

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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HTC CORPORATION and HTC AMERICA, INC.,  
Petitioner,

v.

ADVANCED AUDIO DEVICES, LLC,  
Patent Owner.

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Case IPR2014-01154  
Patent 6,587,403 B1

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Before SCOTT A. DANIELS, CHRISTOPHER L. CRUMBLEY, and  
GEORGIANNA W. BRADEN, *Administrative Patent Judges*.

CRUMBLEY, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
*35 U.S.C. § 318 and 37 C.F.R. § 42.73*

## I. INTRODUCTION

In this *inter partes* review trial, instituted pursuant to 35 U.S.C. § 314, Petitioner HTC Corporation and HTC America, Inc. (collectively, “HTC”) challenges the patentability of claims 1, 3, 6, 7, 11, 12, 16, 22, 24, 27, 29, 30, 35–37, 43 and 45–47 of U.S. Patent No. 6,587,403 (Ex. 1001, “the ’403 patent”), owned by Advanced Audio Devices, LLC (“AAD”).

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision, issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73, addresses issues and arguments raised during trial. For the reasons discussed below, we determine that HTC has met its burden to prove, by a preponderance of the evidence, that claims 1, 3, 6, 7, 11, 12, 16, 22, 24, 27, 29, 30, 35, 36, 37, 43, and 45–47 of the ’403 patent are *unpatentable*. We also determine that AAD has not met its burden on its Motion to Amend regarding entry of proposed substitute claims 49–65, and thus, we *deny* the Motion to Amend.

### A. Procedural History

On July 11, 2014, HTC filed a Petition requesting *inter partes* review of claims 1, 3, 6, 7, 11, 12, 16, 22, 24, 27, 29, 30, 35, 36, 37, 43, and 45–47 of the ’403 patent. Paper 1, “Pet.” AAD filed a Patent Owner’s Preliminary Response. Paper 7. In a December 30, 2014, Decision on Institution of *Inter Partes* Review (Paper 6, “Dec.”), we instituted trial on claims 1, 3, 6, 7, 11, 12, 16, 22, 24, 27, 29, 30, 35, 36, 37, 43, and 45–47 based on the following grounds:

1. Whether claims 1, 6, 7, 22, 29, 30, 43, and 45–47 are unpatentable under 35 U.S.C. § 102 as anticipated by Nathan '259;<sup>1</sup>
2. Whether claims 1, 6, 7, 22, 27, 29, 30, 35, 43, and 45–47 are unpatentable under 35 U.S.C. § 103 as having been obvious over the combined disclosures of Nathan '259 and Nathan '255;<sup>2</sup> and
3. Whether claims 1, 3, 6, 7, 11, 12, 16, 22, 24, 30, 35–37, 43, and 45–47 are unpatentable under 35 U.S.C. § 103 as having been obvious over the combined disclosures of Sound Blaster,<sup>3</sup> Lucente,<sup>4</sup> and Ozawa.<sup>5</sup>

Dec. 22.

Following institution, AAD filed a Patent Owner's Response to the Petition (Paper 13, "PO Resp."), and HTC filed a Reply (Paper 21, "Pet. Reply"). AAD also filed a contingent Motion to Amend pursuant to 37 C.F.R. § 42.121 (Paper 14, "Mot. Amend"), to which HTC filed an Opposition (Paper 22, "Amend Opp."), and AAD filed a Reply (Paper 25, "Amend Reply").

HTC supported its Petition with the Declaration of Christopher Schmandt (Ex. 1007), and submitted a Rebuttal Declaration of Mr.

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<sup>1</sup> Ex. 1002, WO 96/12259 to Nathan et al. (Apr. 25, 1996).

<sup>2</sup> Ex. 1003, WO 96/12255 to Nathan et al. (Apr. 25, 1996).

<sup>3</sup> Ex. 1004, Exhibit B, Sound Blaster 16 User Reference Manual. With Sound Blaster, HTC submits the Declaration of Kyle A. Miller, which states that Sound Blaster was publicly available "no later than the early spring of 1995." Ex. 1004 ¶ 13.

<sup>4</sup> Ex. 1005, EP 0598547 A2 to Lucente et al. (May 25, 1994).

<sup>5</sup> Ex. 1006, US 5,870,710 to Ozawa et al. (filed Jan. 22, 1997).

Schmandt (Ex. 1010) with its Reply. HTC submitted a third Schmandt Declaration in support of its Opposition to the Motion to Amend. Ex. 1023.

With its Patent Owner Response and Motion to Amend, AAD filed the Declaration of Joseph C. McAlexander III. Ex. 2003. AAD filed a Second Declaration of Mr. McAlexander supporting its Reply on its Motion to Amend. Ex. 2009. HTC took the cross-examination of Mr. McAlexander via deposition. Ex. 1016. AAD also submitted the testimony of Peter J. Keller, a named inventor on the '403 patent. Ex. 2004.<sup>6</sup>

AAD filed a Motion to Exclude Exhibit 1004 (Paper 27, "Mot. Exclude"), to which HTC filed an Opposition (Paper 29, "Exclude Opp.") and AAD filed a Reply (Paper 32, "Exclude Reply").

Oral hearing was requested by both parties, and a consolidated oral hearing involving this trial and related trials IPR2014-01155, IPR2014-01156, IPR2014-01157, and IPR2014-01158 was held on September 17, 2015. A transcript of the oral hearing is included in the record. Paper 39, "Tr."

### *B. The '403 Patent*

The '403 patent discloses an audio recording device that the specification terms a "music jukebox." Ex. 1001, 1:11–12. According to the specification, existing recording devices permitted music to be recorded

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<sup>6</sup> Exhibit 2004 was the subject of a Motion to Seal (Paper 15), which was granted. Paper 30. A public, redacted version of Exhibit 2004 was also filed by AAD under the same exhibit number.

onto a compact disc in real time, but did not provide editing functions, the ability to store music on the recorder for making multiple copies of the disc, or the ability to customize easily the order in which tracks are recorded onto the disc. *Id.* at 2:24–58. The described music jukebox is said to address these issues, as well as permit a user to “audition” a stored audio track by listening to it before recording onto a compact disc. *Id.* at 3:19–38.

Various hardware components of the jukebox are described in the specification, including: audio inputs for receiving music in the form of analog signals (*id.* at 7:53–60); one or more data storage structures for storing and retrieving audio stored in digital form (*id.* at 9:15–23); and a drive for recording stored audio onto compact discs (*id.* at 14:4–5). The audio data stored in the memory permits audio tracks to be played back selectively, or “auditioned,” prior to recording. *Id.* at 4:35–44. The components of the music jukebox are contained in a housing having a display for providing information to a user, for example, through a graphical user interface. *Id.* at 4:51–5:11. The housing also comprises a plurality of push buttons for controlling operation of the device. *Id.* at 5:12–36.

The specification of the ’403 patent describes the operation of the device as permitting a user to create “sessions,” which are groups of sound tracks selected from a master song list. *Id.* at 15:63–65, 17:6–14. A user also may reorder the songs within a session by selecting songs and moving them up or down within the session list. *Id.* at 16:37–47. The session then can be written to a compact disc. *Id.* at 15:60–63.

*C. Illustrative Claims*

Of the challenged claims, only claim 1 is independent; all other challenged claims depend, directly or indirectly, from claim 1. The independent claim reads as follows:

1. A music jukebox configured for storing a music library therein, said music jukebox comprising:
  - a housing;
  - an audio data receiver arranged to receive audio data from outside the housing;
  - audio output structure located at least partially within the housing for outputting audio signals;
  - data storage memory in the housing for storing audio data received from outside the housing through the audio data receiver,said music jukebox including a user interface comprising
  - a display device located at least partially within the housing, said display device providing a display which is viewable from outside the housing,
  - and a plurality of manually operable function controllers on the housing,said music jukebox configured such that a music library of sound tracks is storable in digital form in the data storage memory as a result of audio data being received from outside the housing through the audio data receiver,
- said music jukebox configured such that said music library is organizable into a master song list and at least one group of

sound tracks wherein each group comprises at least one sound track []<sup>7</sup> from the master song list,

wherein said music jukebox is configured such that indicia of said master song list and indicia of at least one group of sound tracks are displayable on said display,

wherein said music jukebox is configured such that said plurality of manually operable function controllers is useable to select a group of sound tracks stored in the data storage memory and operate the music jukebox such that said music jukebox outputs audio signals through said audio output structure.

*Id.* at 21:16–43 (line breaks and indentation added for readability).

In its Motion to Amend, AAD proposed substitute claims 49–65, of which claim 49 is independent and a substitute for claim 1, if found unpatentable. Mot. Amend 2. Claims 50–65 are proposed as substitutes for dependent claims 6, 7, 11, 12, 16, 22, 24, 29, 30, 35–37, 43, and 45–47, respectively. Proposed claim 49 reads as follows, with underlined material indicating language added to original claim 1:

49. A music jukebox configured for storing a music library therein, said music jukebox comprising:  
a housing;  
an audio data receiver arranged to receive audio data from outside the housing;  
audio output structure located at least partially within the housing for outputting audio signals;

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<sup>7</sup> The word “selected” was removed from claim 1 by a Certificate of Correction, entered Oct. 7, 2003. Ex. 1001.

data storage memory in the housing for storing audio data received from outside the housing through the audio data receiver,

said music jukebox including a user interface comprising a display device located at least partially within the housing, said display device providing a display which is viewable from outside the housing,

and a plurality of manually operable function controllers on the housing,

said music jukebox configured such that a music library of sound tracks is storable in digital form in the data storage memory as a result of audio data being received from outside the housing through the audio data receiver,

said music jukebox configured such that said music library, after being stored, is organizable into a master song list and at least one group of sound tracks wherein each group comprises at least one sound track selected<sup>8</sup> from the master song list,

wherein after the sound tracks are stored and organized, the order of the sound tracks in said group of sound tracks is customizable,

wherein said music jukebox is configured such that indicia of said master song list and indicia of at least one group of sound tracks are displayable on said display,

wherein said music jukebox is configured such that said plurality of manually operable function controllers is useable to select a group of sound tracks stored in the data storage memory and operate the music jukebox such that

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<sup>8</sup> AAD's proposed claim 49 includes the word "selected," notwithstanding the fact that the word was removed from claim 1 via a Certificate of Correction.



said music jukebox outputs audio signals through said audio output structure.

Mot. Amend 11–12.

## II. DISCUSSION

### A. *Claim Construction*

For purposes of our Decision to Institute, we analyzed each claim term in light of its broadest reasonable interpretation, as understood by one of ordinary skill in the art and as consistent with the specification of the '403 patent. 37 C.F.R. § 42.100(b); *see In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1281–82 (Fed. Cir. 2015). In the Decision, we construed the terms *master song list*, *indicia of said master song list*, *manually operable function controllers*, and *organizable*. *See* Dec. 8–9. During the course of the trial, neither party asked us to modify our constructions of *master song list*, *indicia of said master song list*, or *manually operable function controllers*. We see no reason to alter the constructions of these claim terms as set forth in the Decision to Institute, and we incorporate our previous analysis for purposes of this Decision. Therefore, for the reasons set forth in the Decision to Institute, we interpret certain claim terms of the '393 patent as follows:

|   |   |
|---|---|
| <i>master song list</i>                           | a list of sound tracks within a library                   |
| <i>indicia of said<br/>master song list</i>       | visible information that identifies a<br>master song list |
| <i>manually operable<br/>function controllers</i> | controls that can be operated by hand                     |

Dec. 8–9.

In our Decision to Institute, we construed *organizable* as “put things into a particular arrangement by ordering or grouping.” *Id.* In its Response, AAD asks that we reconsider our earlier interpretation of *organizable*. PO Resp. 8–9. Specifically, AAD disputes our conclusion that the term could be met by either ordering or grouping, as opposed to requiring ordering. *Id.* According to AAD, the term should be construed “to mean that a user can rearrange or customize the order of sound tracks.” *Id.* at 9. To support this construction, AAD notes that our Decision cited two portions of the specification which refer to “rearranging the order” and “customiz[ing] the order” of sound tracks. *Id.*; see Dec. 9 (citing Ex. 1001, 13:11–12, 3:32–33).

AAD misunderstands our prior claim construction ruling. We cited the above-quoted portions of the specification to demonstrate that, when the ’403 patentee wished to refer to ordering sound tracks, the terms *rearranging* or *customizing* were used—as opposed to the term *organizable*. Dec. 9. By contrast, we noted that the specification of the ’403 patent does not use the word *organizable* outside the claims. *Id.* The claim language itself, therefore, is the best guide to the meaning of the term. As we noted in our Decision, claim 1 requires that the music library is “organizable *into* a

master song list and at least one group of sound tracks.” Ex. 1001, 21:32–33 (emphasis added); Dec. 9. This usage implies that the user must be able to, at the very least, add songs from the music library *into* groups such as the master song list and the group of sound tracks. We note that AAD’s expert, Mr. McAlexander, agreed with our construction of the term, with a minor caveat discussed below. Ex. 1016, 31:6–32:16 (“The actual context of an arrangement ordering and grouping, I have no problem with that. I think they’re right.”). AAD’s proposed construction, which limits *organizable* to only the ordering of songs, is not the broadest reasonable interpretation of the claim term.

AAD attempts to read further limitations into *organizable* that do not appear in our prior Decision. According to AAD, our Decision was based “on the assertion that downloaded songs not in the queue represent the master song list.” PO Resp. 28. In other words, AAD interprets our Decision to require that “the two groups are mutually exclusive groups of songs, i.e., the master song list, and the playback queue. As such, a song in the queue cannot also be resident in the master song list.” *Id.* at 30.

Whatever the source of AAD’s interpretation, it is not correct. Our Decision never construed *organizable* to require at least two mutually exclusive groups of sound tracks, nor do we discern any basis in the claims or the specification for such a construction.

For these reasons, we reaffirm our construction of *organizable*, with a slight modification. As correctly noted by Mr. McAlexander during his deposition, the claim term is an adjective, whereas the construction adopted

in our Decision is a verb phrase. Ex. 1016, 31:6–32:16. We, therefore, modify our construction of *organizable* to be “capable of being put into a particular arrangement, by ordering or grouping.”

### *B. Patentability of Original Claims*

We first address whether HTC has met its burden of proving by a preponderance of the evidence that the challenged original claims are unpatentable. We instituted trial on two related grounds, anticipation by Nathan ’259 and obviousness over the combination of Nathan ’259 and Nathan ’255, and will analyze these grounds together before turning to the third instituted ground, obviousness over Sound Blaster, Lucente, and Ozawa.

#### *1. Alleged Anticipation of Claims 1, 6, 7, 22, 29, 30, 43, and 45–47 by Nathan ’259*

##### *a. Disclosures of the Nathan References*

The primary dispute between the parties on the Nathan references is over what the references actually disclose. According to HTC, the jukebox systems described in the Nathan systems permit purchase and download of songs from a remote server, into a master song list stored locally on the jukebox. Pet. 17–21. A user may then select songs from the master song list into a queue; after the songs are played, they are deleted from the queue, but not the local storage. *Id.* By contrast, AAD asserts that the jukeboxes of Nathan permit users to purchase the right to play a song only once; when the songs are downloaded, they are immediately added to the queue, then

deleted from local storage immediately after they are played. PO Resp. 11–12. According to AAD, therefore, a user of the Nathan system has no control over the order of songs in the queue other than the order in which the songs were purchased. *Id.* at 22. Nor does Nathan, in AAD’s reading, provide any library distinct from the queue. *Id.* at 16 (“The queue is *not* a subset of an internal music library; the queue *is* the music library.”) (citing Ex. 2003 ¶ 62).

In our Decision to Institute, we determined that the record at that time did not support AAD’s interpretation of the Nathan references. Rather, we concluded that “it appears that Nathan ’259 discloses deleting songs from the *queue* once they are played, not from the music library altogether.” Dec. 12 (citing Ex. 1002 ¶ 86 (“[w]hen the selection has been reproduced in its entirety, it is removed from the queue file”)). We also determined that the record supported the conclusion that Nathan ’259 discloses a “new selection acquisition mode” (“NSAM”) for ordering and downloading new music onto the jukebox. Dec. 13; Ex. 1002 ¶¶ 64–73. A “selection graphics screen” then permits a user to add these newly acquired songs to a queue for playback. Ex. 1002 ¶ 74. We concluded that Nathan ’259 appeared to describe a master song list to which songs are added via the NSAM, as well as the ability to create a queue of songs selected from the master song list using the selection graphics screen. Dec. 13.

AAD’s Response contends that our interpretation of Nathan ’259 was in error (PO Resp. 11), and Mr. McAlexander testifies in support of AAD’s interpretation of the reference. Ex. 2003 ¶¶ 32–65. AAD raises several

issues regarding the disclosure of Nathan '259, which it contends are inconsistent with HTC's interpretation of the reference.

First, AAD asks why, if songs are not deleted entirely from the device immediately following playback, Nathan '259 does not disclose some sort of "delete" function so that users can clear songs from the memory. PO Resp. 11–12. HTC responds by noting that Nathan '259, as a patent document, likely is focused on the novel aspects of the disclosed device as opposed to known functions such as deleting files. Pet. Reply 9–10.

Prior art references are evaluated according to what they would disclose to a person of ordinary skill in the art. *See Sundance, Inc. v. DeMonte Fabricating Ltd.*, 550 F.3d 1356, 1361 n.3 (Fed. Cir. 2008). As such, the fact that a reference is silent regarding a particular feature only signifies exclusion of that feature if a person of ordinary skill would understand silence to imply exclusion. AAD provides no compelling evidence this is the case with Nathan '259. Mr. McAlexander, AAD's expert, testifies that there is no disclosure of a delete function in Nathan '259, but does not state that he, or any other person of ordinary skill, would interpret this silence to imply that a delete function is excluded. Ex. 2003 ¶ 62. Furthermore, we note that Nathan '255 explicitly discloses a manual delete function for removing little-known titles. Ex. 1003 ¶ 7. We do not find the absence of an explicit "delete function" in Nathan '259 to imply that the Nathan jukebox does not have such a common and known function.

Second, AAD notes that Nathan '259 discloses a system having as little as 32 megabytes of RAM, and asks why such a small amount of

memory is contemplated if a local music library is stored. PO Resp. 12–13. HTC responds by noting that the 32 megabyte capacity is a minimum, and Nathan '259 puts no upper limit on the number of songs that can be stored. Pet. Reply 10. Furthermore, HTC notes that Nathan '255 discloses that its device may store a “minimum of 350 to 400 titles.” *Id.* (citing Ex. 1003 ¶ 7). We consider HTC’s interpretation on this point to be persuasive, and do not understand the disclosure of a 32 megabyte minimum memory capacity to be inconsistent with our understanding of the Nathan references.

Third, AAD points out a passage in Nathan '259 that states that a button “allows validation of the selection or selections for initiating their introduction into the queue,” (Ex. 1002 ¶ 74) and argues that “validation” refers to purchase of a song. PO Resp. 15–16. Therefore, under AAD’s theory, purchase of a song results in immediate addition to the queue. *Id.* at 38. HTC contends that such an interpretation would render Nathan '259’s two modules redundant, as there would be no reason to have both a “new selections acquisition module” (“NSAM”) and a “selection graphics screen,” if songs are directly added from the NSAM to the queue. Pet. Reply 8. We agree with HTC, and additionally note that Nathan '259 uses the word “validate” in other contexts meaning “to confirm.” Ex. 1002 ¶ 75 (“validates his choice”), ¶ 114 (“validates the credit card”). We, therefore, interpret “validation of his the selection” in paragraph 74 of Nathan '259 to refer to confirming that a song will be added to the queue, rather than purchase of a song.

At oral argument, AAD discussed these issues, and asked several other questions regarding the disclosure of Nathan '259 which had not been raised previously in briefing. Tr. 53–54. Even if we were to consider such arguments properly raised,<sup>9</sup> we do not find them persuasive. Based on our review of the Nathan references in light of the expert testimony, our interpretation of the Nathan disclosures has not changed.

We find that Nathan '259 discloses a jukebox that permits the downloading of song tracks via its NSAM. Ex. 1002 ¶ 64, 73 (“The display of FIG. 9 allows the user to access the new selections acquisition mode in connection with the NSAM module. . . . Button (1038) allows ordering of the selection which is then downloaded according to the above described mode.”). A different “selection graphics screen” shows the songs that have been downloaded, permits the user to sort the songs according to different criteria, and gives the user the ability to add songs to a queue. *Id.* ¶ 74 (“Button (124) allows validation of the selection or selections for initiating their introduction into the queue or their immediate and successive performance if the queue is empty.”). Contrary to AAD’s argument, we see no reason to conclude that when a file is purchased and downloaded, it is immediately added to the queue, and deleted from local memory immediately after it is played. Nor do we find that the Nathan systems only

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<sup>9</sup> “A party may . . . only present [at oral hearing] arguments relied upon in the papers previously submitted. No new evidence or arguments may be presented at the oral argument.” *Office Patent Trial Practice Guide*, 77 Fed. Reg. 48,756, 48,768 (Aug. 14, 2012).



permit the order of the queue to be determined by purchase order, as opposed to the order in which the songs are selected from the library of all downloaded songs.

*b. Analysis of Anticipation by Nathan '259*

Anticipation requires not only that all elements of a claim are disclosed within the four corners of a single prior art reference, but that the elements are “arranged as in the claim.” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008). For the following reasons, we determine that Petitioner has not proven by a preponderance of the evidence that Nathan '259 teaches all elements of claim 1, and by extension, any of the challenged dependent claims.

Claim 1 requires, *inter alia*, “a housing” and “a display device located at least partially within the housing.” Furthermore, the claimed music jukebox must be configured “such that indicia of said master song list and indicia of at least one group of sound tracks are displayable on said display.”

In the Petition, HTC identifies an LCD display disclosed in Nathan '259, which is located in the jukebox's housing. Pet. 19–20. HTC also identifies the disclosure of Nathan's “selection module,” which shows indicia of a master song list as well as the queue. Pet. Reply 12. Nathan '259 teaches that the selection module displays a window containing “titles of selections in alphabetic order by song name,” and a button, which “allows validation of the selection or selections for initiating their introduction into the queue.” Ex. 1002 ¶ 74.

AAD argues, however, that HTC errs in linking the selection module of Nathan '259 with the LCD display in the housing. According to AAD, the Nathan '259 jukebox is designed to be connected to a television, and the graphics modules such as the selection module are displayed on the TV. PO Resp. 17–18. By contrast, AAD argues the LCD screen in the housing is intended to “allow minimum display in the case in which the user does not connect a TV screen.” Ex. 1002 ¶ 46. Furthermore, AAD notes that, according to Nathan '259, the LCD screen “allows sequential access to a list in alphabetical order,” (citing Ex. 1002 ¶ 100) but does not disclose that the LCD screen can display *both* a master song list and at least one group of sound tracks, as required by claim 1. PO Resp. 39.

Upon review of the disclosure of Nathan '259 and the testimony of the parties' experts, we find that AAD's interpretation of the reference on this point is the correct one. Nathan '259 states that the object of the invention is to provide a device that can be connected to a television and used to display various windows-based selection modules. Ex. 1002 ¶¶ 1, 65, 74, Figs. 9, 10. The LCD screen, by contrast, is characterized as “minimum,” and is only to be used in the event connection to a TV is unavailable. *Id.* ¶ 46. There is no indication in Nathan '259 that a “minimum display” could display the graphical, windows-based modules such as the selection graphics screen. To the contrary, the LCD screen is said to only permit alphabetical display of a list, and to allow access to that list only sequentially. *Id.* ¶ 100. There is insufficient evidence to conclude that the LCD screen permits display of “indicia of said master song list and indicia of at least one group

of sound tracks,” as required by claim 1. Furthermore, while the television screen described in Nathan is capable of such a display, it is not located “at least partially within the housing.”

For these reasons, we find that HTC has not met its burden of showing that all elements of claim 1 are disclosed by Nathan ’259, and therefore, we conclude that HTC has not proven that Nathan ’259 anticipates the claim. By extension, dependent claims 6, 7, 22, 29, 30, 43, and 45–47, each of which incorporates the limitations of claim 1, also are not anticipated by Nathan ’259.

2. *Alleged Obviousness of Claims 1, 6, 7, 22, 27, 29, 30, 35, 43, and 45–47 in View of Nathan ’259 and Nathan ’255*

The elements of an obviousness analysis under 35 U.S.C. § 103 were set forth by the Supreme Court as follows: “the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.” *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). Furthermore, as a guard against hindsight reasoning, we must “withhold judgment on an obviousness challenge until [we] consider[] all relevant evidence, including that relating to the objective considerations” such as commercial success or long-felt need. *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1079 (Fed. Cir. 2012). While we may apply “an expansive and flexible approach” to the question of obviousness, and take the sequence of the *Graham* factors in a different order depending on the particular case, “the factors continue to

define the inquiry that controls.” *KSR Int’l. Co. v. Teleflex Inc.*, 550 U.S. 398, 407, 415 (2007).

We note at the outset that AAD does not contest that a person of ordinary skill in the art would have combined the disclosures of Nathan ’259 and Nathan ’255. Tr. 80:16–24. Rather, AAD disputes HTC’s interpretation of the Nathan references, and whether a person of ordinary skill in the art would have understood them to disclose all elements of the challenged claims. PO Resp. 45. Upon review of HTC’s asserted reasons to combine the Nathan references (Pet. 31), Mr. Schmandt’s testimony on that point (Ex. 1007 ¶ 125), and the lack of challenge from AAD, we find that a person of ordinary skill would have had reason to combine the Nathan references in the manner asserted.

*a. Independent Claim 1*

The disclosure of Nathan ’255 remedies the deficiency of Nathan ’259 discussed above in the context of the anticipation ground; namely, that Nathan ’259 does not disclose a housing containing a display capable of displaying “indicia of said master song list and indicia of at least one group of sound tracks.” As AAD recognizes, Nathan ’255 discloses a touchscreen display for controlling the jukebox located within its housing. Ex. 1003 ¶ 24; PO Resp. 46. The touchscreen is a 14 inch “Intelli Touch” screen that “allows display of various selection data used by the customers.” Ex. 1003 ¶ 24. Mr. Schmandt, HTC’s expert and a founder of the MIT Media Lab with more than thirty years of experience in the media technology field, testifies that “[a] person skilled in the art would be motivated to implement the touch

screen disclosed in Nathan 255 on the LCD screen . . . disclosed in Nathan 259, to allow more intuitive control of the jukebox.” Ex. 1007 ¶¶ 12, 13, 128. We, therefore, conclude that it would have been obvious to include the touchscreen of Nathan ’255 in the housing of Nathan ’259, to display the modules of Nathan ’259 such as the selection graphics screen. *See* Ex. 1002 ¶ 74. The display in the housing would be capable of displaying indicia of said master song list and indicia of at least one group of sound tracks, as required by claim 1.

Regarding the remaining limitations of claim 1, we find that the Nathan references disclose a housing (“box,” Ex. 1002 ¶ 46); an audio data receiver (“telecommunications interface,” *id.* ¶ 3); an audio output structure (“stereo audio output,” *id.* ¶ 42); data storage memory (“RAM,” *id.* ¶ 51); and a plurality of manually operable function controllers (“a set of buttons,” *id.* ¶ 46). AAD does not contest these elements. Rather, AAD argues that the references do not disclose organizing a music library into a master song list and at least one group of sound tracks, as required by claim 1. PO Resp. 46–47. To support this argument, AAD relies on its interpretation of Nathan as permitting only “single-play” downloads of songs, with immediate introduction of downloaded songs into a queue that cannot be reorganized. *Id.*; *see id.* at 34–38. As discussed above, we do not find this interpretation of Nathan ’259’s disclosure to be the correct one.

Given our finding that Nathan ’259 discloses the ability to select songs to download to local storage, followed by the ability to select songs for introduction into a queue, we find that the disputed limitation of claim 1

is taught by the combination of the Nathan references. The songs downloaded into Nathan's local memory constitute a "master song list," and the selection of songs into a queue is "at least one group of sound tracks." This grouping satisfies the broadest reasonable interpretation of *organizable*, as discussed above. *See supra*, Section II.A.

AAD also argues that the Nathan references do not disclose the ability to use the plurality of manually operable function controllers to select a group of sound tracks. PO Resp. 40–41, 47. As outlined above, however, we find that Nathan '259 discloses buttons that can be used to introduce songs into its queue. Ex. 1002 ¶¶ 46, 66, 74 ("Button (124) allows validation of the selection or selections for initiating their introduction into the queue."). Alternatively, we find that Nathan '255 discloses a touchscreen that may be used to "allow[] display of various selection data used by the customers." Ex. 1003 ¶ 24. As argued by HTC, a "user selects the group of sound tracks just as the captain of a pickup football team selects the team by selecting individual players to form the team." Pet. Reply 13; *see* Tr. 35:21–36:19.

For these reasons, we find that the combination of Nathan '259 and Nathan '255 teaches each limitation of claim 1.

*b. Dependent Claims*

AAD also contests the obviousness of dependent claims 6, 7, 22, 29, 30, 35, 43, and 45–47 over the combined Nathan references, but with respect to claims 22, 35, and 45–47, no argument is made other than AAD's contention that not all elements of claim 1 are disclosed. PO Resp. 41, 47–

48. For the reasons discussed above, the arguments regarding claim 1's elements are unpersuasive, and find that the additional elements of these dependent claims are taught by the Nathan references as set forth in HTC's Petition. Pet. 33–36.

AAD does argue that the additional elements of claims 6, 7, 29, 30 and 43 are not disclosed by Nathan '259, and that this deficiency is not remedied by combination with Nathan '255. *Id.* at 41–45, 47–48. With respect to claims 6 and 7, AAD's arguments focus on whether Nathan '259 satisfies the *organizable* limitation of claim 1, which we rejected above. We find that the additional limitations of claim 6 (“at least one sound track . . . is organizable into at least one group of sound tracks”) and claim 7 (“at least one manually operable function controller capable of being operated to facilitate organizing at least one sound track into at least one group of sound tracks”) are met by Nathan '259's disclosure of introducing songs to its queue. Ex. 1002 ¶ 74.

Claim 29 requires the ability “to sort at least one of the sound tracks and the groups of sound tracks stored in said data storage memory according to indicia of said sound tracks and groups of sound tracks.” HTC argues that this is disclosed by Nathan '259's selection graphics screen, which displays songs stored locally and permits introduction into the queue. Pet. 25; Pet. Reply 13–14. We find that Nathan '259 discloses that this screen contains “Window (121)” which “allows display of titles of selections in alphabetic order by song name.” Ex. 1002 ¶ 74. This meets claim 29's requirement of

the capability to sort “at least one of the sound tracks . . . stored in said data storage memory according to indicia of said sound tracks.”

Claim 30 requires the ability to “audition at least one sound track in said data storage memory.” In its Response, AAD argues that the term *audition* requires the ability to “accept, edit, or delete the song” after listening to all or part of it. PO Resp. 43–44. This interpretation, however, was contradicted by AAD’s counsel at oral argument:

JUDGE CRUMBLEY: . . . Claim 30 recites auditioning at least one sound track, and you point out that . . . the specification at least says, okay, you aud -- truly audition a recording, and it uses that in reference to listening to a sound track before the sound track is recorded onto a compact disk.

MR. FOLEY: Yes.

JUDGE CRUMBLEY: And so does that mean that “audition” requires recording to a compact disk?

MR. FOLEY: No. I wouldn't interpret it that way at all. The device even says it could be used as a jukebox. . . .

JUDGE CRUMBLEY: Well, I guess my question is that -- does “audition” just merely mean playback? Does it mean --

MR. FOLEY: Yeah. I would argue that “audition” means, you know, you can play it.

Tr. 79:13–80:7.

HTC also notes that, in related District Court litigation, AAD argued that “audition” means “to review or listen to.” Pet. Reply 14 (citing Ex. 1011, 14; Ex. 1012, 7). We do not consider *audition* in claim 30 to mean anything more than the ability to listen to all or a portion of a sound track.



As such, Nathan '259 discloses this capability. Ex. 1002 ¶ 100 (“A ‘play’ button (1028) starts playback.”).

Finally, claim 43 requires an amplifier to be located in the housing. HTC directs our attention to Nathan '259's disclosure of a button (15) that allows the volume of connected headphones to be adjusted. Pet. 26 (citing Ex. 1002 ¶ 46). AAD's expert, Mr. McAlexander, testifies that while the use of an amplifier in such a situation is not “necessarily required,” “the volume of an audio output to headphones can typically be adjusted by means of an amplifier.” Ex. 2003 ¶ 61. Mr. Schmandt points out that Nathan '255 also discloses that its jukebox has “integrated amplified loudspeakers,” necessarily requiring inclusion of an amplifier. Ex. 1007 ¶ 144. Based on this testimony, and our review of the references, we find that inclusion of an amplifier in the housing is taught or suggested by the combined disclosures of the Nathan references.

We, therefore, conclude that HTC has met its burden of showing that each element of challenged dependent claims 6, 7, 22, 27, 29, 30, 35, 43, and 45–47 is disclosed by the combination of Nathan '259 and Nathan '255. As discussed above, we also find that a person of ordinary skill in the art would have had reason to combine the Nathan references.

*c. Objective Indicia of Nonobviousness*

Factual inquiries for an obviousness determination include secondary considerations based on evaluation and crediting of objective evidence of nonobviousness. *See Graham*, 383 U.S. at 17. Notwithstanding what the teachings of the prior art would have suggested to one of ordinary skill in the

art at the time of the invention, the totality of the evidence submitted, including objective evidence of nonobviousness, may lead to a conclusion that the challenged claims would not have been obvious to one of ordinary skill in the art. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). Secondary considerations may include any of the following: long-felt but unsolved needs, failure of others, unexpected results, commercial success, copying, licensing, and praise. *See Graham*, 383 U.S. at 17; *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007).

To be relevant, evidence of nonobviousness must be commensurate in scope with the claimed invention. *In re Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011) (citing *In re Tiffin*, 448 F.2d 791, 792 (CCPA 1971)); *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998). In that regard, in order to be accorded substantial weight, there must be a nexus between the merits of the claimed invention and the evidence of secondary considerations. *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995). “Nexus” is a legally and factually sufficient connection between the objective evidence and the claimed invention, such that the objective evidence should be considered in determining nonobviousness. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988). The burden of showing that there is a nexus lies with the patent owner. *Id.*; *see Paulsen*, 30 F.3d at 1482.

AAD argues that the “clear commercial success” of the invention claimed in the ’403 patent demonstrates its nonobviousness, notwithstanding the disclosures of the Nathan references. PO Resp 57–58. To demonstrate

this alleged commercial success, AAD submits the testimony of Peter Keller, supported by a number of confidential licenses which are said to have generated more than \$10,000,000 of gross revenue. *Id.* at 58. Mr. Keller describes the “AAD Family of Patents,” which includes the ’403 patent, other related United States Patents, and foreign counterparts. Ex. 2004 ¶¶ 5, 8. Mr. Keller testifies that, for each licensee, he ensured that “at least one commercial product sold” was covered by “at least one claim of at least one patent” of the family. *Id.* ¶ 11.

In cases in which the proffered evidence of commercial success is licenses, rather than sales of products embodying the invention, there is a danger that the licenses may have been taken only because they were cheaper than defending an infringement suit. *See EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 908 (Fed. Cir. 1985). In such situations, nexus between the commercial success and the patent cannot be inferred; rather, “affirmative evidence of nexus” is required. *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1324 (Fed. Cir. 2004). In other words, a patent owner must demonstrate “a nexus between the *merits of the invention* and the licenses of record”; otherwise, the licenses are to be accorded little weight. *In re GPAC Inc.*, 57 F.3d at 1580 (emphasis added).

HTC notes that each of the licenses listed by Mr. Keller includes at least two patents that explicitly claim a compact disc recorder, an element not present in the claims of the ’403 patent. Pet. Reply 24. HTC also contends that AAD fails to demonstrate any link between the invention of the ’403 patent and the taking of the license; for example, AAD provides no

apportionment of revenues to show the amount attributable to the '403 patent, as opposed to the other members of the licensed family. *Id.*

We agree with HTC that the evidence provided by AAD does not establish a sufficient link between the merits of the invention claimed in the '403 patent and the taking of the licenses. Although Mr. Keller notes that some of the provided licenses were taken in situations where there was no pending litigation against the licensee (Ex. 2004 ¶ 9), he does not address whether litigation had been *threatened* against those parties. We, therefore, cannot determine whether the licenses reflect the commercial value of the invention claimed in the '403 patent, or whether they were taken merely to avoid the cost of litigation, either pending or threatened. Absent a persuasive showing of nexus, AAD's evidence of licensing fails to establish commercial success.

We conclude that the evidence of objective indicia of nonobviousness is insufficient to overcome the evidence of obviousness over the combined Nathan references.

*d. Conclusion on Obviousness*

For the foregoing reasons, HTC has proven by a preponderance of the evidence that Nathan '255 and Nathan '259 teach all elements of challenged claims 1, 6, 7, 22, 27, 29, 30, 35, 43, and 45–47, and that a person of ordinary skill in the art would have had reason to combine the disclosures. Furthermore, we conclude that such a combination would have been within the level of ordinary skill in the art, as evidenced by the prior art of record. We, therefore, conclude that claims 1, 6, 7, 22, 27, 29, 30, 35, 43, and 45–47

would have been obvious at the time of the invention, and thus are unpatentable under 35 U.S.C. § 103.

3. *Alleged Obviousness of Claims 1, 3, 6, 7, 11, 12, 16, 22, 24, 30, 35–37, 43, and 45–47 in View of Sound Blaster, Lucente, and Ozawa*

We instituted trial to determine whether claims 1, 3, 6, 7, 11, 12, 16, 22, 24, 30, 35–37, 43, and 45–47 would have been obvious over the combined disclosures of Sound Blaster, Lucente, and Ozawa, finding persuasive HTC’s unchallenged analysis in its Petition of how the elements of the challenged claims are taught by the references. Dec. 16–17, 21. In so doing, we noted that AAD did not dispute the alleged disclosures of the references, but instead disputed that Sound Blaster qualified as prior art to the ’403 patent, and argued that a person of ordinary skill in the art would have not combined the references. *Id.* at 17. In its Response, AAD again does not address the disclosures of the references, and instead argues that the references are not combinable because the combined teachings would produce an inoperable device. PO Resp. 48–57. According to AAD, to combine Sound Blaster with the teachings of Lucent would require a substantial reconstruction and redesign of the elements in Lucent. *Id.* at 46–47. Thus, AAD concludes that the combination of Sound Blaster and Lucent and any other prior art would not have rendered the challenged claims obvious. *Id.* at 49. In addition, AAD moved to exclude Exhibit 1004 (Miller Declaration, Miller CV, and the Sound Blaster reference). Mot. Exclude 1.

Sound Blaster discloses audio software with a graphical user interface designed for organizing and playing back audio files. Ex. 1004, 2-1.<sup>10</sup> Sound Blaster also discloses the ability to group sound tracks into playlists. *Id.* at 2-20–2-28, Fig. 2-8.

Lucente discloses a “pen-based computer with an integral flat panel display and digitized screen.” Ex. 1005 1:3–4. The housing of Lucente includes an audio input and output, processor, and memory. *Id.* at 12:2–13; 7:39–49. According to HTC, the hardware of Lucente is capable of running the Sound Blaster software. Pet. 38.

Ozawa discloses a portable audio device that can download music from a network service center and save audio files to a hard drive in the device. Ex. 1006, 4:48–53. The Ozawa device has push-button controls on its face for controlling the operation of the device, such as playing and pausing music. *Id.* at 5:30–33.

At oral hearing, AAD’s counsel did not concede that Sound Blaster, Lucente, and Ozawa disclose all elements of the claims if combined, but acknowledged that AAD’s briefs had provided no argument on that point. Tr. 90–91. Specifically, AAD did not provide any evidence or testimony contrary to the evidence and testimony provided by Petitioner regarding the disclosures of Sound Blaster, Lucente, and Ozawa. Our Scheduling Order in this case cautioned AAD that “any arguments for patentability not raised in

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<sup>10</sup> HTC did not add page numbers to the Sound Blaster reference, as required by our Rules. *See* 37 C.F.R. § 42.63(d)(2)(i). We refer to the page numbers of the original Sound Blaster manual when citing the reference.

the [Patent Owner Response] will be deemed waived.” Paper 7, 3. The Board’s Trial Practice Guide, furthermore, states that the Patent Owner Response “should identify all the involved claims that are believed to be patentable *and state the basis for that belief.*” *Office Patent Trial Practice Guide*, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012) (emphasis added). As the Board has stated, our governing statute and Rules “clearly place some onus on the patent owner, once trial is instituted, to address the material facts raised by the petition as jeopardizing patentability of the challenged claims.” *Johnson Health Tech Co. v. Icon Health & Fitness, Inc.*, Case IPR2013-00463, slip op. at 12 (PTAB Jan. 29, 2015) (Paper 41). By addressing only the combination of the references, AAD conveyed to the Board and HTC that the only bases for its belief that the challenged claims are patentable were (i) whether Sound Blaster and Lucente were combinable and (ii) whether Sound Blaster is admissible.

In our Decision to Institute, we concluded that HTC had made a threshold showing that Sound Blaster, Lucente, and Ozawa taught all the limitations of the challenged claims, sufficient for us to conclude that there was a reasonable likelihood that HTC would prevail in showing that the challenged claims were obvious over the combined references. Dec. 21–22. We must now determine whether the preponderance of the evidence of record supports a finding of obviousness. 35 U.S.C. § 316(e). Given AAD’s waiver of argument that the combination of references does not teach all elements of the challenged claims, the record now contains the same arguments and evidence on that point as it did at the time of our Decision to

Institute. After careful consideration of the entire record, including the Petition, Patent Owner's Response, and all evidence submitted by the parties, we find that the preponderance of the evidence of record supports a finding that HTC has set forth how all limitations of the challenged claims are taught by Sound Blaster, Lucente, and Ozawa. Pet. 42–58; Ex. 1007 ¶¶ 172–214 (Schmandt declaration including claim charts). We, therefore, turn to the two remaining issues on this ground of unpatentability: AAD's Motion to Exclude Sound Blaster, and whether a person of ordinary skill would have had reason to combine Sound Blaster, Lucente, and Ozawa.

*a. Motion to Exclude Exhibit 1004*

Exhibit 1004 contains two related documents: (1) the Declaration of Kyle A. Miller, attesting to the public availability of the Sound Blaster reference; and (2) the Sound Blaster reference itself. Mr. Miller testifies that Sound Blaster is a copy of a Sound Blaster 16 User Reference Manual he received during the course of his employment at Creative Labs, “no later than the early spring of 1995.” Ex. 1004 ¶ 19. According to Mr. Miller, his employer provided him with commercial versions of Creative Labs' most popular products, including the Sound Blaster 16 Audio Card. *Id.* ¶ 12. Mr. Miller testifies that the product he received included the User's Manual, and would have been the same documentation provided to a commercial purchaser of the product. *Id.* ¶ 14.

AAD moves to exclude Exhibit 1004 on several grounds. Mot. Exclude 1. Pursuant to our Rules, a motion to exclude evidence must be filed to preserve any previously-made objections to evidence. 37 C.F.R.



§ 42.64(c). The motion must identify where in the record the objections were made, and must explain the objections. *Id.*

We note that AAD does not identify where in the record its objections to evidence were made prior to their being the basis of the Motion to Exclude, in violation of Rule 42.64(c). Indeed, the Board is aware of AAD's prior objections only because they were quoted in HTC's opposition to the Motion to Exclude. For this reason, AAD's Motion is procedurally deficient, and may be denied on this basis alone.

Even if we were to overlook the procedural deficiency of the motion itself, we would not exclude Exhibit 1004. First, AAD argues that the Miller Declaration is hearsay. Mot. Exclude 3–5. It does not appear that AAD previously made this objection, as required by our Rules. According to HTC, the only hearsay-based objection made by AAD was that Exhibit B (the Sound Blaster reference itself) did not satisfy the business records exception to the hearsay rule. Exclude Opp. 2. Furthermore, even if AAD had preserved such an objection, we do not consider the Miller Declaration to be hearsay, as it is not an out-of-court statement. In an *inter partes* review, direct testimony is typically provided via affidavit, with cross-examination taken via deposition. 37 C.F.R. § 42.53(a). In this respect, testimony via affidavit before the Board is distinguishable from the affidavits submitted in District Court cases cited by AAD, such as *Hilgraeve, Inc. v. Symantec Corp.*, 271 F. Supp. 2d 964 (E.D. Mich. 2003). See *Polaris Wireless, Inc. v. TruePosition, Inc.*, Case IPR2013-00323, slip op. at 41 (PTAB Nov. 3, 2014) (Paper 62).

Second, AAD objects to the copyright date on the Sound Blaster reference as hearsay. Mot. Exclude 5–7. Again, AAD has not established that it previously made such an objection, other than the general objection to “Exhibit B” as not being within the business records exception. This is insufficient to put HTC on notice that AAD was specifically objecting to the copyright date of the reference as hearsay. *See* 37 C.F.R. § 42.64(b)(1) (“The objection must identify the grounds for the objection with sufficient particularity to allow correction in the form of supplemental evidence.”). In any event, we consider the exclusion of the copyright date to be moot, as we do not rely on the copyright date to reach our determination that Sound Blaster was publicly available. Mr. Miller’s testimony that Sound Blaster was publicly available rests on his personal recollection, and merely cites the copyright date as corroboration for that recollection. Ex. 1004, Miller Decl., ¶ 17.

Third, AAD contends that Sound Blaster is not within the business records exception to the hearsay rule. Mot. Exclude 8. While it does appear that AAD previously made this objection, the Motion does not cite to where in the record the objection was made, as required by our Rule 42.64(c). Nevertheless, the application of a hearsay exception is irrelevant, as Sound Blaster is not offered for a hearsay purpose. As a prior art reference, Sound Blaster is offered to show what information it would have conveyed to a person of ordinary skill in the art; the truth of the contents of Sound Blaster is not relevant to this inquiry. *See EMC Corp. v. Personal Web Techs., LLC*, Case IPR2013-00085, slip op. at 66 (PTAB May 15, 2014) (Paper 73) (“a

prior art document submitted as a ‘printed publication’ under 35 U.S.C. § 102(b) is offered simply as evidence of what it described, not for proving the truth of the matters addressed in the document”); *see Joy Techs., Inc. v. Manbeck*, 751 F. Supp. 225, 233 n.2 (D.D.C. 1990), *aff’d*, 959 F.2d 226 (Fed. Cir. 1992)).

Finally, AAD seeks to exclude Sound Blaster as not authenticated, as there is no evidence to authenticate the reference “except the inadmissible Miller Declaration.” Mot. Exclude 8. We have not found the Miller Declaration to be inadmissible, however. To authenticate an item of evidence, a party must “produce evidence sufficient to support a finding that the item is what the proponent claims it is.” Fed. R. Evid. 901(a). The Miller Declaration provides sufficient evidence to support the finding that Sound Blaster is what HTC contends it to be: a document distributed to the public with the commercially available version of the Sound Blaster 16 Audio Card.

For these reasons, even if AAD’s Motion to Exclude were procedurally proper, we would not exclude Exhibit 1004, including the Sound Blaster reference, from the record.

*b. Combinability of References*

HTC contends that a person of ordinary skill in the art would have had reason to combine Sound Blaster, Lucente, and Ozawa. Pet. 40. First, the references are said to pertain to personal computing devices with similar hardware, for similar purposes of reproducing audio. *Id.* In addition, HTC argues the devices of Lucente and Ozawa are directed to portable devices,

and HTC asserts that a person of ordinary skill in the art would have combined the software of Sound Blaster with these devices to “improv[e] multimedia user experience.” *Id.* at 41.

To the contrary, AAD argues that combining Sound Blaster with Lucente would have been outside the level of ordinary skill at the time of the invention. PO Resp. 48–49. AAD first focuses on hardware incompatibilities between the tablet computer of Lucente and the software of Sound Blaster. *Id.* Citing the McAlexander Declaration, AAD argues that “[t]he amount of skill required to make the Lucente device compatible with the Sound Blaster software would substantially exceed the level of ordinary skill.” *Id.* (citing Ex. 2003 ¶¶ 23–28). Mr. McAlexander testifies that modification of the Lucente computer to run Sound Blaster would include such drastic steps as “redesign of the battery and thermal management within the housing to provide the designed battery operating time while preventing overheating of the internal circuits” (Ex. 2003 ¶ 25) and redesign of the “entire interface structure of the Sound Blaster 16 audio card . . . from an ISA configuration to a different bus standard, including firmware re-write to conform to the different bus protocol” (*id.* ¶ 27).

Mr. McAlexander also testifies that the Sound Blaster software required a Windows 3.1 operating system, which allegedly was incompatible with the “pen-based computer” disclosed in Lucente. *Id.* ¶ 28. For example, Mr. McAlexander points out Lucente’s recitation of the ability to rotate the display to permit either right-handed or left-handed operation, and states that such a functionality was not provided in Windows 3.1. *Id.* ¶ 30.

In response, HTC argues that AAD focuses too heavily on the physical combinability of the devices disclosed in the references, as opposed to whether the teachings of the references would be combined. Pet. Reply 17–18. HTC submits the testimony of Mr. Schmandt, who testifies that a person of ordinary skill in the art would have recognized that the functionality of the Sound Blaster software (such as storing and managing audio files, including making playlists) would provide similar benefits in a portable touchscreen computer, such as the one described in Lucente. Ex. 1007 ¶ 168. The disclosures of Sound Blaster and Lucente, according to Mr. Schmandt, would allow a person of ordinary skill in the art to construct a device as claimed in the '403 patent. Ex. 1010 ¶ 58. Mr. Schmandt also addresses Mr. McAlexander's opinion that a person of ordinary skill in the art would have been unable to combine the computer of Lucente with the software of Sound Blaster, and testifies that a person of ordinary skill would have both the ability and reason to combine the teachings of these references. *Id.* ¶¶ 60–71.

In our view, HTC's proposed analysis better comports with the “expansive and flexible approach” to obviousness set forth by the Supreme Court in *KSR*. “The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference.” *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Our inquiry is, therefore, not “whether the references could be physically combined but whether the claimed inventions are rendered obvious by the

teachings of the prior art as a whole.” *In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985) (en banc).

Based on the combination of references proposed by HTC, Mr. Schmandt testifies that a person of ordinary skill in the art would have recognized the advantages of Sound Blaster’s *functionality*, and sought to incorporate those features into Lucente. Ex. 1007 ¶ 168 (“a person of ordinary skill in the art would be motivated to combine a system with the flexibility, portability, and ease of use of Lucente with the audio management capabilities of Sound Blaster”); *id.* at ¶ 170 (“it would be obvious to design a system with physical (e.g. push-button) controls to carry out the various *functions* designed by Sound Blaster, particularly in view of Lucente and Ozawa”) (emphasis added). The record reflects that such a modification would not have been outside the level of ordinary skill, which both experts define similarly. Ex. 1007 ¶ 25 (Schmandt: at least a bachelor’s degree in electrical engineering, computer science, or equivalent, and 1–3 years of experience in designing and programming consumer electronic devices); Ex. 2003 ¶ 8 (McAlexander: bachelor’s degree in electrical engineering or computer engineering, and at least two years of experience in the design of audio systems). This level of skill is also reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). AAD’s focus on whether the Sound Blaster hardware sound card could be installed on the Lucente device, or whether the Sound Blaster software could run on Lucente’s operating system, ignores that a person of

ordinary skill is a “person of ordinary creativity, not an automaton.”  
*KSR*, 550 U.S. at 421.

It would not have been outside the level of ordinary skill in the art, as defined by both experts, to modify the device of Lucente to have the functionality described in Sound Blaster—including grouping and ordering songs—as well as the ability to download songs as described in Ozawa. We, therefore, find that a person of ordinary skill in the art would have had reason to combine the disclosures of Sound Blaster, Lucente, and Ozawa, and would have had a reasonable expectation of success in doing so.

*c. Objective Indicia of Nonobviousness*

As discussed above, we have considered AAD’s evidence of objective indicia of nonobviousness, but conclude that the evidence is insufficient to support a conclusion of nonobviousness.

*d. Conclusion on Obviousness*

For the foregoing reasons, HTC has proven by a preponderance of the evidence that Sound Blaster, Lucente, and Ozawa teach all elements of challenged claims 1, 3, 6, 7, 11, 12, 16, 22, 24, 30, 35–37, 43, and 45–47, and that a person of ordinary skill in the art would have had reason to combine the disclosures. Furthermore, we conclude that such a combination would have been within the level of ordinary skill in the art, as evidenced by the prior art of record. We, therefore, conclude that claims 1, 3, 6, 7, 11, 12, 16, 22, 24, 30, 35–37, 43, and 45–47 would have been obvious at the time of the invention, and thus are unpatentable under 35 U.S.C. § 103.

*C. Patentability of Proposed Substitute Claims*

In an *inter partes* review, amended claims are not added to the patent as of right, but rather must be proposed as a part of a motion to amend. 35 U.S.C. § 316(d). As moving party, the patent owner bears the burden of proof to establish that it is entitled to the relief requested—namely, addition of the proposed claims to the patent. 37 C.F.R. § 42.20(c). A patent owner must meet the requirements of 37 C.F.R. § 42.121, and demonstrate the patentability of the proposed substitute claims. *Idle Free Sys., Inc. v. Bergstrom, Inc.*, Case IPR2012-00027 (PTAB June 11, 2013) (Paper 26, “*Idle Free*”) (informative); *see also Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1308 (Fed. Cir. 2015) (“Assuming an amendment is appropriately responsive to the grounds of unpatentability involved in the trial, the patentee must still go on to show that it is entitled to its substitute claim.”)

AAD’s Motion to Amend proposes to substitute new claim 49 for claim 1, contingent on claim 1 being held unpatentable. Mot. Amend 2. As we have held claim 1 to be unpatentable, we consider the Motion to Amend.

Proposed claim 49 differs from claim 1 in two respects: (1) the proposed claim recites that the music library is organizable “after being stored”; and (2) after the sound tracks are stored and organized, the order of the sound tracks is customizable. *Id.* To provide written description support for these changes, AAD cites to the disclosure of US Patent Application No. 09/641,069 (Ex. 2006), filed August 17, 2000, which issued as the ’403 patent. *Id.* at 2–5. Therefore, even if we were to grant the Motion to



Amend, the proposed substitute claims would only be entitled to a priority date of August 17, 2000. *See* 37 C.F.R. § 42.121(b) (“A motion to amend claims must . . . set forth: . . . (2) The support in an earlier-filed disclosure for each claim for which benefit of the filing date of the earlier filed disclosure is sought.”)

A motion to amend is also required to set forth a construction for any new terms introduced via amendment. *See Idle Free*, slip op. at 7. In particular, AAD introduces the term *customizable* to the claims. AAD does not proffer a construction of “customizable,” instead stating that the amendment “simply codifies the Board’s claim construction of the term ‘organizable.’” Mot. Amend 6. If, by this “codification,” AAD intended *customizable* to be synonymous with *organizable*, it is unclear how this is so. As discussed above, the broadest reasonable interpretation of *organizable* is “capable of being put into a particular arrangement, by ordering or grouping.” Proposed claim 49 includes the phrase “the order of the sound tracks is customizable.” From this usage, *customizable* appears to be used to refer to ordering, which is encompassed by, but not coextensive with, *organizable*. This construction, however, introduces confusion into the claim, as it is not clear what is meant by “after the sound tracks are stored and organized, the order of the sound tracks in said group of sound tracks is customizable” if *customizable* is synonymous with, or encompassed by, *organizable*.

AAD’s failure to set forth a clear claim construction for *customizable* could, on its own, be fatal to the Motion to Amend. Nevertheless, we will

construe *customizable* as referring to ordering, and the amendment as referring to the ability to reorder sound tracks in a group (*customize*) after a first grouping or ordering operation (*organize*). Even adopting this construction, however, we would not grant the Motion to Amend, as AAD has not demonstrated patentability of claim 49 or any of the proposed dependent claims.

In a motion to amend, a patent owner has the burden “to show patentable distinction over the prior art of record and also prior art known to the patent owner.” *Idle Free*, slip op. at 7. We have held that “prior art of record” refers to material art in the prosecution history of the patent, material art of record in the current proceeding before the Board, and material art of record in any other proceeding before the Office involving the patent. *See MasterImage 3D, Inc. v. RealD Inc.*, Case IPR2015-00040, slip op. at 2 (PTAB July 15, 2015) (Paper 42, “*MasterImage 3D*”). To that end, in its Motion, AAD discusses two references, Alexander and Timis, which were allegedly the “most pertinent references” cited during prosecution of the ’403 patent. Mot. Amend 8. AAD also discusses the Nathan references, which are of record in the current proceeding. *Id.* at 8–10.

AAD does not discuss, however, the patentability of claim 49 or the dependent claims over the Sound Blaster, Lucente, and Ozawa references of record in the current proceeding, other than to challenge the combinability of the references. *Id.* at 10. As discussed above, we are not persuaded by AAD’s arguments on this point, and conclude that a person of ordinary skill in the art would have combined the disclosures of the references.

Furthermore, as HTC correctly notes in its Opposition, the Sound Blaster reference discloses that a user may rearrange the songs in a playlist, after they are stored locally and grouped into the playlist. Amend Opp. 10 (citing Ex. 1004, 2–25; Ex. 1023 ¶¶ 12–14). By failing to address sufficiently this disclosure in its Motion, AAD has failed to demonstrate patentability of claim 49, or any of the proposed dependent claims, over the prior art of record.

Additionally, AAD’s Motion lacks sufficient discussion of the prior art known to AAD, beyond that already of record. The Board has stated that this requires “no more than the material prior art that Patent Owner makes of record in the current proceeding pursuant to its duty of candor and good faith to the Office under 37 C.F.R. § 42.11.” *MasterImage 3D*, slip op. at 3. In considering this duty of candor and good faith, patent owners should emphasize the limitations added to the proposed claim. *Id.* AAD’s Motion fails to make any such prior art of record, even though it acknowledges that other patents in the same family as the ’403 patent “had hundreds of items of prior art cited against it.” Mot. Amend 9. AAD merely makes the statement that “[a]s far as Patent Owner knows, none of the features now being claimed were previously known or disclosed in any of the prior art of record, or in any other prior art known to Patent Owner.” *Id.* at 9–10.

AAD argues that “[t]here are almost 200 references made of record in the AAD patent family. AAD cannot be expected to discuss them all in its Motion.” Amend Reply 4. Even if the large number of prior art references cited in related applications may excuse AAD’s failure to discuss one or two

material references, however, it does not excuse AAD from, at the very least, making a good faith attempt to determine whether any prior art known to it discloses the additional limitations introduced in the proposed amended claim. As discussed above, the earliest priority date supported by the Motion to Amend is August 17, 2000. AAD makes no effort, however, to discuss the state of the art as of that date, or provide any prior art references beyond those already of record that might be material to the added limitations. A generalized statement that “none of the features now being claimed were previously known or disclosed in any of the prior art of record, or in any other prior art known to Patent Owner” (Mot. Amend 9–10) is not sufficient, on this record, to carry AAD’s burden. *See Idle Free*, slip op. at 7 (“Some representation should be made about the specific technical disclosure of the closest prior art known to the patent owner, and not just a conclusory remark that no prior art known to the patent owner renders obvious the proposed substitute claims.”).

In addition, HTC cites several references from the prosecution of a related AAD patent, including the Logan,<sup>11</sup> Looney,<sup>12</sup> and Yankowski<sup>13</sup> patents, and argues that they disclose the added limitations of proposed claim 49. Amend Opp. 14–15. In reply, AAD asserts only that “[n]one of [Logan, Looney, or Yankowski] discloses or suggests what is now being

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<sup>11</sup> Ex. 1018, US 6,199,076 B1 to Logan et al. (filed Oct. 2, 1996).

<sup>12</sup> Ex. 1020, US 5,969,283 to Looney et al. (filed June 17, 1998).

<sup>13</sup> Ex. 1019, US 5,751,672 to Yankowski (May 12, 1998).

claimed, *as a whole*, in substitute claim 1.” Amend Reply 5 (emphasis added). At best, this assertion only addresses the purported *novelty* of the claim over each of the cited references; AAD never addresses the obviousness of the claimed subject matter, in particular the limitations added via amendment. Therefore, even if we were to excuse AAD’s failure to discuss references such as Logan, Looney, and Yankowski in its Motion to Amend, AAD has not demonstrated that the proposed claims are not obvious over the art.

We, therefore, conclude that AAD has not met its burden of demonstrating that it is entitled to the relief requested in its Motion to Amend. In particular, the Motion fails to set forth a clear claim construction for *customizable*; fails to address the patentability of the claims over the prior art of record; and fails to address the patentability of the claims over the material prior art known to AAD. The Motion to Amend is *denied*.

### III. CONCLUSION

We conclude that HTC has demonstrated, by a preponderance of the evidence, that claims 1, 3, 6, 7, 11, 12, 16, 22, 24, 27, 29, 30, 35–37, 43, and 45–47 of the ’403 patent are unpatentable under 35 U.S.C. § 103, as having been obvious over the following combinations of prior art references:

Claims 1, 6, 7, 22, 27, 29, 30, 35, 43, and 45–47: Nathan ’259 and Nathan ’255; and

Claims 1, 3, 6, 7, 11, 12, 16, 22, 24, 30, 35–37, 43, and 45–47: Sound Blaster, Lucente, and Ozawa.

In addition, we conclude that AAD has not demonstrated, by a preponderance of the evidence, that proposed substitute claims 49–65 are

patentable over the prior art, and that it is entitled to entry of the proposed substitute claims. We, therefore, *deny* AAD's Motion to Amend.

#### IV. ORDER

Accordingly, it is

ORDERED that claims 1, 3, 6, 7, 11, 12, 16, 22, 24, 27, 29, 30, 35–37, 43, and 45–47 of U.S. Patent No. 6,587,403 B2 are *unpatentable*;

FURTHER ORDERED that Patent Owner's Motion to Exclude is *denied*;

FURTHER ORDERED that Patent Owner's Motion to Amend is *denied* as to proposed substitute claims 49–65;

FURTHER ORDERED that, pursuant to 35 U.S.C. § 318(b), upon expiration of the time for appeal of this decision, or the termination of any such appeal, a certificate shall issue canceling claims 1, 3, 6, 7, 11, 12, 16, 22, 24, 27, 29, 30, 35–37, 43, and 45–47 in U.S. Patent No. 6,587,403 B2; and

FURTHER ORDERED that, because 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.

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