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Paper 105
Entered: October 7, 2014

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

SIGHTSOUND TECHNOLOGIES, LLC,
Patent Owner.

Case CBM2013-00020
Patent 5,191,573

Before MICHAEL P. TIERNEY, JUSTIN T. ARBES, and GEORGIANNA W. BRADEN, *Administrative Patent Judges.*

ARBES, *Administrative Patent Judge.*

FINAL WRITTEN DECISION
35 U.S.C. § 328(a) and 37 C.F.R. § 42.73

I. BACKGROUND

Petitioner Apple Inc. ("Apple") filed a Corrected Petition (Paper 6, "Pet.") seeking covered business method patent review of claims 1, 2, 4, and 5 of U.S. Patent No. 5,191,573 ("the '573 patent") pursuant to 35 U.S.C. §§ 321–29. On October 8, 2013, we instituted a covered business method patent review of claims 1, 2, 4, and 5 on two grounds of unpatentability (Paper 14, "Dec. on Inst."). Patent Owner SightSound Technologies, LLC ("SightSound") filed a Patent Owner Response (Paper 41, "PO Resp."), Apple filed a Reply (Paper 52, "Reply"), and SightSound filed a Sur-Reply (Paper 104, "Sur-Reply"). *See* Paper 100 (authorizing a sur-reply).

Apple filed a Motion to Exclude (Paper 71, "Pet. Mot. to Exclude") certain testimony from one of SightSound's declarants, John Snell. SightSound filed an Opposition (Paper 79, "PO Exclude Opp."), and Apple filed a Reply (Paper 88, "Pet. Exclude Reply"). SightSound filed a Motion to Exclude (Paper 68, "PO Mot. to Exclude") certain testimony and evidence submitted by Apple. Apple filed an Opposition (Paper 80, "Pet. Exclude Opp."), and SightSound filed a Reply (Paper 86, "PO Exclude Reply"). SightSound also filed a Motion for Observation (Paper 76, "Obs.") on certain cross-examination testimony of Apple's declarants, and Apple filed a Response (Paper 81, "Obs. Resp.").

The parties moved to seal certain materials in this proceeding, and we conditionally granted the motions and entered the parties' proposed protective order, which was a copy of the Board's default protective order. Paper 92. The materials later were unsealed upon agreement of the parties. Paper 100 at 3–4. Apple subsequently filed an additional Motion to Seal (Paper 102, "Mot. to Seal"), which is addressed herein.

A combined oral hearing in this proceeding and related Case CBM2013-00023 was held on May 6, 2014, and a transcript of the hearing is included in the record (Paper 101, "Tr.").

We have jurisdiction under 35 U.S.C. § 6(c). This final written decision is issued pursuant to 35 U.S.C. § 328(a) and 37 C.F.R. § 42.73.

For the reasons that follow, we determine that Apple has shown by a preponderance of the evidence that claims 1, 2, 4, and 5 of the '573 patent are unpatentable.

A. The '573 Patent

The '573 patent[1] relates to a "method for the electronic sales and distribution of digital audio or video signals." Ex. 4101, col. 1, ll. 9–14.[2] The '573 patent describes how three types of media used for storing music at

[1] The '573 patent issued on March 2, 1993, from U.S. Patent Application No. 07/586,391 ("the '391 application"), filed September 18, 1990, which is a file wrapper continuation of U.S. Patent Application No. 07/206,497, filed June 13, 1988. The '573 patent has expired. U.S. Patent No. 5,966,440 ("the '440 patent") is a continuation-in-part of the '573 patent, and is the subject of related Case CBM2013-00023.

[2] Apple's original Exhibits 1101–1146 were not labeled properly. Paper 5 at 2. Apple filed corrected exhibits, but used the same numbers as the originally filed exhibits. Paper 7. To avoid confusion, we renumbered the originally filed copies as Exhibits 4101–4146. Rather than referring to the replacement copies numbered Exhibits 1101–1146, however, the parties in their subsequent papers continued to refer to the originally filed copies numbered Exhibits 4101–4146. Apple also filed additional exhibits in the 4000 series. To ensure that the record is clear, we exercise our discretion and waive the labelling requirements of 37 C.F.R. § 42.63(d), and refer to Apple's original exhibits filed as Exhibits 4101–4274. *See* 37 C.F.R. § 42.5(b). Accordingly, Exhibits 1101–1146 should no longer be cited in this proceeding.

the time of the patent—records, tapes, and compact discs ("CDs")—did not allow for music to be transferred easily and had various problems, such as low capacity and susceptibility to damage during handling. *Id*. at col. 1, l. 17–col. 2, l. 9. The '573 patent discloses storing "Digital Audio Music" (i.e., music encoded into binary code) on a computer hard disk and selling and distributing such music electronically. *Id*. at col. 1, ll. 53–56; col. 2, ll. 10–35.

Figure 1 of the '573 patent is reproduced below.

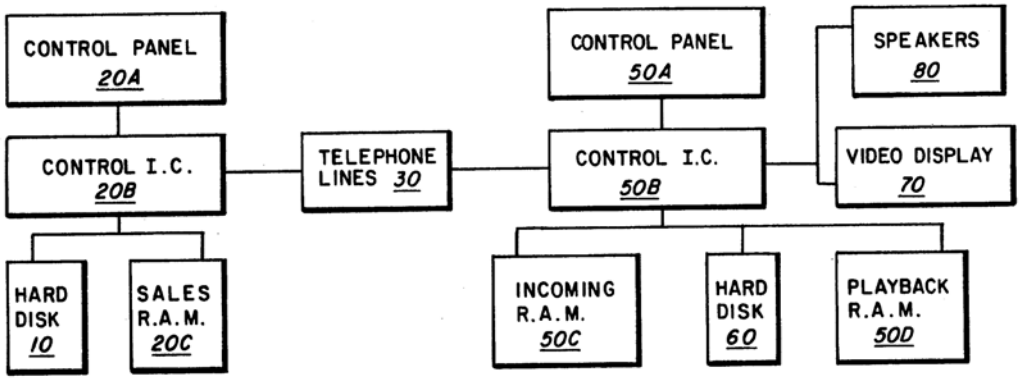

FIG. 1

As shown in Figure 1 above, an agent authorized to sell and distribute "Digital Audio Music" has control unit 20 (control panel 20a, control integrated circuit 20b, and sales random access memory chip 20c) and hard disk 10, which stores the music to be distributed. *Id*. at col. 3, ll. 44–67. On the other side of the Figure, a user has control unit 50 (control panel 50a, control integrated circuit 50b, incoming random access memory chip 50c, and playback random access memory chip 50d), hard disk 60, video display unit 70, and speakers 80. *Id*. at col. 3, l. 67–col. 4, l. 10. The agent and user are connected via telephone lines 30. *Id*. at col. 3, ll. 63–67. According to the '573 patent, control units 20 and 50 are "designed specifically to meet

the teachings of this invention," but all other components shown in Figure 1 were "already commercially available." *Id*. at col. 4, ll. 16–23.

The '573 patent describes a process by which a user transfers money "via a telecommunications line" to purchase music from the agent and the music is transferred electronically "via a telecommunications line" to the user and stored on the user's hard disk. *Id*. at col. 5, ll. 29–45. Control integrated circuits 20b and 50b regulate the electronic transfer. *Id*. at col. 4, ll. 29–47. The agent's sales random access memory chip 20c stores music temporarily so that it can be transferred to the user. *Id*. The user's incoming random access memory chip 50c stores music temporarily before storage in hard disk 60, and playback random access memory chip 50d stores music temporarily so that it can be played. *Id*. In addition to "Digital Audio Music," the '573 patent contemplates "Digital Video" being sold and distributed electronically via the disclosed methods. *Id*. at col. 5, l. 67–col. 6, l. 2.

B. Exemplary Claim

Claim 1 of the '573 patent recites:

> 1. A method for transmitting a desired digital audio signal stored on a first memory of a first party to a second memory of a second party comprising the steps of:
>
> transferring money electronically via a telecommunication line to the first party, at a location remote from the second memory and controlling use of the first memory, from the second party financially distinct from the first party, said second party controlling use and in possession of the second memory;

> connecting electronically via a telecommunications line the first memory with the second memory such that the desired digital audio signal can pass therebetween;
>
> transmitting the desired digital audio signal from the first memory with a transmitter in control and possession of the first party to a receiver having the second memory at a location determined by the second party, said receiver in possession and control of the second party; and
>
> storing the digital signal in the second memory.

C. Prior Art

Apple relies on the following materials, which Apple contends are evidence of a publicly disclosed prior art system referred to by Apple as the "CompuSonics system":

> 1. Declaration of David M. Schwartz, founder of CompuSonics Corp. and CompuSonics Video Corp. (Ex. 4133);
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> 2. *Joint Telerecording Push: CompuSonics, AT&T Link*, BILLBOARD, Oct. 5, 1985 (Ex. 4106);
>
> 3. David Needle, *From the News Desk: Audio/Digital Interface for the IBM PC?*, INFOWORLD, June 4, 1984, at 9 (Ex. 4107);
>
> 4. Larry Israelite, *Home Computing: Scenarios for Success*, BILLBOARD, Dec. 15, 1984 (Ex. 4108);
>
> 5. Image titled "CompuSonics Digital Audio Telecommunications System" (Ex. 4112);
>
> 6. Letter from David M. Schwartz to CompuSonics shareholders, July 16, 1984 (Ex. 4113);
>
> 7. Hyun Heinz Sohn, *A High Speed Telecommunications Interface for Digital Audio Transmission and Reception*, presented at the 76th Audio Engineering Society (AES) Convention, Oct. 8-11, 1984 (Ex. 4114);
>
> 8. Letter from David M. Schwartz to CompuSonics shareholders, Oct. 10, 1985 (Ex. 4115);

9. *CompuSonics Video Application Notes: CSX Digital Signal Processing* (1986) (Ex. 4116);

10. Image titled "CompuSonics Digital Audio Software Production/Distribution" (Ex. 4117);

11. U.S. Patent No. 4,682,248, issued July 21, 1987 (Ex. 4118);

12. Brian Dumaine, *The Search for the Digital Recorder*, FORTUNE, Nov. 12, 1984 (Ex. 4119);

13. Video excerpts of a lecture given at Stanford University by David M. Schwartz and John P. Stautner, Feb. 18, 1987 (Ex. 4120);

14. Photograph of CompuSonics equipment (Ex. 4131); and

15. *New Telerecording Method for Audio*, BROADCAST MANAGEMENT/ENGINEERING, Oct. 1985, at 14-15 (Ex. 4140).

D. Pending Grounds of Unpatentability

The instant covered business method patent review involves the following grounds of unpatentability:

Reference(s)	Basis	Claims
CompuSonics system	35 U.S.C. § 102(a)	1, 2, 4, and 5
CompuSonics publications (Exhibits 4106–4108, 4112–4119, and 4140)	35 U.S.C. § 103(a)	1, 2, 4, and 5

II. ANALYSIS

A. Claim Interpretation

The Board interprets claims of unexpired patents using the "broadest reasonable construction in light of the specification of the patent in which

[they] appear[].” 37 C.F.R. § 42.300(b); *see also* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012) (“Trial Practice Guide”). For claims of an expired patent, however, the Board’s claim interpretation analysis is similar to that of a district court. *See In re Rambus Inc.*, 694 F.3d 42, 46 (Fed. Cir. 2012). Claim terms are given their plain and ordinary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). “There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). Prosecution disclaimer or disavowal must be clear and unmistakable. *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1325–26 (Fed. Cir. 2003). We apply this standard to the claims of the expired ’573 patent.

1. Previously Interpreted Terms

In the Decision on Institution, we interpreted various claim terms of the ’573 patent as follows:

Term(s)	Interpretation
“first party”	a first entity, whether a corporation or a real person
“second party”	a second entity, whether a corporation or a real person

Term(s)	Interpretation
"telecommunication line" (claim 1) "telecommunications line" (claims 1 and 4)	an electronic medium for communicating between computers
"electronically"	through the flow of electrons
"connecting electronically"	connecting through devices or systems which depend on the flow of electrons
"transferring money electronically"	providing payment electronically (i.e., through devices or systems which depend on the flow of electrons)
"digital audio signal"	digital representation of sound waves

See Dec. on Inst. 8–9. Neither party disputes these interpretations in the Patent Owner Response, Reply, or Sur-Reply. We incorporate our previous analysis for purposes of this decision. *See id.*

2. "Second Memory" (Claims 1 and 4)

SightSound argues that one additional term requires interpretation: "second memory." PO Resp. 24–27. Independent claims 1 and 4 recite transferring money electronically from a "second party controlling use and in possession of [a] second memory" to a first party having a first memory, connecting the first memory with the second memory, transmitting the second party's desired digital signal, and "storing the digital signal in the second memory." In its Patent Owner Response, SightSound proposes two interpretations for "second memory." First, SightSound states that the "only reasonable interpretation of 'second memory' . . . is that the claims require a

hard disk for storage, not a removable medium."[3] *Id*. at 26–27 (citing Ex. 2153 ¶ 28). Second, SightSound argues that "second memory" means "a non-volatile form of memory that is not a tape, CD or other similar removable media." *Id*. at 13. Apple disagrees with both assertions, arguing that "second memory" should not be interpreted as requiring a hard disk or non-removable medium. Reply 2–3 (citing Ex. 4262 ¶¶ 4–13).

a. Ordinary Meaning

The parties do not dispute that the ordinary and customary meaning of "memory" does *not* require a hard disk or that the device be non-removable. One dictionary, for example, defines "memory" as "storage space in a computer system or medium that is capable of retaining data or instructions." S.M.H. COLLIN, ED., DICTIONARY OF COMPUTING (2004) (Ex. 3001); *see also* WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 1409 (1986) (Ex. 3002) (defining "memory" as "a component in an electronic computing machine (as a computer) in which information (as data or program instructions) may be inserted and stored and from which it may be extracted when wanted" or "a device external to a computer for the insertion, storage, and extraction of information"). Thus, the ordinary meaning of "second memory" is a second storage space in a computer system or medium that is capable of retaining data or instructions.

[3] SightSound argued at the hearing that "second memory" should be limited further to require an "internal hard drive" and exclude "external hard drives." Tr. 42:3–16. Because we are not persuaded that "second memory" requires a hard disk, for the reasons explained below, we need not determine whether such a device must be internal rather than external.

b. Specification of the ’573 Patent

SightSound contends that the ordinary meaning of “second memory” is disclaimed expressly in the Specification of the ’573 patent. PO Resp. 25–28. SightSound argues that (1) the Specification describes various disadvantages of records, tapes, and CDs, such as potential damage during handling, limited capacity, and limited playback capability, and “[f]loppy disks have the same limitations” according to SightSound, (2) the purpose of the ’573 patent system was to overcome those disadvantages, and (3) every embodiment in the Specification overcomes the identified disadvantages in the prior art. *Id*. (citing Ex. 4101, col. 1, l. 16–col. 2, l. 9). In particular, SightSound points to the statement in the Specification that Digital Audio Music is “stored onto one piece of hardware, a hard disk, thus eliminating the need to unnecessarily handle records, tapes, or compact discs on a regular basis.” Ex. 4101, col. 2, ll. 31–35.

We are not persuaded that the Specification limits the recited “second memory” to a hard disk. The Specification describes the use of a hard disk in the context of describing a preferred embodiment, not defining the “second memory” recited in the claims. *See, e.g.*, *id*. at col. 3, ll. 42–57 (describing hard disk 60 of the user in a section titled “Description of the Preferred Embodiment”); col. 5, ll. 61–67 (stating that the description and drawings “shall be interpreted as illustrative, and not in a limiting sense”). We do not see anything in the Specification indicating that the disclosed method requires a hard disk, as opposed to merely treating it as a preferred type of memory.

Nor are we persuaded that the Specification limits “second memory” to only non-removable devices. The Specification does not use the term

"removable" or state that any memory must be incapable of being removed. Indeed, hard disks, which are the preferred embodiment disclosed in the Specification, were available at the time of the '573 patent as removable and non-removable devices, as SightSound's declarant, Mr. Snell, acknowledges. *See* Ex. 4165 at 107:20–108:2. Further, the Specification's description of disadvantages of certain types of removable storage media (i.e., records, tapes, and CDs) does not mean necessarily that the term "second memory" excludes such devices. *See Thorner*, 669 F.3d at 1366 ("Mere criticism of a particular embodiment encompassed in the plain meaning of a claim term is not sufficient to rise to the level of clear disavowal."). The Specification does not indicate that the identified disadvantages extend to all removable media or that the disadvantages occur specifically because the devices are removable. *See* Ex. 4101, col. 1, l. 17–col. 2, l. 9. To the contrary, some of the identified disadvantages, like limited capacity and playback capability, have nothing to do with whether the device can be removed. *See id*. at col. 1, ll. 21–38. Thus, we do not see any basis in the Specification for limiting "second memory" to only non-removable devices.

We also note that the primary case relied upon by SightSound in support of its proposed interpretation, *In re Abbott Diabetes Care Inc.*, 696 F.3d 1142 (Fed. Cir. 2012), is distinguishable. In *Abbott*, the Federal Circuit interpreted the claim term "electrochemical sensor" as excluding cables and wires, noting that the "claims themselves suggest[ed]" that the sensor does not include such devices. *Id*. at 1149. The challenged claims of the '573 patent, by contrast, do not have anything suggesting that the "second memory" must be non-removable. Also, the specification of the patent at

issue in *Abbott* specifically referenced "cables and wires," whereas the '573 patent Specification does not discuss the removability of any memory. *See id*. at 1150. Accordingly, we are not persuaded that the Specification shows a clear disclaimer of the ordinary meaning of "second memory."

c. Prosecution History

SightSound also argues that the prosecution history of an *ex parte* reexamination of the '573 patent, Reexamination Control No. 90/007,402 ("the '402 reexamination"), shows that "second memory" means "non-volatile storage that is not a tape, CD, or removable media." PO Resp. 11–13. During the reexamination, the patentee amended claims 1 and 4 to recite "storing the digital signal in *a non-volatile storage portion of* the second memory, *wherein the non-volatile storage portion is not a tape or a CD*." Ex. 4103 at 716–17 (added language in emphasis). The '573 patent then expired, removing the pending amendments from consideration. *Id*. at 1504–05. The examiner entered a new rejection of the original claims based on certain prior art that disclosed storing a digital audio signal on a tape or CD. *Id*. at 1506–22. In response, the patentee argued that (1) "cassette tapes and CDs are not 'second memories' according to the claims and specification," and (2) tapes, records, and CDs are "described in the specification as containing drawbacks in light of their removable nature and their physical distribution (when compared with a hard disk acting as an internal, non-volatile storage device), and it is those drawbacks that the patented invention seeks to overcome." *Id*. at 1531–32.

The examiner then allowed the claims, stating that "[i]n view of [the] patent expiration, the specification, and the repeated patent owner statements

and actions [during the reexamination], the examiner interprets the ordinary and customary meaning of 'second memories' as *not* including cassette tapes, CDs and the like." *Id*. at 1587. Thus, the examiner viewed the claims as having "essentially the same scope" as the amended claims reciting a second memory that is "not a cassette tape or a CD." *Id*. (emphasis omitted). SightSound reads the examiner's statement of "and the like" as applying to all removable media, and asserts that the examiner's interpretation should apply in this proceeding as well. PO Resp. 12–13.

We are not persuaded that the prosecution history demonstrates a clear and unmistakable disclaimer of all removable media. Again, like the portions of the Specification discussed above, the cited statements from the prosecution history pertain to specific hardware devices—records, tapes, and CDs—and are not tied explicitly to all removable media. Further, the prior art the patentee was attempting to overcome in the reexamination used a tape or CD for storage. *See* Ex. 4103 at 1506–22. The fact that tapes and CDs have the common attribute of being removable (in addition to many other attributes) does not mean that the patentee was disclaiming all removable devices. At most, the patentee's statements may be read as disclaiming records, tapes, and CDs, but may not be read as disclaiming all removable media as SightSound contends.

In addition, certain statements in the prosecution history contradict SightSound's proposed interpretation. During the original prosecution of the '391 application, which issued as the '573 patent, the named inventor, Arthur R. Hair, stated that "[a]ny suitable recording apparatus controlled and in possession of the second party can be used to record the incoming digital signals." Ex. 4102 at 140. SightSound characterizes the word "suitable" as

indicative of Mr. Hair describing non-removable devices, but we see nothing in the surrounding discussion indicating that he meant "suitable" to mean non-removable. *See* Sur-Reply 8 n.6. In addition, the original claims of the '391 application expressly recited a "hard disk," but the language was removed from the claims in favor of the broader term "second memory." *See* Ex. 4102 at 18 (reciting a "hard disk of the user"); *see also* Ex. 4103 at 717–18 (new claims submitted in the '402 reexamination reciting "second party hard disk"). This indicates a deliberate choice to use the broader "second memory" language instead of a narrower term, such as "hard disk." After reviewing the full prosecution history of the '573 patent and '402 reexamination, we do not see clear evidence that "second memory" excludes removable devices.

d. Conclusion

For the reasons explained above, we are not persuaded that the full scope of "second memory" was disclaimed, either in the Specification or during prosecution. Thus, we interpret the term according to its ordinary meaning to mean a second storage space in a computer system or medium that is capable of retaining data or instructions.

B. Overview of the CompuSonics Prior Art

In its Petition, Apple alleges that a computer system, referred to by Apple as the "CompuSonics system," was developed by CompuSonics Corp. and CompuSonics Video Corp. (collectively, "CompuSonics") in the 1980s. Pet. 33–35. Apple provides as supporting evidence a declaration from the founder of CompuSonics, David M. Schwartz (Ex. 4133), as well as various

printed publications (Exs. 4106–4108, 4112–4119, 4140), a photograph (Ex. 4131), and a videotaped lecture from February 18, 1987 (Ex. 4120), allegedly describing the CompuSonics system. In response, SightSound provides a declaration from another former CompuSonics employee, John P. Stautner (Ex. 2121). Before turning to the substance of Apple's allegations of unpatentability, we provide a brief summary of the evidence submitted by the parties.

1. Mr. Schwartz's Testimony and the CompuSonics Publications

Mr. Schwartz, founder of CompuSonics and declarant for Apple, testifies that the CompuSonics system comprised "digital recorder/players, which CompuSonics referred to as DSPs [Digital Signal Processors]." Ex. 4133 ¶ 4. According to Mr. Schwartz, a DSP could "download digital data from a remote source to a local disk" (a process CompuSonics called "[t]elerecording") and play back the stored digital data. *Id*. Mr. Schwartz provides the following photograph of "a CompuSonics digital recorder/player" as Exhibit 4131. Ex. 4133 ¶ 18.

Exhibit 4131 is a photograph depicting a "DSP-1000" device with a floppy disk that can be inserted in the device.

Mr. Schwartz also provides two diagrams allegedly showing the CompuSonics system. The first diagram is Exhibit 4112 shown below.

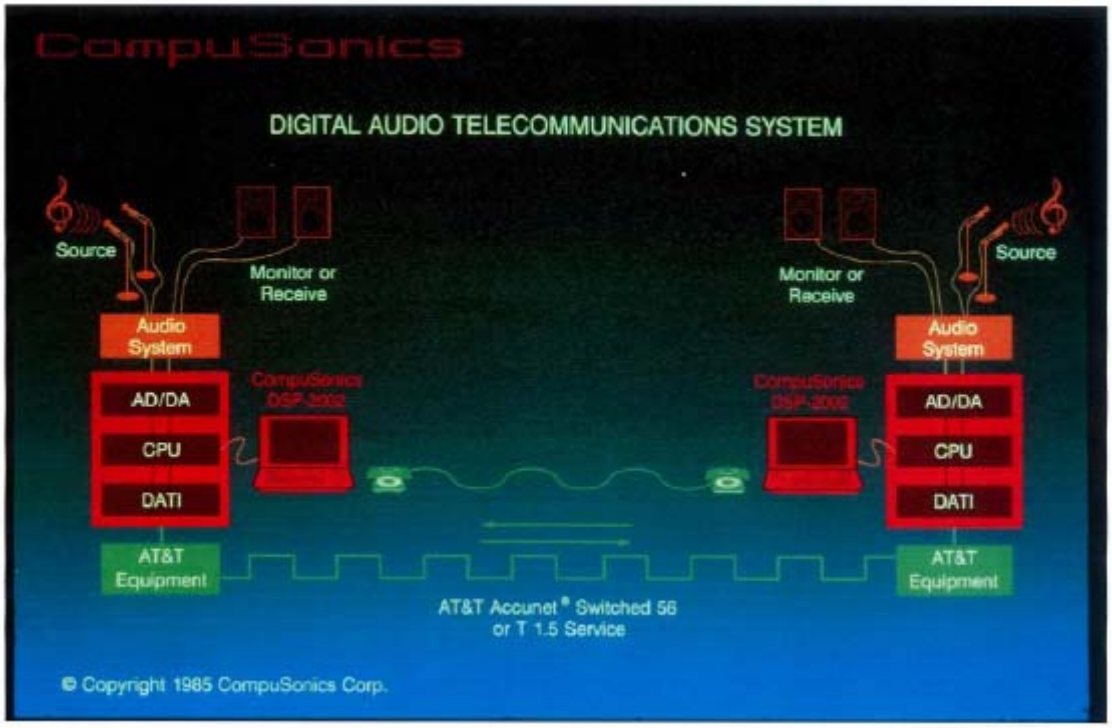

Exhibit 4112 depicts the transmission of digital audio from one "DSP-2002" to another "DSP-2002" over an AT&T telephone line or T1 line.

Mr. Schwartz testifies that he created the diagram, which "illustrat[es] CompuSonics'[s] telerecording technology, dated 1985," and presented the diagram to the public at various events. Ex. 4133 ¶ 9.

The second diagram is Exhibit 4117 shown below.

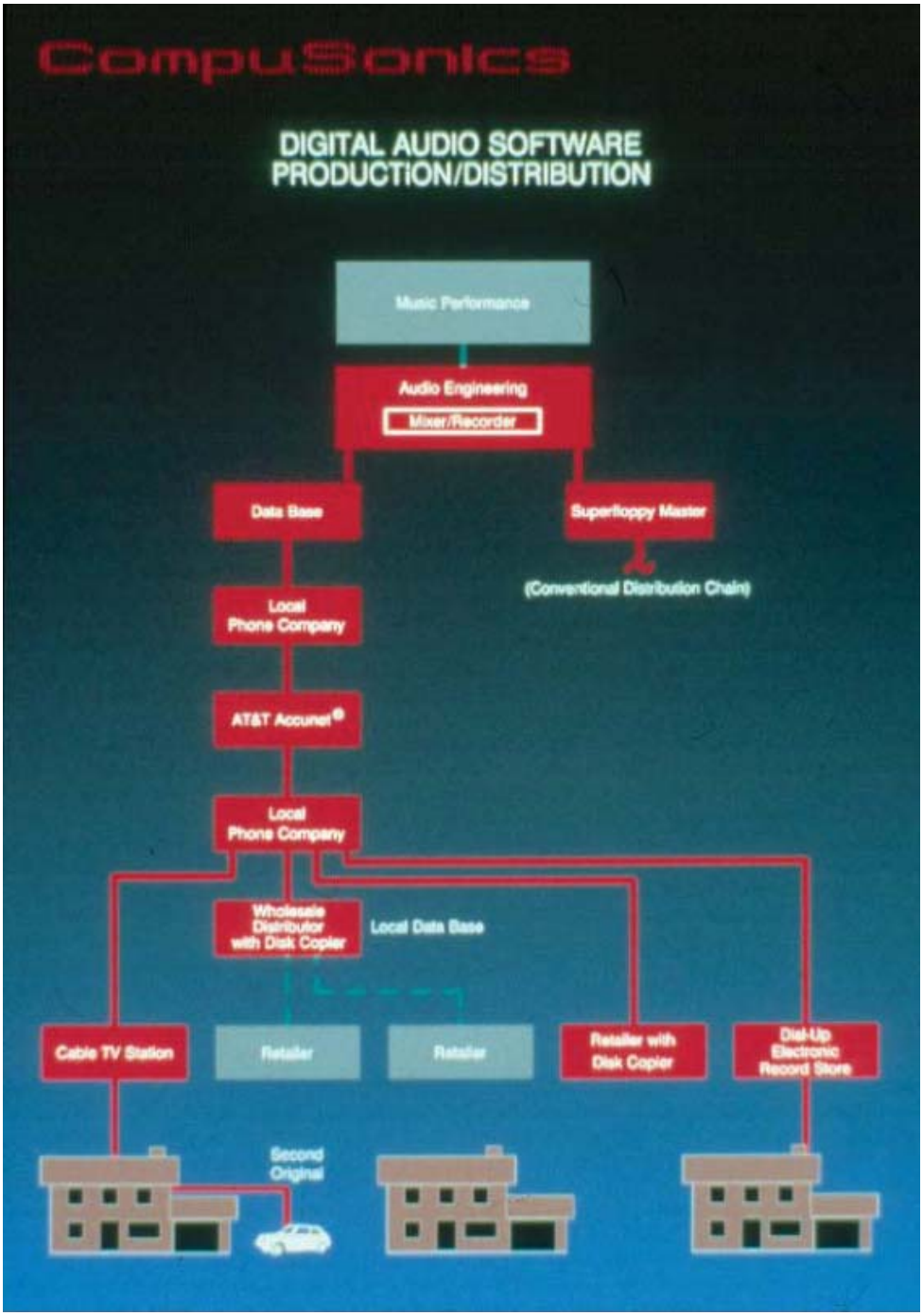

Exhibit 4117 depicts "Dial-Up Electronic Record Store" user access to a music performance via a "Local Phone Company" and "AT&T Accunet." Mr. Schwartz testifies that he created the diagram and showed it to the

public at various events, including the videotaped lecture he gave with Mr. Stautner in 1987 (Ex. 4120). Ex. 4133 ¶ 14.

Mr. Schwartz describes the CompuSonics publications and attests that they are "public disclosure[s] of features of the CompuSonics system." *Id*. ¶¶ 5–14, 16, 17, 19. For example, various publications describe downloading music electronically over a telephone line and storing it locally on the user's device. A June 1984 article in *InfoWorld* magazine discloses:

> Among the new products to be previewed at the Consumer Electronics Show this month will be a digital / audio disk player that uses a new 3.3-megabyte floppy drive to store music in digital form. The player will cost $1,000. The company behind the product, CompuSonic[s], says it also has developed a software interface for its new CompuSonic[s] DS-1000 system that will allow the user to route music through the IBM PC. The user will supposedly be able to edit the music by using the computer's keyboard as a mixer. *The firm is also looking at potential electronic distribution of music whereby you would be able to download music onto your PC in the same manner as other digital information. The CompuSonic[s] system has a built-in communications device that receives information via an existing phone line.*

Ex. 4107 at 1 (emphasis added). A June 1984 letter to CompuSonics shareholders states:

> Testing of the Telerecording system with CMI Labs began last week. . . . A successful test of the *digital transmission of high fidelity music over telephone lines* will be followed by a joint press conference of CompuSonics, CMI Labs and AT&T, heralding the dawn of a new era in the music industry in the not too distant future [when] consumers will be able to purchase digital recordings of their favorite artists directly from the production studio's dial-up data base and *record them on blank SuperFloppies in a DSP-1000*.

Ex. 4113 at 1 (emphases added); *see also* Ex. 4106 at 3 ("record the transmission onto a five-and-a-quarter-inch 'super-floppy' disk").

Various publications also describe work that CompuSonics did with AT&T in the 1980s, including one demonstration of transmitting digital audio between DSPs in Chicago and New York. An October 1985 article in *Billboard* magazine discloses that the two companies entered into an agreement to jointly promote AT&T's "Accunet Switched 56 data transmission service and CompuSonics['s] digital telerecording system." Ex. 4106 at 3. The article states:

> At a recent press demonstration hosted by AT&T at its headquarters here, CompuSonics made use of AT&T's land-based telephone data transmission system to digitally transmit and receive music between Chicago and New York.
>
> . . .
>
> David Schwartz, president of CompuSonics, is a strong proponent of the "electronic record store" concept, an idea that has been bandied about for some time, but which Schwartz says is now poised to "become a reality." While that is open to debate, such a system, as seen by Schwartz and CompuSonics, would utilize the firm's telerecording process and hard disk equipment to allow music software dealers to receive an album master via a digital transmission from the record company.
>
> The retailers would then be able, in turn, to digitally transmit the music to consumers who would use credit cards to charge their purchases over the phone lines. The final step would involve the CompuSonics consumer digital audio recorder/player (which has yet to see production), which would record the transmission onto a five-and-a-quarter-inch "super-floppy" disk.

Id.; *see also* Ex. 4114 at 2 (describing the use of the AT&T Accunet service for transmitting digital audio signals at 56,000 bits per second); Ex. 4140. An October 1985 letter to CompuSonics shareholders describes a "series of

successful telerecording tests and demonstrations which culminated in August with New York City to Chicago and back digital audio communications between two CompuSonics DSP-2002s with AT&T ACCUNET Switched 56 service providing the channel." Ex. 4115 at 1.

Finally, the CompuSonics publications discuss using the telerecording process to sell music to consumers. One article, for instance, contemplates retailers being able "to digitally transmit the music to consumers who would use credit cards to charge their purchases over the phone lines." Ex. 4106 at 3. Another discloses that:

> Compusonics is talking to AT&T about setting up a service that would enable record companies to sell direct to consumers over the telephone. Symphonies, ordered by credit card, could travel digitally over phone lines into homes to be recorded by Compusonics'[s] machine. Movies, which can also be recorded digitally, might be sent the same way.

Ex. 4119 at 2. Another publication states that:

> AT&T's commitment to telerecording may hasten the arrival of that day, in the not too distant future, when the technology will filter down to the consumer level, allowing all-electronic purchases, transfers and digital recording of high fidelity audio from any music dealer's DSP-2000 to the DSP-1000 in your living room.

Ex. 4115 at 1.

2. Mr. Stautner's Testimony

Mr. Stautner, declarant for SightSound, testifies that he began working for CompuSonics as its second employee in 1983 or 1984, became President of CompuSonics Video Corp. in 1985, and remained with the company until CompuSonics went out of business in 1989 or 1990.

Ex. 2121 ¶¶ 3–4. Mr. Stautner describes two "series" of DSPs created by CompuSonics, both of which could record audio in digital form. *Id*. ¶¶ 6–14. The "2000 series," which included the DSP-2002 and DSP-2004, was meant for professional recording studios and used a hard disk for storing digital audio. *Id*. ¶¶ 6–7. The "1000 series" was meant for consumers and "used a floppy disk storage system as well as cartridge floppy storage and cartridge optical disk storage." *Id*. ¶¶ 8–9. Later DSP-1000s used a "write-once optical disk drive." *Id*. ¶ 10. Mr. Stautner states that CompuSonics "developed and tested software that enabled DSP's to transmit digital audio files locally and over distances," including the software used in the 1985 demonstration discussed above. *Id*. ¶¶ 12–14. However, "[t]elerecording capability never existed on any DSP that was sold or commercially available by CompuSonics" because of various "challenges that stood in the way of the adoption of telerecording," such as the limited availability and large expense of high-capacity digital connections. *Id*. ¶ 15. Mr. Stautner further testifies that "CompuSonics never developed a system or method for selling digital audio or video signals over telecommunications lines, nor did CompuSonics ever develop or write software that would enable DSP's to be used to transfer money electronically." *Id*. ¶ 21. According to Mr. Stautner, telerecording, and the idea of an "Electronic Record Store," were merely aspirational, and not actually put into practice by CompuSonics. *Id*. ¶¶ 15–16.

C. Anticipation Ground

Apple argues that claims 1, 2, 4, and 5 are anticipated by the CompuSonics system under 35 U.S.C. § 102(a),[4] which specifies that a person shall be entitled to a patent unless "the invention was known . . . by others in this country . . . before the invention thereof by the applicant for patent." *See* Pet. 33–34; Reply 5. We have reviewed the parties' submissions and evidence discussed in those papers, and are not persuaded, by a preponderance of the evidence, that claims 1, 2, 4, and 5 are anticipated.

The basis for Apple's anticipation argument is its assertion that there existed a single "CompuSonics system" that was known publicly prior to the '573 patent. *See* Pet. 33–34. Apple asserts that "CompuSonics publicly demonstrated its recorder/players, patented its underlying technology, and promoted the use of its recorder/player system for facilitating the sale and distribution of digital audio and video over telephone, T1, and cable lines." *Id*. Apple refers collectively to the "technology and concepts embodied in CompuSonics'[s] publicly disclosed system," as evidenced by Mr. Schwartz's testimony and the various CompuSonics materials submitted in this proceeding, as the "CompuSonics system." *Id*.

Although the materials contain very similar disclosures, we are not persuaded that they disclose a single, publicly known system that anticipates the challenged claims. Anticipation requires that every limitation of the claim at issue be disclosed in a prior art disclosure and "arranged or combined in the same way as recited in the claim." *Net MoneyIN, Inc. v.*

[4] Section 18(a)(1)(C) of the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) ("AIA"), provides that a covered business method patent review may be based on "prior art that is described by section 102(a)" as in effect before March 16, 2013.

VeriSign, Inc., 545 F.3d 1359, 1371 (Fed. Cir. 2008). "[I]t is not enough that the prior art reference . . . includes multiple, distinct teachings that the artisan might somehow combine to achieve the claimed invention." *Id*.; *see also Kyocera Wireless Corp. v. ITC*, 545 F.3d 1340, 1351–52 (Fed. Cir. 2008) (concluding that a set of eleven specifications pertaining to the same telecommunication standard did not constitute a "single prior art reference").

Apple does not argue that a single prior art reference discloses all limitations of the challenged claims, instead relying on different materials as allegedly disclosing different limitations. *See* Pet. 43–55. The cited materials undoubtedly are similar, as they all describe technology developed by CompuSonics and pertain generally to the recording of digital audio or video. There are differences, however. For example, the materials describe different models of DSPs with slightly different features and capabilities. Certain materials discuss the recording of digital audio on DSP-1000 series devices with floppy disks, *e.g.*, Ex. 4113, whereas others disclose storage on DSP-2000 series devices with a hard disk, *e.g.*, Ex. 4119. Given that the prior art teachings and suggestions are found in references describing a family of device models, as opposed to a single device model, we find that one skilled in the art would not have at once envisaged the claimed arrangement of known components in a manner consistent with anticipation under 35 U.S.C. § 102(a). Apple has not demonstrated, by a preponderance of the evidence, that claims 1, 2, 4, and 5 of the '573 patent are anticipated by the CompuSonics system.

D. Obviousness Ground

In the Decision on Institution, we found that Apple had shown, more likely than not, that the printed publications it submitted regarding CompuSonics (Exs. 4106–4108, 4112–4119, 4140) teach all of the limitations of claims 1, 2, 4, and 5 of the '573 patent. Dec. on Inst. 27–28. We also determined that Apple's analysis and supporting evidence demonstrated, more likely than not, that the claims would have been obvious to a person of ordinary skill in the art based on the CompuSonics publications. *Id*. Upon review of all of the parties' papers and supporting evidence discussed in those papers, we are persuaded, by a preponderance of the evidence, that claims 1, 2, 4, and 5 are unpatentable over the CompuSonics publications under 35 U.S.C. § 103(a).

1. The Board Has Jurisdiction to Review Whether the Claims Would Have Been Obvious

As an initial matter, SightSound argues that we exceeded the scope of our jurisdiction in instituting a covered business method patent review of the challenged claims based on obviousness over the CompuSonics publications. PO Resp. 56–59. SightSound contends that Apple did not assert explicitly a ground of obviousness based on the CompuSonics publications in its Petition and, therefore, the Decision on Institution was improper under 37 C.F.R. § 42.208(c). *Id*. SightSound further contends that the Decision violated its due process rights because it does not know what arguments Apple would make regarding obviousness in reply to the Patent Owner Response, and SightSound would not have "an opportunity to respond to [Apple's] arguments directly in writing." *Id*. Apple responds that the

Decision was proper because Apple's Petition supported the ground of obviousness and because Dr. John P. J. Kelly's supporting declaration explained his view that the claims are anticipated and would have been obvious. Reply 8; *see* Ex. 4132 ¶ 47, App. C.

SightSound's arguments are not persuasive. "Post-grant review shall not be instituted for a ground of unpatentability, unless the Board decides that the petition *supporting the ground* would, if unrebutted, demonstrate that it is more likely than not that at least one of the claims challenged in the petition is unpatentable." 37 C.F.R. § 42.208(c) (emphasis added). As stated in our Decision on Institution, Apple's Petition supported a ground of obviousness based on the CompuSonics publications. Dec. on Inst. 27–28. Apple explained in detail in its Petition how the publications teach every limitation of the claims, and how the publications describe similar features and relate to each other. *See* Pet. 33–55. The allegations in the Petition were supported by the declarations of Mr. Schwartz, who testified that the CompuSonics publications were disclosed publicly, and Dr. Kelly, who testified regarding how the CompuSonics publications teach every limitation of the challenged claims. *See* Ex. 4132 ¶¶ 32–40, 47, App. C; Ex. 4133 ¶¶ 5–14, 16, 17, 19. SightSound did not rebut Apple's allegations in its Preliminary Response, arguing only that the '573 patent is not a covered business method patent. *See* Dec. on Inst. 23–28. We are not persuaded that the Decision on Institution was improper under 37 C.F.R. § 42.208(c).

SightSound further does not contend that we lacked jurisdiction to institute a covered business method patent review on the ground of anticipation. *See* PO Resp. 56–59. Once a covered business method patent review is instituted, the Board's mandate is to "issue a final written decision

with respect to the patentability of any patent claim challenged by the petitioner." 35 U.S.C. § 328(a). We do so based on the instituted grounds and full record before us. Thus, we proceed to determine the patentability of the challenged claims based on the existing record, including a determination of whether the claims would have been obvious based on the CompuSonics publications.

Finally, we are not persuaded that instituting a covered business method patent review on the ground of obviousness violated SightSound's due process rights. The Petition supported the ground of obviousness, as explained above, and the Decision on Institution explained the basis for that determination. *See* Dec. on Inst. 23–28. Further, SightSound was permitted to file a Sur-Reply and new declaration testimony in response to Apple's Reply, and availed itself of that opportunity. *See* Paper 100 at 2–4; Sur-Reply.[5]

2. Level of Ordinary Skill in the Art

The parties' declarants apply similar definitions for the level of ordinary skill in the art at the time of the '573 patent (June 13, 1988, when parent U.S. Patent Application No. 07/206,497 was filed), and neither party contends that the minor differences between those definitions impact the obviousness analysis. Apple's declarant, Dr. Kelly, testifies that a person of

[5] SightSound also argues that "[f]or the reasons previously stated, none of the claims is a 'covered business method,'" citing pages 23–39 of its Preliminary Response. PO Resp. 10 n.2. Doing so was improper, and we do not consider arguments SightSound attempts to incorporate by reference from its previous filing. *See* 37 C.F.R. § 42.6(a)(3) ("Arguments must not be incorporated by reference from one document into another document.").

ordinary skill would have had "a bachelor's degree or equivalent in computer engineering or computer science and approximately two years of experience in developing software and hardware that transmit and receive files over a network." Ex. 4132 ¶ 11. SightSound's declarant, Mr. Snell, testifies that a person of ordinary skill would have had "an undergraduate degree in electrical engineering or computer science and/or approximately 2–4 years of industry experience in the design of systems and methods for storing and transmitting digital information." Ex. 2153 ¶ 30. The district court in *SightSound Techs., LLC v. Apple Inc.*, Case No. 2:11-cv-01292-DWA (W.D. Pa.), applied the same level of ordinary skill as Mr. Snell. *See* Ex. 4134 at 12 n.12; Ex. 4135.

Based on our review of the '573 patent, the types of problems and solutions described in the '573 patent and cited prior art, and the testimony of the parties' declarants, we agree with Dr. Kelly's assessment and conclude that a person of ordinary skill in the art would have had a bachelor's degree or equivalent in computer engineering or computer science and approximately two years of experience in developing software and hardware that transmit and receive files over a network. *See, e.g.*, Ex. 4101, col. 1, l. 9–col. 2, l. 9 (describing alleged problems in the prior art, and stating that the '573 patent describes "a method [by] which a user may purchase and receive digital audio or video signal[s] from any location which the user has access to a telecommunications line"); col. 4, ll. 16–22 (stating that certain components, such as hard disks 10 and 60, telephone lines 30, compact disc player 40, video display unit 70, and stereo speakers 80, were "already commercially available"); Ex. 4132 ¶¶ 2–7 (describing the background of Dr. Kelly); Ex. 2153 ¶¶ 3–13 (describing the background of

Mr. Snell). In particular, Dr. Kelly's definition is appropriate because it requires some level of specific experience with transmitting and receiving data over a network, consistent with the recitation in the claims of connecting electronically and transmitting data over a telecommunication line.

3. The CompuSonics Publications Are Prior Art

We are persuaded that all of the CompuSonics publications qualify as prior art under 35 U.S.C. § 102. Exhibits 4106–4108, 4113–4116, 4119, and 4140 are publicly available printed publications that are prior art under 35 U.S.C. §§ 102(a) and 102(b), and Exhibit 4118 is a patent that is prior art under 35 U.S.C. § 102(a). *See* Ex. 4133 ¶¶ 6–8, 10–13, 16, 17, 19 (testimony of Mr. Schwartz regarding the public availability of the publications). SightSound does not dispute that these documents qualify as prior art.

SightSound argues that the two diagrams shown above, Exhibits 4112 and 4117, do not qualify as prior art printed publications because they only were displayed for a few seconds in slide show format at trade shows. PO Resp. 35–37; *see* Ex. 2121 ¶¶ 23–24 (testimony from Mr. Stautner that he believes the diagrams were not provided to the public, but shown briefly during a slide show). We disagree. Mr. Schwartz testifies that the diagrams were "shown to the public via presentation at businesses, conferences, lectures, and industry events," such as the 1987 lecture with Mr. Stautner. *See* Ex. 4133 ¶¶ 9, 14; Ex. 2124 at 46:9–11. Mr. Schwartz further testifies that he presented Exhibit 4112 at trade shows, including National Association of Broadcasters trade shows and the Consumer Electronics

Show. Ex. 2124 at 45:11–46:20. At those shows, a slide show would be "running all the time" to accompany Mr. Schwartz's "discussions with people who visited the booth," and the slide would be on the screen for 30 seconds at a time. *Id*. Similarly, Mr. Schwartz states that he displayed Exhibit 4117 at trade shows and used it in pitches to various companies. *Id*. at 64:19–68:8.

The determination of whether a document is a "printed publication" under 35 U.S.C. § 102 involves a case-by-case inquiry into the facts and circumstances surrounding its disclosure to members of the public. *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004). To qualify, a document must have been sufficiently accessible to the public interested in the art. *Kyocera*, 545 F.3d at 1350–51 (a "reference is publicly accessible 'upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it'") (citation omitted). The evidence of record indicates that the diagrams were displayed, publicly and repeatedly, at trade shows, lectures, and similar events, and that those events were of the type that would have been attended by persons of ordinary skill in the art. The diagrams were displayed multiple times at multiple events, unlike the situation where a slide is displayed only one time at an oral presentation. *See Klopfenstein*, 380 F.3d at 1349 n.4. Further, each diagram is a relatively simple display of components on a single page, and there is no indication in the record that attendees at the various events could not have copied the diagrams. *See id*. at 1351 ("The more complex a display, the more difficult it will be for members of the public to effectively capture its information. The simpler a

display is, the more likely members of the public could learn it by rote or take notes adequate enough for later reproduction."). Apple has established that Exhibits 4112 and 4117 qualify as prior art printed publications under 35 U.S.C. § 102(a).

4. Independent Claim 1

a. The CompuSonics Publications Teach Every Limitation of Claim 1

Apple explains in detail in its Petition how the CompuSonics publications teach every limitation of claim 1, relying on the testimony of Dr. Kelly in support. *See* Pet. 33–51; Ex. 4132 ¶¶ 17–40, App. C at 1–7. For example, the two CompuSonics diagrams shown above depict an arrangement of two DSPs connected via a telephone or T1 "telecommunication line," and other publications describe how digital audio could be downloaded from a "transmitter" of one user to a "receiver" of another and stored locally on a floppy disk. *See* Pet. 43–51 (citing Exs. 4106–4108, 4112–4119, 4140); Ex. 4132, App. C at 5–7. Apple identifies as a "first memory of a first party" a seller database of music, which Apple contends is stored necessarily on a memory device, and identifies as a "second memory of a second party" the floppy disk in the user's device. *See id*. at 44 (citing Exs. 4106, 4113); Ex. 4132, App. C at 1–3. Apple's analysis, supported by the testimony of Dr. Kelly, is persuasive.

In its Patent Owner Response, SightSound "does not dispute that the *components* needed to practice the claims were available prior to 1988," when the parent application of the '391 application, which issued as the '573 patent, was filed. PO Resp. 31. Thus, there is no dispute that all of the physical components recited in the claimed methods (i.e., first memory,

second memory, telecommunication line, transmitter, receiver) were known in the prior art. Rather, SightSound argues that the CompuSonics publications fail to teach certain steps of the method of claim 1, as well as the specific combination of steps recited in the claim.[6] *Id*. at 22–35, 59–65.

First, SightSound argues that the CompuSonics publications do not teach "storing the digital signal in the second memory" because they describe storage on a floppy disk, not a hard disk. *Id*. at 24–30, 50–52. SightSound's argument is based on its proposed interpretation of "second memory," with which we disagree for the reasons explained above. *See supra* Section II.A.2. We interpret the term to mean a second storage space in a computer system or medium that is capable of retaining data or instructions. *Id*. A floppy disk, as disclosed in the CompuSonics publications, meets that definition. *See* Pet. 49–51; Ex. 4132, App. C at 7 (citing Exs. 4106, 4116, 4118, 4119); Ex. 4262 ¶¶ 4–13.

[6] SightSound also argues that CompuSonics's technology already was considered by the Office during prosecution of the '402 reexamination, and that the 1985 demonstration was considered by the district court in denying a motion for summary judgment of invalidity because the CompuSonics system "'was not configured to accept credit card information and transmit it to the seller's mainframe as a preliminary step to downloading the signals.'" PO Resp. 13–14; *see* Ex. 4103 at 420–21, 424. The particular evidence and arguments presented by Apple in this proceeding, however, were not considered by the Office previously. Although some of the CompuSonics publications were submitted during the '402 reexamination, at least three important disclosures—the two CompuSonics diagrams shown above (Exs. 4112, 4117) and the 1985 *Billboard* magazine article describing retailers "digitally transmit[ting] the music to consumers who would use credit cards to charge their purchases over the phone lines" (Ex. 4106 at 3)—were not. *See* Ex. 4101 at 10–24; Reply 5 n.1. Nor is there any indication that the CompuSonics publications, including those disclosing telephone payment, ever were considered as a group.

Second, SightSound argues that the CompuSonics publications do not teach the step of "transferring money electronically via a telecommunication line to the first party . . . from the second party financially distinct from the first party," as recited in claim 1. PO Resp. 6–7, 22–24, 33, 43–49, 62, 65. SightSound asserts that no CompuSonics device ever was "programmed to process payments," relying on the testimony of Mr. Stautner. *Id*. at 6–7, 24, 33 (citing Ex. 2121 ¶¶ 20–21). For purposes of assessing whether the claim would have been obvious based on the CompuSonics publications, however, the issue is not whether CompuSonics created a product that transferred money electronically, but rather what "the combined teachings of the references would have suggested to those having ordinary skill in the art." *See In re Mouttet*, 686 F.3d 1322, 1333 (Fed. Cir. 2012).

We agree with Apple, and Dr. Kelly, that the CompuSonics publications teach the "transferring money electronically" step of claim 1. *See* Pet. 44–46; Ex. 4132, App. C at 3–5; Ex. 4262 ¶¶ 14–25. Exhibit 4106 describes retailers "digitally transmit[ing] . . . music to consumers who would *use credit cards to charge their purchases over the phone lines*." Ex. 4106 at 3 (emphasis added). Exhibit 4119 discloses allowing "record companies to *sell direct to consumers over the telephone*," where "[s]ymphonies, *ordered by credit card*, could travel digitally over phone lines into homes to be recorded by Compusonics'[s] machine." Ex. 4119 at 2 (emphasis added). Exhibit 4115 discloses "allowing *all-electronic purchases*, transfers and digital recording of high fidelity audio from any music dealer's DSP-2000 to the DSP-1000 in your living room." Ex. 4115 at 1 (emphasis added).

SightSound does not dispute that the "transferring money electronically" step encompasses a person charging a purchase over the telephone. *See* Tr. 38:16–39:5 (acknowledging that the step could be "a person picking up their phone, calling in a credit card number over the phone"). Indeed, claim 3, which depends from claim 1, recites that "the transferring step includes the steps of telephoning the first party" and "providing a credit card number of the second party . . . so the second party is charged money." Further, during prosecution of the '391 application, the named inventor declared that "[o]ne skilled in the art would know that an electronic sale inherently assumes a transferring of money by providing a credit or debit card number (since this is the only way for electronic sales to occur) coupled with a transferring of a service or product." Ex. 4102 at 170. The named inventor also acknowledged, during prosecution of U.S. Patent Application No. 08/023,398 (a continuation of the '573 patent), that electronic sales include telephone purchases, and that such purchases were well-known at the time:

> One skilled in the art would know that an electronic sale inherently assumes a transferring of money by providing an account number or a credit or debit card number which then allows for access to or a transferring of a service or product through telecommunications lines.
>
> One skilled in the art would know that an electronic sale inherently assumes a charging of a fee to an account which then allows for access to or a transferring of a product or service through telecommunications lines.
>
> The use of transferring money across telecommunication connections, such as by telephoning over the phone lines the agent who has a first party's hard disk, or charging a fee to a purchaser or "second party" preferably at a location remote from a purchaser or "second party," for obtaining data on the

> first party's hard disk through telecommunications lines is well known to one skilled in the art to be part of electronic sales.[7]

Ex. 4136 at 109–10; *see also* Ex. 4102 at 163 (citing the "well known process of 'providing a credit card number' over a telephone line and 'telephoning' to make the connection"); Ex. 4165 at 59:13–61:22, 74:5–75:24 (SightSound's declarant, Mr. Snell, acknowledging during his deposition that telephone purchases were well-known). Thus, a person of ordinary skill in the art would have understood the CompuSonics publications that describe music purchases over the telephone (e.g., with a credit card) to teach the "transferring money electronically" step of claim 1.

With respect to one of the CompuSonics publications, Exhibit 4119, Mr. Snell contends that a person of ordinary skill in the art would have understood the document's reference to selling "over the telephone" to mean "placing an order by telephone to be invoiced on a monthly bill," and the reference to symphonies "ordered by credit card" to mean that "a credit card payment would be made in writing in advance of purchase, for instance by writing down a code for a recording and a credit card number and mailing it to the seller." Ex. 2153 ¶ 55. We are not persuaded that a person of

[7] SightSound argues that the statements made during prosecution are irrelevant, citing our decision denying institution on Apple's asserted ground based on the Synth-Bank article. Sur-Reply 13 (citing Dec. on Inst. 30). The Synth-Bank article, however, merely discloses an "on-line shopping service" where users can "purchase" sound files, without describing how the user provides payment. *See* Dec. on Inst. 29. By contrast, the CompuSonics publications specifically describe a consumer making a credit card purchase over the telephone. *See, e.g.*, Ex. 4106 (consumers "would use credit cards to charge their purchases over the phone lines"); Ex. 4119 (record companies would "sell direct to consumers over the telephone," with symphonies "ordered by credit card"). The prosecution statements regarding credit card purchases over the telephone, therefore, are relevant.

ordinary skill in the art would have read the document in that manner, as the publication does not discuss doing anything via mail and doing so would be inconsistent with the full disclosure of the document. Exhibit 4119 discloses: "Compusonics is talking to AT&T about setting up a service that would enable record companies to *sell direct to consumers over the telephone*. *Symphonies, ordered by credit card*, could travel digitally over phone lines into homes to be recorded by Compusonics'[s] machine." Ex. 4119 at 2 (emphasis added). Reading both sentences together, a skilled artisan would have understood Exhibit 4119 to be referring to a consumer telephoning a record company and providing a credit card number so that the consumer could purchase music. *See* Ex. 4262 ¶¶ 18–19.

Finally, SightSound argues that the CompuSonics publications do not teach the "transferring money electronically" step, because (1) CompuSonics controlled the DSP on both ends of the communication, as shown in the Exhibit 4112 diagram, and (2) "no DSP was ever configured to transmit payment information." PO Resp. 2, 6–7, 35, 48–50 (citing Ex. 2153 ¶ 48). As explained above, the CompuSonics publications describe a consumer purchasing music from a music seller (e.g., by charging a purchase over the telephone), which amounts to the transfer of money electronically between financially distinct parties. *See* Pet. 44–46; Ex. 4132, App. C at 3–5. We interpret "first party" and "second party" to encompass both a corporation and a real person. *See supra* Section II.A.1. The claims do not require that either be any particular type of party (e.g., a consumer)—only that they be "financially distinct." *See* Reply 6. In addition, there is no requirement in the claims that the device that stores the digital signal in a "second memory" also be used to transmit payment information. *See id*. at 3–4; Ex. 4262 ¶ 25.

Thus, we are persuaded that the CompuSonics publications teach every limitation of claim 1.

b. A Person of Ordinary Skill in the Art Would Have Had Reason to Combine the Teachings of the CompuSonics Publications

Having found that the CompuSonics publications teach all of the limitations of claim 1, we turn to whether a person of ordinary skill in the art would have had reason to combine the teachings of the references to achieve the claimed method. We are guided by the Supreme Court's decision in *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007). "Section 103(a) forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" *Id*. at 405. "[W]hen a patent 'simply arranges old elements with each performing the same function it had been known to perform' and yields no more than one would expect from such an arrangement, the combination is obvious." *Id*. at 417 (citation omitted). "If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. . . . [A] court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id*. A determination of obviousness, though, requires identifying "'some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.'" *Id*. at 417–18 (citation omitted).

The evidence of record demonstrates that the CompuSonics publications describe prior art elements operating according to their known

functions and yielding predictable results. *See supra* II.B; Pet. 33–51; Ex. 4132 ¶¶ 17–40, App. C at 1–7; PO Resp. 31 (acknowledging that "the *components* needed to practice the claims were available prior to 1988"). The disclosed DSPs would store digital signals and communicate digital signals electronically over a telephone line in a known manner. A floppy disk used by a DSP would function for its known purpose of storing digital data. Allowing the user to telephone the music provider and provide a credit card number for payment would have functioned just like other known payment systems of the time. *See* Ex. 4132 ¶¶ 26–27; Ex. 4262 ¶¶ 14–25. A person of ordinary skill in the art, having the educational background and work experience described above, *see supra* Section II.D.2, would have recognized that the predictable result of using these elements was a system that allowed users to purchase and download music, as expressly contemplated by the references themselves.

Importantly, SightSound admits that the CompuSonics publications describe prior art elements working according to their established functions in a predictable manner:

> Despite *the prior art elements working according to their established functions and predictability*, no ordinary skilled artisan, and certainly not CompuSonics, saw the problem with removable hardware units until the '573 Patent specification was published. CompuSonics taught the use of a hard disk for an "electronic record store," but specifically disclosed a floppy disk for the consumer.

PO Resp. 64 (emphasis added). Mr. Snell similarly acknowledges "the prior art elements working according to their established functions and predictability." Ex. 2153 ¶ 74. The fact that the disclosed elements would operate in known ways to achieve predictable results supports a conclusion

of obviousness. Additionally, based on the record presented, we do not see sufficient reason why providing for the purchase of digital audio over the telephone, and using CompuSonics DSPs to transmit digital audio and store it on a floppy disk, would have achieved an unexpected result or would have been uniquely challenging or otherwise beyond the level of skill of an ordinarily skilled artisan. *See KSR*, 550 U.S. at 416, 421; *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161-62 (Fed. Cir. 2007).

As to a particular reason why a person of ordinary skill in the art would have combined the teachings of the CompuSonics publications, the references expressly contemplate that it would be commercially desirable to have a system that allowed users to buy music electronically. Exhibit 4119, for instance, describes CompuSonics's technology for storing digital audio and video on a floppy disk or hard disk, and states that "future applications could be dazzling," noting the potential CompuSonics-AT&T "service that would enable record companies to sell direct to consumers over the telephone." Ex. 4119 at 1–2. Exhibit 4116 states that "[d]igital music video distribution offers customers two significant benefits: high fidelity digital audio and video, and convenient purchasing via electronic distribution directly to the home." Ex. 4116 at 2. Other CompuSonics publications include similar statements. *See, e.g.*, Ex. 4113 at 1 (describing "a new era in the music industry in the not too distant future [when] consumers will be able to purchase digital recordings of their favorite artists directly from the production studio's dial-up data base and record them on blank SuperFloppies in a DSP-1000"); Ex. 4115 at 1 (projecting that telerecording "technology will filter down to the consumer level, allowing all-electronic purchases, transfers and digital recording of high fidelity audio"); Ex. 4106

at 3 (recounting Mr. Schwartz's statement that the "'electronic record store' concept" is "poised to 'become a reality'"); Ex. 4108 at 4 ("in the not-too-distant future consumers will be able to buy music at home, over telephone lines or through cable television hookups, and play it back through an audio device resembling a microcomputer"); Ex. 4114 at 11 (contemplating "great potential for expanding the music market through digital technology" where "a large database of the latest music chart successes [could] exist only a phone call away" and "[v]ideo music services which broadcast over cable networks can simultaneously release [a] new album and have it ready for immediate sale without first having filled the distribution pipeline").

Thus, the references themselves demonstrate that a person of ordinary skill in the art would have been led to create a system for users to purchase and download music. *See Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1125 (Fed. Cir. 2000) (evidence of a motivation to combine prior art references "may flow from the prior art references themselves").

SightSound makes two main arguments that the challenged claims would not have been obvious. First, SightSound contends that the specific combination of selling music (the "transferring money electronically" step) and using a hard disk to store the music (the "storing the digital signal in the second memory" step) would not have been obvious based on the CompuSonics publications, which teach away from the use of a hard disk. PO Resp. 24–25, 29, 59–65. Specifically, SightSound contends that CompuSonics used floppy disks and optical disks, not hard disks, in the DSP-1000 series devices meant for users, and did not recognize or address the problems that the '573 patent allegedly solved by using a hard disk. *Id*.

at 28–29; *see* Sur-Reply 6–13. As explained above, however, the challenged claims do not require the "second memory" to be a hard disk. *See supra* Section II.A.2. Thus, SightSound's purported distinctions based on the use of a hard disk for storage are without merit.

Second, SightSound argues that the record does not show sufficiently how or why the different CompuSonics publications would be combined by a person of ordinary skill in the art. Sur-Reply 4–6. We disagree. Apple explained in its Petition which publications teach which claim limitations, and Dr. Kelly's testimony supports that analysis. *See* Pet. 43–51; Ex. 4132, App. C at 1–7. The references themselves also suggest combining their teachings to create a system for allowing users to buy music electronically, as explained above.

Further, as the Supreme Court held in *KSR*, to determine whether there was an apparent reason to combine known elements in the manner claimed, it often will be necessary to "look to interrelated teachings of multiple patents," as "in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." 550 U.S. at 418–20. "A person of ordinary skill is . . . a person of ordinary creativity, not an automaton." *Id*. at 421; *see Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013) (holding that the Supreme Court in *KSR* "[r]eject[ed] a blinkered focus on individual documents," instead "requir[ing] an analysis that reads the prior art in context, taking account of 'demands known to the design community,' 'the background knowledge possessed by a person having ordinary skill in the art,' and 'the inferences and creative steps that a person of ordinary skill in the art would employ'") (quoting *KSR*, 550 U.S. at 418). Although we are not persuaded that the

CompuSonics publications disclose a solitary, publicly known "system," *see supra* Section II.C, they certainly have interrelated teachings, as all of the publications describe technology developed by the same company (CompuSonics), use similar terminology, and pertain generally to the recording of digital audio or video. Based on the evidence of record, we are persuaded that a person of ordinary skill in the art would have considered the publications collectively to achieve a system for selling music electronically, as expressly contemplated by the references. *See In re Hyon*, 679 F.3d 1363, 1366 (Fed. Cir. 2012) (affirming an obviousness determination where two "references both teach processes directed to making the same class of products" and minor differences between the disclosures did not "negate the motivation to combine"); *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1166 (Fed. Cir. 2006) (explaining that in an obviousness analysis, "the prior art must be considered *as a whole* for what it teaches").

Accordingly, we are persuaded that the CompuSonics publications teach all of the limitations of claim 1, and that a person of ordinary skill in the art would have had reason to combine those teachings to achieve the method of claim 1.

c. Secondary Considerations of Non-Obviousness

As part of our obviousness analysis, we consider the evidence and arguments submitted by SightSound regarding secondary considerations of non-obviousness. *See Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). In particular, SightSound argues that commercial success, copying, industry

praise, and long-felt need demonstrate that the challenged claims would not have been obvious to a person of ordinary skill in the art.[8] PO Resp. 66–80.

i. Commercial Success

SightSound bases its commercial success argument on Apple's iTunes Music Store ("iTMS"), an "'online music store that lets customers quickly find, purchase and download the music they want for just 99 cents per song, without subscription fees.'" PO Resp. 18 (citing Ex. 2137). SightSound contends that the iTMS is "the most successful download music store of all time," embodies the methods recited in the challenged claims, and is coextensive with the claims. *Id*. at 18–21, 68–77. Apple does not dispute that the iTMS has been commercially successful; the only dispute is whether SightSound has shown a nexus between the claimed methods and that success, and if so, whether that showing has been rebutted. *See* Reply 10–14.

Evidence of commercial success "is only significant if there is a nexus between the claimed invention and the commercial success." *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1311–12 (Fed. Cir. 2006). To establish a proper nexus between a claimed invention and the commercial success of a product, a patent owner must offer "proof that the sales [of the allegedly successful product] were a direct result of the unique characteristics of the claimed invention—as opposed to other economic and commercial factors unrelated to the quality of the patented subject matter." *In re Huang*, 100

[8] The parties refer to the challenged claims collectively in their arguments regarding secondary considerations, and we do the same. *See* PO Resp. 66–80; Reply 10–15; Sur-Reply 14–15.

F.3d 135, 140 (Fed. Cir. 1996). In addition, "if the commercial success is due to an unclaimed feature of the device," or "if the feature that creates the commercial success was known in the prior art, the success is not pertinent." *Ormco*, 463 F.3d at 1312; *see also In re Kao*, 639 F.3d 1057, 1070 (Fed. Cir. 2011) (requiring a determination of "whether the commercial success of the embodying product resulted from the merits of the claimed invention as opposed to the prior art or other extrinsic factors"). If a patent owner is able to show a sufficient nexus, "the burden shifts to the challenger to prove that the commercial success is instead due to other factors extraneous to the patented invention, such as advertising or superior workmanship." *J.T. Eaton & Co., Inc. v. Atlantic Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed. Cir. 1997).

Further, if a product both "embodies the claimed features" and is "coextensive" with the claim at issue, "a nexus is presumed and the burden shifts to the party asserting obviousness to present evidence to rebut the presumed nexus." *Brown & Williamson*, 229 F.3d at 1130. When a product is not "coextensive with the patented invention," however, such as when "the patented invention is only a component of a commercially successful machine or process, . . . the patentee must show prima facie a legally sufficient relationship between that which is patented and that which is sold." *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392–93 (Fed. Cir. 1988).

SightSound argues that the challenged claims "cover a method for a customer to purchase and download digital audio and/or digital video signals over the internet for future playback as selected by the end user," which is "coextensive with both digital downloads generally to non-removable media

and sales of audio and video content from the ITMS." PO Resp. 72. SightSound relies on the testimony of Mr. Snell in support of its position. *Id*. (citing Ex. 2153 ¶¶ 98–102).

Even assuming (without deciding) that the iTMS embodies the claimed methods, we are not persuaded that the iTMS is coextensive with the claims. First, the issue is whether the claims are coextensive with the specific iTMS product alleged to be successful, not whether the claims are coextensive with digital downloads "generally" as SightSound suggests. *See id*. The present facts differ significantly from cases where a discrete product or composition was found to be coextensive with a claim directed to the same product or composition. *See, e.g.*, *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 723 F.3d 1363, 1367, 1372–73 (Fed. Cir. 2013) (claim and product both were a drug); *Brown & Williamson*, 229 F.3d at 1123–24, 1130 (claim and product both were a cigarette); *Demaco*, 851 F.2d at 1389, 1394 (claim and product both were a paving stone).

As Apple points out, the iTMS is a complex computer system embodying numerous inventions. *See* Reply 10–11. Jeffrey Robbin, an Apple employee and "one of the leaders of the initial development team for the [iTMS]," testifies that "[t]he iTunes client and [iTMS] include many technological features developed by Apple" (other than the general purchasing and downloading of music and video). Ex. 4255 ¶¶ 1, 6, 7. For instance, Mr. Robbin cites the "Genius" feature that "provide[s] recommendations based on past purchases," as well as patented features relating to "user interface technology, playlist management, presentation of media on a device, secure access to content, and assigning ratings." *Id*. ¶ 7 (citing nine specific Apple patents on which he is a named inventor).

Dr. Kelly also identifies Apple patented technology pertaining to other features of the iTMS. Ex. 4262 ¶¶ 66–81. The testimony of Mr. Robbin and Dr. Kelly is persuasive, and demonstrates that the iTMS embodies numerous inventions other than the general purchasing and downloading of music relied upon by SightSound. *See Therasense, Inc. v. Becton, Dickinson & Co.*, 593 F.3d 1289, 1299 (Fed. Cir. 2010) (finding no presumption of nexus where the success of the product at issue "embodied at least two patents," one of which was the asserted patent), *vacated for en banc rehearing on inequitable conduct,* 374 F. App'x 35 (Fed. Cir. 2010); *Demaco,* 851 F.2d at 1392 (a product is not "coextensive" with a claim when the claimed invention is "only a component of a commercially successful machine or process").

Second, Mr. Snell's analysis is of limited probative value because, although he explains why he believes that the iTMS *practices* the claimed methods, he does not explain in any detail why they allegedly are *coextensive* with each other. *See* Ex. 2153 ¶¶ 88–98. The two issues are not the same. *See Brown & Williamson*, 229 F.3d at 1130; *Demaco*, 851 F.2d at 1392. SightSound, therefore, has not established that the iTMS is coextensive with the claims, and we do not presume a nexus.

Nevertheless, even if the iTMS is not coextensive with the claims, SightSound may still be able to demonstrate a prima facie nexus by showing that the success of the iTMS is due specifically to novel features of the challenged claims. *See In re DBC*, 545 F.3d 1373, 1384 (Fed. Cir. 2008) (finding no nexus absent evidence that "the driving force behind [the allegedly successful product's sales] was the claimed combination"); *Ormco*, 463 F.3d at 1312. SightSound argues that "the decision by consumers to

purchase digital downloads generally, and to purchase from the ITMS specifically, rather than obtain digital content through other means (such as buying removable media or subscribing to a streaming service) establishes a nexus between the commercial success of the product and the unique features" of the claims. PO Resp. 72–73. This circular reasoning is not persuasive, however. The fact that customers decide to buy music and video through the iTMS is the alleged commercial success itself, not a connection between such success and any claimed features. If all that was necessary to prove a nexus was to show that customers bought more of the identified product than other products, a nexus would exist for every product that exhibits success in the marketplace. Rather, a patent owner must show proof that the success is "the direct result of the unique characteristics of the claimed invention." *Huang*, 100 F.3d at 140.

We also note that Apple presents persuasive evidence that the commercial success of the iTMS is due to features other than those of the claimed methods. *See* Reply 11–14. Specifically, we have reviewed the testimony of Lawrence Kenswil, a former employee of the Universal Music Group and board member of the Recording Industry Association of America with over 25 years of experience in the music industry, and find it persuasive. *See* Ex. 4256 ¶¶ 5–18. Mr. Kenswil explains in detail his opinion that the iTMS's success is due to factors not attributable to the challenged claims. *Id*. ¶¶ 66–98. We note two factors in particular: content selection and the iTMS user interface.

Mr. Kenswil states that an important reason for the iTMS's success was "Apple's ability to secure licenses with the major record labels," which "was an attractive feature for consumers because it gave them a store with a

full catalog of offerings to browse and from which to select." *Id*. ¶ 69. Citing to evidence in the record, Mr. Kenswil explains the history of how Apple was able to alleviate record label concerns over piracy and copyright protection, thereby ensuring that Apple would be able to offer a wide selection of content on the iTMS. *Id*. ¶¶ 70–74, 80 (citing Exs. 4195, 4197, 4198, 4201, 4202, 4204–4207). Further, as Mr. Kenswil points out, even SightSound in its own documentation recognized the importance of having broad content available to users. *Id*. ¶¶ 75–80; *see* Ex. 4157 at 9–10 (stating that the company's success is "dependent" on its ability to obtain content); Ex. 4160 at 5 (describing content as the "key missing ingredient"). We are persuaded by Mr. Kenswil's explanation attributing the success of the iTMS to its content selection. We do not agree with SightSound that the mere existence of a choice for users as to whether to purchase music on a CD or via the iTMS by itself demonstrates the requisite link to the claimed methods. *See* PO Resp. 74; Ex. 2153 ¶ 101.

With respect to the iTMS user interface, Mr. Kenswil opines that its features, such as "the five-star rating system, lists of music videos by the band being viewed, lists of movies and books about the band being viewed, concert tour information for the band being viewed, the 'genius' recommendation feature, and the song-by-song 'Popularity' rating," are important factors in the iTMS's success. Ex. 4256 ¶¶ 92–93; *see* Exs. 4169–4172 (showing various features of the user interface). Mr. Kenswil also explains why, in his experience, "features related to popularity, recommendations, and lists of what other content was often purchased by people who bought the song/movie being viewed" would contribute to the success of the iTMS. Ex. 4256 ¶ 94.

Relying on the testimony of Mr. Snell, SightSound asserts that the iTMS user interface cannot be a driver for sales, because (1) the iTMS user interface is "substantially similar" to the SightSound.com user interface, and (2) the cited features of the iTMS user interface are not specific to purchasing music and video through the iTMS. PO Resp. 73–74. Mr. Snell, however, only compared the SightSound.com website to the iTMS, and did not account for any technical details of the SightSound.com website or address the specific features cited by Mr. Kenswil. *See* Ex. 2153 ¶ 101 (citing Exs. 2112, 2113, 2119, 2150, 2151); Ex. 4165 at 127:20–128:11; Reply 13. Mr. Snell also acknowledged during his deposition that his "expertise is in the engineering and the computer side," not in sales. Ex. 4165 at 213:24–214:14. Given Mr. Kenswil's lengthy background in the music industry and testimony regarding specific features of the iTMS user interface, we find his testimony regarding the causes of the iTMS's commercial success to be more convincing.

Finally, SightSound argues that Apple's alleged reasons for the iTMS's commercial success are immaterial because commercial success may be shown even when the success is due to multiple factors. Sur-Reply 14–15. As explained above, though, SightSound has not met its burden to establish a nexus between the claims and the alleged commercial success. Even if it had, Apple has provided persuasive evidence in rebuttal demonstrating that the success of the iTMS is due to other features, *not*

features of the claimed methods. Consequently, the commercial success of the iTMS does not support a conclusion of nonobviousness of the claims.[9]

ii. Copying

SightSound argues that Apple copied the claimed methods of the '573 patent. PO Resp. 16–19, 77–78. SightSound points to a 1993 letter from Arthur R. Hair, the named inventor of the '573 patent, to John Sculley, the Chairman and Chief Executive Officer ("CEO") of Apple, informing Apple of the issuance of the '573 patent and stating that the patent "will revolutionize the video rental industry and the prerecorded music industry." Ex. 2111; *see* PO Resp. 16 n.8. SightSound also provides a declaration from Scott Sander, one of the founders of SightSound's predecessor companies along with Mr. Hair. Ex. 2110 ¶ 2. Mr. Sander testifies that on January 15, 1999, he sent a letter to Steve Jobs, the Chairman and CEO of Apple at the time, stating that "we believe that the download sale of movies and music will become the consumers' method of choice," and including a schematic showing SightSound's system. *Id*. ¶ 8 (citing Ex. 2117). According to Mr. Sander, he and Mr. Hair met with two Apple employees, Mark Gavini and Tom Weyer, in February 1999. *Id*. ¶ 10. During the meeting, Mr. Sander and Mr. Hair discussed SightSound's patents, "expressed [their] belief in the superiority of [SightSound's] download purchase model versus streaming subscription services," and "discussed in more detail the written schematic previously provided to Steve Jobs." *Id*. Mr. Sander recalls

[9] Although based on a different evidentiary record, we note that SightSound's arguments regarding Apple's commercial success were rejected by the Examiner in the '402 reexamination. *See* Ex. 4103 at 266–68.

Mr. Gavini and Mr. Weyer indicating that "it would take an entire re-write of the Mac operating system to adequately support the level of encryption that would be needed to satisfy the media and entertainment industry." *Id.* Apple subsequently introduced its iTunes software in 2001 and the iTMS in 2003. *See* Exs. 2131, 2137.

Apple responds that it did not copy any of SightSound's code or specific details of SightSound's commercial system, and provides testimony from a number of individuals. Reply 14–15 (citing Exs. 4255, 4257, 4258, 4262). Mr. Weyer, one of the Apple employees who met with Mr. Sander, testifies that (1) he did not take any documents from SightSound's representatives, (2) he does not remember taking any notes at the meeting, (3) he does not recall "having any further interactions with [SightSound] or discussing any details about [the meeting] with others at Apple," (4) "nothing from the early 1999 meeting was communicated to anyone who was involved with the development of iTunes or the [iTMS]," and (5) he was not involved personally in the development of iTunes or the iTMS. Ex. 4258 ¶¶ 2–9. Marco Mazzoni (formerly known as Mark Gavini), the other Apple employee at the meeting, similarly testifies that (1) he does not remember receiving any documents from SightSound's representatives, (2) he does not recall "ever communicating about SightSound or anything related to SightSound to anyone at Apple, including anyone who was involved with the development of iTunes or the [iTMS]," and (3) he was not involved personally in the development of iTunes or the iTMS. Ex. 4257 ¶¶ 2–3. Mr. Robbin, one of the leaders of the iTMS development team, testifies unequivocally that the iTMS was developed independently of any information received from SightSound. Ex. 4255 ¶¶ 6, 8–9. He does not

remember hearing of SightSound before 2003 or recall communicating with Mr. Weyer or Mr. Mazzoni about SightSound, and is not aware of anyone on the development team who knew anything about SightSound prior to 2003. *Id*. ¶ 8. Mr. Robbin further states that based on his personal involvement with the development of iTunes and the iTMS, he believes that "Apple developed those technologies based on the predecessor product SoundJam MP that it acquired in September 2000" and based on Apple's own development work. *Id*. ¶ 9.

The testimony submitted by Apple persuasively rebuts SightSound's assertions of copying. The statements of Mr. Weyer, Mr. Mazzoni, and Mr. Robbin are unequivocal and we see no reason based on the record before us to doubt their veracity. In its Motion for Observation, SightSound points to deposition testimony from Mr. Weyer and Mr. Mazzoni allegedly showing that they do not remember everything they may have learned or been provided at the 1999 meeting. Obs. 14–15. Regardless, absent some demonstrated connection between the specific details that were discussed at the 1999 meeting and the actual development of the iTMS, we are not persuaded that there is sufficient evidence of copying. Similarly, with respect to Mr. Hair's 1993 letter and Mr. Sander's 1999 letter to Mr. Jobs, although SightSound points to testimony from Mr. Robbin regarding Mr. Jobs's involvement in developing the iTMS, *id*. at 13–14, SightSound does not cite evidence linking the letters to the actual development of the iTMS years later. SightSound has not shown proof of copying that would support a conclusion of nonobviousness as to the challenged claims.

iii. Industry Praise

SightSound argues that it "received press and media coverage praising the innovative new method for selling digital content," citing three magazine articles from 1998–2000. PO Resp. 78–79 (citing Exs. 2110 ¶ 7, 2114–2116). We have reviewed the materials and find that although they describe various aspects of SightSound's system for purchasing music and videos online, they also express skepticism that the business would be successful. *See, e.g.*, Ex. 2114 at 1–2 (stating that it "may not be easy" to market the service to record companies that are "against the online sale of music," consumers "may not be hip to the idea" that downloaded songs "can only be played on the computers they're downloaded to," and selling the existing songs in the service "has not been easy"); Ex. 2115 at 1 (stating that "[s]ince movie files are so big, downloading is an option only for people on high-speed connections"). Further, as Apple points out, SightSound's service did not end up being successful in the industry. *See* Reply 12, 15; Ex. 4256 ¶¶ 32–50. Thus, the evidence of industry praise submitted by SightSound is of limited probative value.[10]

iv. Long-Felt Need

SightSound contends that there was a long-felt need in the art to "instantaneously cue and arrange music selections as a form of digital 'mix

[10] We also note that CompuSonics's technology, in the prior art, likewise received industry praise. *See, e.g.*, Ex. 4119 at 1–2 ("If the technology does take hold, future applications could be dazzling. . . . Enough speculators have been taken with these prospects to push Compusonics'[s] stock up 525% to a recent price of 12 1/2 cents."); Ex. 4140 at 2 ("CompuSonics made audio history recently when the company sponsored a telerecording demonstration along with AT&T, which provides the high-speed lines.").

tape.'" PO Resp. 79–80. As support, SightSound points to the CompuSonics patent expressing a desire for an "efficient digital recording and playback system," and a CompuSonics publication stating that CompuSonics's video database computer permitted records (video/audio segments) to be played back in any order. *See* Ex. 4118, col. 14, ll. 40–42; Ex. 4116 at 1. The general statements in these references do not show that there was a long-felt need for the ability to create digital "mix tapes" that the '573 patent solved. Moreover, both were in the prior art, and to the extent the references show any need at all, they suggest that the need would have been met by CompuSonics's devices. Thus, SightSound's evidence of long-felt need is not persuasive.

v. Conclusion

Based on all of the evidence of record, including evidence of secondary considerations of nonobviousness submitted by SightSound, we determine that claim 1 would have been obvious based on the CompuSonics publications under 35 U.S.C. § 103(a).

5. Independent Claim 4

Independent claim 4 is nearly identical to independent claim 1, but recites a "digital video signal" rather than a "digital audio signal." Again, Apple explains in its Petition how the CompuSonics publications teach the limitations of claim 4 and relies on the testimony of Dr. Kelly in support. *See* Pet. 53–54; Ex. 4132 ¶¶ 17–40, App. C at 10–11. For instance, a 1986 CompuSonics "Application Notes" document discloses that "CompuSonics Video's CSX [CompuSonics compression technology] digital signal

processing can be applied to a wide variety of consumer, industrial, and professional digital video products," and describes "a few of the many new or improved products which are possible using CSX." Ex. 4116 at 1. One such application was "Music Video Distribution." *Id*. at 2. The document provides:

> A small but increasingly significant number of consumers are also purchasing music videos in videotape format. Although the video may be recorded off the air or cable using a VCR, the resulting video and audio fidelity of the copy is poor. Digital music video distribution offers customers two significant benefits: high fidelity digital audio and video, and convenient purchasing via electronic distribution directly to the home.
>
> The proposed music video distribution chain has three principle components that depend on CSX technology: a video database computer, a broadcast digital encoder, and a home disk-based digital video decoder/recorder. *A consumer enjoying music television who chooses to purchase his own digital copy calls the distributor with his request. The distributor enables the video database computer to access the consumer's selection and transfer the video/audio data to the broadcast digital encoder.* This encoder modulates the data onto a cable television subcarrier or other transmission format. *The home decoder/recorder receives the digital video/audio data over the cable link and copies it to disk.*
>
> . . . A home digital decoder/recorder using currently available 400 megabyte write-once optical disks would capture and store about one hour of CSX format digital music video material permanently.

Id. at 2–3 (emphases added). Another CompuSonics publication suggests that the same method of selling music, discussed above in connection with claim 1, also could be used for video:

> Compusonics is talking to AT&T about setting up a service that would enable record companies to sell direct to consumers over the telephone. Symphonies, ordered by credit card, could travel

> digitally over phone lines into homes to be recorded by Compusonics'[s] machine. *Movies, which can also be recorded digitally, might be sent the same way.*

Ex. 4119 at 2 (emphasis added). CompuSonics's patent also describes a device for converting an analog audio or video signal into digital form and transmitting the signal electronically. *See* Ex. 4118, Abstract; col. 3, ll. 44–50; col. 5, ll. 52–58; col. 14, ll. 31–47; col. 15, ll. 11–41.

Similar to its previous argument regarding the digital audio signal of claim 1, SightSound contends that the CompuSonics publications do not teach storing a digital video signal in a "second memory" because they describe storage on an optical disk, not a hard disk. PO Resp. 39–40. As explained above, we do not agree that "second memory" requires a hard disk. *See supra* Section II.A.2, II.D.4.a.

SightSound also argues that the CompuSonics publications do not mention explicitly transmitting video and accepting electronic payment. PO Resp. 40. Exhibit 4119, however, suggests that movies can be sent the "same way" as audio that is sold "direct to customers over the telephone" and "ordered by credit card." Ex. 4119 at 2. Exhibit 4116 further discloses that a "consumer enjoying music television who chooses to purchase his own digital copy calls the distributor with his request," and the distributor "transfer[s] the video/audio data to the broadcast digital encoder," suggesting that video is transmitted in connection with a purchase. Ex. 4116 at 2. Exhibit 4114 discloses that "[v]ideo music services which broadcast over cable networks can simultaneously release [a] new album and have it ready for immediate sale without first having filled the distribution pipeline." Ex. 4114 at 11.

We are persuaded by Apple's analysis, supported by the testimony of Dr. Kelly, that the CompuSonics publications teach every limitation of claim 4. We also are persuaded that the claimed method would have amounted to arranging known elements with each performing their known function and yielding predictable results, and would have been obvious to a person of ordinary skill in the art considering the CompuSonics publications as a whole, including the specific statements above that extend to video. *See supra* Section II.D.4.b. Further, a person of ordinary skill in the art would have had reason to create a system that allowed users to purchase and download music and video, as expressly contemplated by the references, for the reasons explained above. *See id*. With respect to secondary considerations of non-obviousness, SightSound's arguments are the same for all of the challenged claims, and the parties do not make any separate arguments regarding the sale of video through the iTMS. *See* PO Resp. 16–21, 68–80; Reply 10–15. The evidence and arguments submitted by SightSound do not overcome the evidence of obviousness. *See supra* Section II.D.4.c. Thus, based on the evidence of record, we determine that claim 4 would have been obvious based on the CompuSonics publications under 35 U.S.C. § 103(a).

6. Dependent Claims 2 and 5

Claim 2 depends from claim 1 and recites "after the transferring step, the steps of searching the first memory for the desired digital audio signal; and selecting the desired digital audio signal from the first memory." Claim 5 depends from claim 4 and recites similar limitations with respect to a "digital video signal." Apple asserts in its Petition that the CompuSonics

publications necessarily disclose searching a content provider's memory for the desired selection "in order to download it to the consumer's digital recorder/player." Pet. 51–52, 54–55; *see* Ex. 4132, App. C at 9, 12. SightSound argues that based on the disclosures of the CompuSonics publications, the "searching" and "selecting" steps could be done *before* the transferring step, and therefore, are not disclosed inherently. PO Resp. 40–42, 65–66.

We agree that the CompuSonics publications necessarily disclose the "searching" and "selecting" steps of the claims, for the reasons stated by Apple. Mr. Snell's acknowledgement, in the context of the iTMS, that the system always searches in memory for content because "the server has to locate the data file in memory," supports Apple's position. *See* Ex. 4165 at 41:4–42:23. With respect to the particular ordering of the "searching" and "selecting" steps after the "transferring money electronically" step, we agree with Dr. Kelly that the ordering would have been obvious to one of ordinary skill in the art. *See* Ex. 4262 ¶¶ 26–27. Exhibit 4116 further suggests the order by stating: "A consumer enjoying music television who chooses to *purchase* his own digital copy calls the distributor with his request. The distributor enables the video database computer to *access the consumer's selection* and transfer the video/audio data to the broadcast digital encoder." Ex. 4116 at 2 (emphases added).

We also are persuaded that the claimed methods would have amounted to arranging known elements with each performing their known function and yielding predictable results, and would have been obvious to a person of ordinary skill in the art considering the CompuSonics publications as a whole. *See supra* Section II.D.4.b. Further, a person of ordinary skill in

the art would have had reason to create a system that allowed users to purchase and download music and video, as expressly contemplated by the references, for the reasons explained above. *See id*. With respect to secondary considerations of non-obviousness, SightSound's arguments are the same for all of the challenged claims, and the parties do not make any separate arguments regarding the additional limitations of claims 2 and 5. *See* PO Resp. 16–21, 68–80; Reply 10–15. The evidence and arguments submitted by SightSound do not overcome the evidence of obviousness. *See supra* Section II.D.4.c. Thus, based on the evidence of record, we determine that claims 2 and 5 would have been obvious based on the CompuSonics publications under 35 U.S.C. § 103(a).

E. Motions to Exclude

The party moving to exclude evidence bears the burden of proof to establish that it is entitled to the relief requested—namely, that the material sought to be excluded is inadmissible under the Federal Rules of Evidence. *See* 37 C.F.R. §§ 42.20(c), 42.62(a). For the reasons discussed below, Apple's Motion to Exclude is denied, and SightSound's Motion to Exclude is denied-in-part and dismissed-in-part.

1. Apple's Motion to Exclude

Apple moves to exclude Mr. Snell's declaration (Ex. 2153) under Federal Rule of Evidence 702. Pet. Mot. to Exclude 3. Federal Rule of Evidence 702 provides:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
>
> (b) the testimony is based on sufficient facts or data;
>
> (c) the testimony is the product of reliable principles and methods; and
>
> (d) the expert has reliably applied the principles and methods to the facts of the case.

Apple argues that Mr. Snell is not qualified to offer opinions on the alleged commercial success of the iTMS, and does not provide a sufficient factual "basis" for his opinions. Pet. Mot. to Exclude 3–5. For instance, Apple contends that Mr. Snell applied an erroneous interpretation of "second memory" in the claims, and gave opinions that contradict the prosecution history of the '573 patent. *Id*. at 11–15. We have reviewed the cited portions of Mr. Snell's testimony and see no basis on which they would warrant the extreme remedy of exclusion. Apple's arguments indicate a mere disagreement with Mr. Snell's testimony and pertain to the weight to be given to that testimony, which we are able to assess without excluding it, as explained above. Apple's Motion to Exclude is denied.

2. SightSound's Motion to Exclude

Mr. Robbin's Declaration (Ex. 4255): SightSound argues that two statements in the declaration should be excluded because Mr. Robbin lacks sufficient personal knowledge to make them: (1) Mr. Robbin's statement in paragraph 9 that the idea of selling music and video files over computer networks was "prevalent in the industry since the mid-1980s," and (2) Mr. Robbin's statement in paragraph 7 that the iTMS embodies

numerous inventions, many the subject of Apple's own patents. PO Mot. to Exclude 1–3.

With respect to the first statement, although we rely on other statements by Mr. Robbin in paragraph 9 pertaining to his knowledge of the development of the iTMS, we do not rely on his statement regarding what allegedly was prevalent in the industry. SightSound's request to exclude that statement, therefore, is dismissed as moot.

With respect to the second statement, SightSound argues that the material should be excluded under Federal Rules of Evidence 602, 701, 702, 703, 704, or 705, but does not provide specific analysis directed to any of those rules or case law support explaining why the material is inadmissible. *See id*. Moreover, we are not persuaded that Mr. Robbin, as an Apple employee, one of the leaders of the iTMS development team, and a named inventor on the identified patents, lacks sufficient personal knowledge to testify regarding the matters in paragraph 7. *See* Ex. 4255 ¶¶ 1, 6; Pet. Exclude Opp. 2–4. SightSound's request to exclude Mr. Robbin's statement in paragraph 7, therefore, is denied.

Mr. Weyer's Declaration (Ex. 4258): SightSound argues that Mr. Weyer's statement that "[i]f we had been impressed with the technology offered by [SightSound], Apple would have followed up with additional meetings," should be excluded under Federal Rules of Evidence 402, 403, 601, or 602 as speculative and not based on sufficient personal knowledge. PO Mot. to Exclude 3–4. Mr. Weyer was an Apple employee and explains in his declaration what he did in connection with the 1999 meeting and what he did at the company in general; we are not persuaded that he lacks sufficient personal knowledge to testify on the matter. *See* Ex. 4258 ¶¶ 1–9;

Pet. Exclude Opp. 4–5. Further, his testimony is corroborated by the testimony of Mr. Robbin and Mr. Mazzoni. *See* Ex. 4255 ¶ 8; Ex. 4257 ¶¶ 2–3; Pet. Exclude Opp. 5. SightSound's request is denied.

Two Patents (Exs. 4209, 4210): SightSound moves to exclude two patents cited by Apple in its Reply. PO Mot. to Exclude 4. As we do not rely on the materials for our decision, SightSound's request to exclude them is dismissed as moot.

Mr. Kenswil's Declaration (Ex. 4256) and Dr. Kelly's Declaration (Ex. 4262): SightSound argues that Mr. Kenswil's opinions on technology in the 1980s/1990s, alleged reasons for commercial success of the iTMS, SightSound's business operations, and other issues should be excluded because Mr. Kenswil "lacks the requisite expertise for his testimony and his declaration lacks 'sufficient facts or data' to support his opinions." PO Mot. to Exclude 5–11. Similarly, SightSound contends that Dr. Kelly's opinions regarding the iTMS and CompuSonics are conclusory and unsupported, and ignore contrary evidence, such as an expert report on infringement from the related litigation between the parties and Mr. Stautner's declaration. *Id*. at 11–15. SightSound cites numerous bases for excluding the declarations, including Federal Rules of Evidence 402, 403, 602, 603, 701, 702, 703, 704, 705, 801, 802, and 901. *Id*. at 5–15.

We have reviewed SightSound's arguments and Apple's responses, and are not persuaded that the declarations should be excluded. *See id*.; Pet. Exclude Opp. 6–15; PO Exclude Reply 3–5. SightSound does not explain sufficiently why the declarations would be *inadmissible* under any of the cited rules—as opposed to being merely incorrect or insufficiently supported in SightSound's view. SightSound's arguments pertain more to the merits of

the parties' arguments and the weight to be given to the opposing declarants than to any issue of admissibility. Just as we are able to assess Mr. Snell's testimony and assign it the appropriate weight, we are able to do so for the testimony of Mr. Kenswil and Dr. Kelly. Also, with respect to SightSound's argument that numerous documents cited by Mr. Kenswil and Dr. Kelly are hearsay, SightSound does not identify specifically the textual portions of the documents that allegedly are being offered for the truth of the matter asserted, or provide sufficient explanation for why the material would be inadmissible. PO Mot. to Exclude 9–12, 14. We also are not persuaded by SightSound's assertion that the documents "are not the types of facts or data typically relied upon by experts" in forming their opinions under Federal Rule of Evidence 703, particularly when Mr. Snell relied on similar materials for his opinions. *See id*. at 9; Pet. Exclude Opp. 9–11 & n.3. SightSound's request is denied.

Other Patents (Exs. 4212–4250): SightSound argues that various patents submitted by Apple as allegedly embodied by the iTMS are inadmissible under 37 C.F.R. § 42.61(c). PO Mot. to Exclude 15. We disagree, as Apple offers the patents only to prove what the patents "describe[]," not for the "truth of the data" under 37 C.F.R. § 42.61(c). SightSound also asserts that the patents should be excluded under Federal Rules of Evidence 402 or 403 because Apple does not provide sufficient evidence establishing that the patents are embodied by the iTMS. *Id*. We disagree, and are able to assign all of the materials and testimony of record on commercial success the appropriate weight, as explained above. *See supra* Section II.D.4.c.i. SightSound's request is denied.

F. Motion for Observation

SightSound's observations are directed to the cross-examination testimony of Mr. Mazzoni (Ex. 2172), Mr. Weyer (Ex. 2173), Mr. Kenswil (Ex. 2174), Dr. Kelly (Ex. 2175), and Mr. Robbin (Ex. 2176), who were cross-examined after Apple filed its Reply. We have considered SightSound's observations and Apple's responses in rendering our decision, and have accorded the testimony the appropriate weight as explained above. *See* Obs. 1–15; Obs. Resp. 1–15.

G. Motion to Seal

On November 22, 2013, Apple filed an opposition (Paper 38) to SightSound's motion for additional discovery in this proceeding, and filed with the opposition a declaration from an Apple employee, Arthur Rangel (Ex. 4155). Apple filed the declaration in the Patent Review Processing System (PRPS) as "Parties and Board Only," but did not file a motion to seal or otherwise alert the Board that it requested the material to be sealed. After being contacted by Board administrative staff regarding the error, Apple filed a Motion to Seal and a redacted, public version of the declaration (Ex. 4274). In its Motion, Apple argues that the redacted material contains confidential "information regarding the type and nature of customer information and feedback gathered by Apple relating to Apple products and services in the course of its competitive business operations," and "additional analysis of customer information and feedback, such as marketing studies conducted with gathered data and the design of Apple surveys," the disclosure of which "would be beneficial to Apple's

competitors and harmful to Apple." Mot. to Seal 2–3. SightSound did not file an opposition to Apple's Motion to Seal.

There is a strong public policy in favor of making information filed in a covered business method patent review open to the public, especially because the proceeding determines the patentability of claims in an issued patent and, therefore, affects the rights of the public. Under 35 U.S.C. § 326(a)(1) and 37 C.F.R. § 42.14, the default rule is that all papers filed in a covered business method patent review are open and available for access by the public; a party, however, may file a concurrent motion to seal and the information at issue is sealed pending the outcome of the motion. It is, however, only "confidential information" that is protected from disclosure. 35 U.S.C. § 326(a)(7); *see* Trial Practice Guide, 77 Fed. Reg. at 48,760. The standard for granting a motion to seal is "for good cause." 37 C.F.R. § 42.54(a). The party moving to seal bears the burden of proof in showing entitlement to the requested relief, and must explain why the information sought to be sealed constitutes confidential information. 37 C.F.R. § 42.20(c).

We have reviewed the redacted material in Mr. Rangel's declaration, and are persuaded that good cause exists to have it remain under seal. The redacted portions contain confidential information pertaining to Apple's business, and are narrowly tailored to redact only confidential information. We also note that the decision on SightSound's motion for additional discovery cited material from the declaration that is not redacted, and we do not rely on the declaration in this decision. *See* Paper 40 at 8; Ex. 4274 ¶ 9. The declaration will be maintained under seal under the terms of the protective order entered in this proceeding. *See* Ex. 4269; Paper 92 at 8.

III. ORDER

Apple has not demonstrated, by a preponderance of the evidence, that claims 1, 2, 4, and 5 of the '573 patent are anticipated by the CompuSonics system under 35 U.S.C. § 102(a), but has demonstrated, by a preponderance of the evidence, that the claims are unpatentable over the CompuSonics publications under 35 U.S.C. § 103(a).

In consideration of the foregoing, it is hereby:

ORDERED that claims 1, 2, 4, and 5 of the '573 patent have been shown to be unpatentable;

FURTHER ORDERED that Apple's Motion to Exclude (Paper 71) is *denied*;

FURTHER ORDERED that SightSound's Motion to Exclude (Paper 68) is *denied-in-part* and *dismissed-in-part*; and

FURTHER ORDERED that Apple's Motion to Seal (Paper 102) is *granted*, and the declaration of Arthur Rangel (Ex. 4274, redacted; Ex. 4155, unredacted) will be kept under seal under the terms of the protective order entered in this proceeding (Ex. 4269).

This is a final decision. Parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

Certain material has been sealed in this proceeding, but has not been relied upon in this final written decision. *See supra* Section II.G. The record will be maintained undisturbed pending the outcome of any appeal taken from this decision. At the conclusion of any appeal proceeding, or if no appeal is taken, the materials will be made public. *See* Trial Practice Guide, 77 Fed. Reg. at 48,760–61. Further, either party may file a motion to

expunge the sealed materials from the record pursuant to 37 C.F.R. § 42.56. Any such motion will be decided after the conclusion of any appeal proceeding or the expiration of the time period for appealing.

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