24-25; Ex. 2021 at ¶ 109. At the time of invention, a conventional cellular phone operated on a 2G network at a frequency of 800 MHz/1900MHz. *Id.* AMPS and 3G networks also operate at similar frequencies. *Id.* at ¶ 111. OFDM/FM teaches signal transmission at a much lower frequency — only 144MHz. Ex. 1015 at 303; Ex. 2021 at ¶ 109. For this reason alone, a person of ordinary skill at the time of invention would have viewed

Rolf and OFDM/FM as incompatible, and would not seek to combine their teachings. Ex. 2021 at ¶¶ 109, 111.

In addition, the basic network architecture of an ALOHA system is incompatible with the 3G network taught by Rolf. Id. at ¶ 111. ALOHA networks transmit data whenever is the data is ready, regardless of whether another station is transmitting data on the same channel. Id. In contrast, Rolf teaches a time-dependent network, which only transmits data at a particular, predesignated timeslot, reducing interference and improving throughput. Id. at ¶¶ 80, 111. Indeed, the incongruity is evident in light of OFDM/FM's disclosed bit error rate of 1x10⁻⁵, which is below the threshold necessary to transmit a high quality file. Ex 1015 at Fig 18; Ex. 2021 at ¶ 110 ("to transmit MP3 data as taught by Rolf, a Skilled Practitioner would appreciate that a high-quality transmission system with a low BER, better than 1x10⁻⁶⁻ would be required"); Ex. 2020 at 170. OFDM/FM's teachings simply could not be imported into the Rolf system without significant modifications. Ex. 2021 at ¶ 108. Thus, application of the OFDM/FM method to Rolf in view of MP3 Guide would not be able to transmit a high quality rich media file wirelessly to a "wireless device means."

A person of ordinary skill would recognize these incongruities, and avoid modifying Rolf according to OFDM/FM. Accordingly, the combination or Rolf and OFDM/FM does not render the claims of the '875 patent invalid as obvious.

Choosing to modify Rolf in view of MP3 Guide with the 4. teachings of OFDM/FM would require undue experimentation without a reasonable expectation of success (Claim 22).

As discussed above, simply modifying the combination of Rolf and MP3 Guide with the teachings of OFDM/FM would result in a device unable to function properly. Thus, in order to create a working device according to the Petitioners' proposed combination at the time of invention, a person of ordinary skill would be required to perform an undue amount of experimentation. Further, one of skill would not have a reasonable expectation that the combination would succeed. Thus, Petitioners' proposed combination does not render Claim 22 obvious.

The only way to arrive at the combination of Rolf and MP3 Guide modified by OFDM/FM is through impermissible hindsight. While obviousness turns on the understanding of a person of ordinary skill in the art, the hypothetical person of ordinary skill is not required to perform undue experimentation to arrive at the patented invention without a reasonable expectation of success. See, e.g. Leo Pharm. Prods., Ltd. v. Rea, 726 F.3d 1346, 1357 (Fed. Cir. 2013) (noting that prior art did not render a patent obvious when "that prior art gave no direction as to which of the many possible combination choices were likely to be successful").

Here, at the time of invention, one of skill in the art would have to perform undue experimentation to implement the pure ALOHA system disclosed in OFDM/FM on a device disclosed in Rolf. Ex. 2-21 at ¶ 107. First, Rolf does not disclose the necessary transceivers to send or receive data on the pure ALOHA

system in OFDM/FM. *Id.* Second, the base stations necessary to transmit data to and from the device would need to be modified to be able to receive such a signal in a pure ALOHA system. *Id.* Finally, there is no disclosure in either reference in a method for transmitting at a low enough error rate for the transmission of compressed multimedia data. *Id.* at ¶ 110; Ex. 2020 at 170. Rather, one of skill would be left to conduct undue experimentation to render a system using the device of Rolf implementing the transmission modulation protocol of OFDM/FM to utilize OFDM in the data transmission. Ex. 2021 at ¶ 107.

Thus, a skilled artisan would not have been able to successfully modify Rolf according to the teachings of OFDM/FM without undue experimentation.

5. A person of ordinary skill would not be motivated to combine Rolf in view of MP3 Guide with OFDM/FM (Claim 22).

A person of ordinary skill in the art would not be motivated to look to OFDM/FM to modify Rolf. A combination of the prior art does not render the claims of a patent obvious if a person of ordinary skill would not be motivated to combine the art. *Procter & Gamble Co. v. Teva Pharm. USA, Inc.*, 566 F.3d 989, 994 (Fed. Cir. 2009) (to prove obviousness a party must show that a person skilled in the art "would have been motivated to combine the teachings of the prior art references to achieve the claimed invention" and "have had a reasonable expectation of success in doing so") (citations omitted).

Rolf teaches a method of transmitting data to a cellular phone using a 3G network. Ex. 1017 7:59-60. OFDM/FM on the other hand, summarizes the results of an experiment utilizing OFDM to transmit simple data in a Pure ALOHA environment. Ex. 1015. At the time of invention, a person of ordinary skill would consider 3G transmission sufficient to transmit that data discussed in Rolf and thus would not be motivated to look to OFDM/FM's experimental teachings to modify Rolf. Ex. 2021 at ¶ 106. See also Ex. 2011(a skilled practitioner would be aware of IMT-2000's ultimate rejection of OFDM for 3G networks). Petitioners fail to address why one of skill would modify the transmission modulation used in Rolf with that provided in OFDM/FM. Indeed, Petitioners merely provided non-viable reasons why one of skill would look to these references without addressing why one of skill would utilize a different modulation scheme than that presented in Rolf. Thus, one of skill would not be motivated to combine these methods.

Moreover, the process in OFDM/FM is technically inferior to the process utilized in Rolf. Pure ALOHA protocol means that if data is ready to be sent on a network, it is sent. Ex. 2021 at ¶ 79. If the message collides with another transmission on the network, the data is resent. *Id.* In other words, a pure ALOHA network station transmits its data even if the channel is occupied by another station. *Id.* In contrast, 2G and 3G cellular networks utilize time-based networks. *Id.* at ¶ 80. These networks only transmit data at the beginning of a predefined timeslot, which reduces the

amount of data collision on the network. *Id.* These networks have the advantage of higher throughput in contrast to a pure ALOHA network. *Id.* Because a person of ordinary skill would be aware of these principles, that person would not look to OFDM/FM to transmit high quality digital files.

While ALOHA networks may be sufficient for simple, low quality data transmission, a person of ordinary skill would not seek to use ALOHA protocols to transmit rich media files. *Id.* The effectiveness of the transmission, and playback of a file, is dependent on its bit error rate. *Id.* at ¶ 81. OFDM/FM reports ideal bit error rates as low as 1x10⁻⁵ and as high as 1x10⁻¹. Ex. 1015, Fig. 18. However, acceptable bit error rates for speech generally must be better than 1x10⁻⁶. *Id.*; Exhibit 2020 at 170. Even in an idealized environment, OFDM/FM only teaches bit error rates as low as 1x10⁻⁵. Ex. 1015 Fig. 18. This would be unsuitable for vocal communication, let alone transmission and playback of high quality audio and/or visual files, absent significant application of error control techniques by the receiver. Ex. 2021 at ¶ 81. A person of ordinary skill would recognize that such a process is undesirable, and thus would not seek to apply OFDM/FM's teachings to the transfer of rich media files.

Petitioners fail to set forth viable reasons why one of skill would be motivated to combine these references. First, Petitioners assert that one of skill would combine the references because both relate to transfer of data over a cellular network. Pet. at 55-

56.³ However, Petitioners ask this Board to ignore the facts that they readily admit. In particular, Petitioners admit that the OFDM/FM discloses a transmission over an analog FM channel. *Id.* In other words, a non-digital channel. Yet, Petitioners also admit that Rolf discloses transmitting over a digital channel. Pet. 28; Ex. 1017 3:17-25; 5:22-24; 7:44-48.

Indeed, Rolf does not have any disclosure of transmitting data, much less multimedia data, over any channel other than the digital channel. Ex. 2021 at ¶¶ 68-69. One of skill would understand that Rolf describes using the digital channel of a device for receipt and transmission of data. *Id.* Petitioners do not cite any portion of Rolf that suggests using the audio or analog channel. Petitioners also do not provide support or citation that the device disclosed in Rolf could utilize the audio or analog channel for the transmission of data. If anything, Rolf discloses that transmission occurs on the digital channel. *Id.*; Ex. 1017 3:17-25; 5:22-24; 7:44-48. As such, Petitioners have not provided any viable support for why one of skill would be motivated to combine these references.

³ It should be noted that Petitioners cite paragraph 124 of Dr. Kotzin's declaration for support on why one of skill would be motivated to combine these references. Pet. at 56. However, paragraph 124 of Dr. Kotzin's declaration relates to the Omnibook reference, which is not at issue in this proceeding.

Second, Petitioners' entire argument is based on a false premise and contrary to the law. Dr. Kotzin opines that Rolf is not limited to any type of phone, and as such, one of skill may have considered using an analog cellular such as AMPS. Ex. 1008 at ¶ 120. This statement is flawed because it is not consistent with the law of inherency. For an item to be inherently disclosed, it must be necessary and not based on probabilities or possibilities. Continential Can Co. v. Monsanto Co., 948 F.2d 1264, 1268 (Fed. Cir 1991). Dr. Kotzin's statement that Rolf was not limited to any type of cellular device defeats this argument as it acknowledges that there were several possibilities, including digital cellular phones. Also, Rolf discloses that its device is a "digital, cellular communications device." Ex. 1017 5:22-24; see also 3:22-25. Nothing in Rolf suggests using the analog channel. Ex. 2021 at ¶¶ 68-69. Thus, an analog cellular phone is not inherently disclosed in Rolf.

Because an analog cellular system is not inherently disclosed and there is no teaching or suggestion to use an analog cellular system in Rolf or OFDM/FM, one of skill would not be motivated to combine these references.

Regardless of whether the Board decides that "wireless device Ε. means" is or is not a means-plus-function limitation, Claims 18, 21, and 22 are valid for the reasons set forth in Sections V(A-D).

The reasons why Petitioners have not demonstrated by a preponderance of the evidence that claims 18, 21, and 22 are invalid as obvious over the proposed combinations as set forth in Sections V(A-D) are still determinative of the issues regardless of what construction is adopted by the Board as to "wireless device

means." In other words, claims 18, 21, and 22 are valid whether "wireless device means" is determined to be a means-plus-function limitation or not because there are additional, independent reasons why Petitioners have not satisfied their burden.

Thus, the Petition should be denied as to claims 18, 21, and 22 for these independent reasons.

F. The *Inter Partes* Review Initiated in Relation to U.S. Patent No. 7,548,875 Deprives Patent Owner of Its Right to a Jury Trial Pursuant to the Seventh Amendment of the United States Constitution.

For the reasons stated above, the petition should be denied. Nevertheless and in order to preserve its rights, Patent Owner presents the following constitutional challenge regarding the *inter partes* review process to preserve the issue for review by the Federal Circuit. Patent Owner does not believe that the Board has the authority to determine whether the *inter partes* review process is constitutional. The USPTO has indicated agreement with this proposition. *See*, Ex. 2023 at 14. However, the USPTO has stated that the proper course for a determination of the constitutionality of the *inter partes* review process is to raise the issue in the *inter partes* review, to be subsequently reviewed by the Federal Circuit. *Id* at 11-12. As such, Patent Owner raises this issue now, in accordance with the USPTO's guidance.

Patent Owner did not choose this forum for deciding issues of validity. Patent Owner filed an infringement action in the District of Minnesota against Petitioners. Petitioners answered asserting the affirmative defense of invalidity and

counterclaimed for a declaratory judgment that the '875 patent is invalid. In so doing, the parties evidenced their desire to have issues of non-infringement and validity decided by a jury in accordance with the Seventh Amendment of the United States Constitution, and not by an administrative tribunal.

A patent owner is accorded a Seventh Amendment right to a trial by jury in actions at law. A patent owner's rights in a patent (once the patent has issued) are private rights whose validity can only be determined by a jury. Once a patent has issued, private parties seeking to determine the validity of the patent's claims can only do so before a jury in an Article III court. The Seventh amendment prevents patent validity challenges from being withdrawn from Article III courts and assigned to Article I courts as a matter of constitutional law.

as a public rights exception based on cases such as *Commodity Futures Trading*Commission v. Schor, Patent Owner hereby confirms that it does not elect or consent to having the issue of validity of the challenged claims in the '641 patent determined by the Board. 478 U.S. 833, 844, 852-55 (1986). Such determination should be made by a jury pursuant to the Seventh Amendment. Patent Owner is aware that ex parte

⁴ Patent Owner provides this response to protect its private patent rights in the challenged claims, and the mere act of participating in this proceeding should not be considered either an explicit or implicit election or consent to the proceeding. Failure

Mossinghoff, 758 F.2d 594 (Fed. Cir. 1985) and Joy Techs., Inc. v. Manbeck, 959 F.2d 226 (Fed. Cir. 1992), but Patent Owner notes that the Supreme Court has not weighed in on the issue. In fact, the Supreme Court would need to change over 100 years of precedent to sanction those cases. Dating back to at least McCormick Harvesting Machine Co. v. Aultman, 169 U.S. 606 (1898), the Supreme Court has explained that "when a patent has received the signature of the secretary of the interior, countersigned by the commissioner of patents, and has had affixed to it the seal of the patent office, it has passed beyond the control and jurisdiction of that office, and is not subject to be revoked or canceled by the president, or any other officer of the government."

Moreover, the Federal Circuit appeared to allow ex parte reexamination because it was equivalent to patent prosecution. The same cannot be said for the new inter partes review procedure. Indeed the PTAB has clearly stated that inter partes review "is not original examination, continued examination, or reexamination of the involved patent. Rather, it is a trial, adjudicatory in nature and constituting litigation." See, Scent Air Tech., Inc. c.

of Patent Owner to participate in this proceeding, notwithstanding its constitutional challenge to the proceeding, would almost certainly result in cancellation of the challenged claims. As such, Patent Owner has no choice but to participate in the proceeding until it is determined that the *inter partes* review process is not constitutional.

Prolite, Inc., IPR 2013-00179, Paper 9, at 4 (Apr. 16, 2013) (emphasis added). This acknowledgement support the argument that determination of validity by the PTAB violates the Seventh Amendment, as the Federal Circuit stated that "[t]he right to a jury trial on issues of patent validity that may arise in a suit for patent infringement is protected by the Seventh Amendment." Patlex, 758 F.2d at 603 (emphasis added) (citation omitted).

Though *inter partes* review is similar to *ex parte* reexamination in that it occurs at the USPTO, that is where the similarities end. The Administrative Law Judicial Panel in an *inter partes* review does not do the very thing that *Patlex* found acceptable: reexamine the patent to correct governmental mistakes. *Inter partes* review is the epitome of a private dispute, and was designed by Congress to lack the features of reexamination that made the latter a proceeding just between the government and patent owner. The PTAB assumes that the adversaries will bring the best prior art, and does not conduct any examination as part of the proceedings. Its decision is based entirely on the parties' arguments, to such an extent that patentees are not subject to the duty of disclosure like they are in reexamination. This stands in stark contrast to *ex parte* reexaminations.

Notwithstanding the PTAB's own characterization of the proceedings, the governing rules demonstrate the similarity of *inter partes* review with a trial before a federal court. First, the PTAB's regulations provide for depositions, and authorize

parties to "seek such discovery as the Patent Office determines is otherwise necessary in the interest of justice." *See, Abbott Labs v. Cordis Corp.*, 710 F.3d 1318, 1326 (Fed. Cir. 2013). Routine discovery includes cited documents, cross-examination of declaration testimony, and information inconsistent with positions advanced during the proceedings. *See*, 37 C.F.R. § 42.73(d)(1).

Unlike reexamination, the claims under *inter partes* review cannot be freely amended. Rather, permission to amend is subject to Board approval, and approval has almost never been granted. *See*, 37 C.F.R. § 42.121. Indeed, the burdens for obtaining approval are vastly different than those employed during examination. An *inter partes* review proceeds before a panel of administrative law judges, as opposed to an examiner in the Central Reexamination Unit that presided of the predecessor reexamination procedures. Unlike reexamination, the patent owner/inventor is forbidden to communicate directly with the Board. And unlike reexamination, the Board does not have as its goal the issuing of valid claims.

The differences described above between *inter partes* review and *ex parte* reexamination are constitutionally significant. Because of these differences, the *inter partes* review process violates the Patent Owner's Seventh Amendment rights and constitutes a violation of the separation of powers.

VI. CONCLUSION

Petitioners have failed to prove that the prior art in the grounds for institution render any of the claims of the '875 patent obvious, alone or in combination with each other. For the reasons stated in more detail above, Patent Owner respectfully requests that the Board uphold the validity of claims 1-3, 5, and 15-23 of the '875 patent, due to the fact that Petitioners have failed to establish that the challenged claims were obvious to one of skill in the art at the time of invention.

Additionally, Patent Owner requests that *inter partes* review of the '875 patent be vacated because it deprives Patent Owner of its Seventh Amendment rights under the United States Constitution and is a violation of the separation of powers.

Dated: April 29, 2015

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on this 29th of April, 2015, a copy of this Patent Owner Response has been served in its entirety by electronic mail on the Petitioners:

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