from the prior art. A claim that includes a negative limitation satisfies the written description requirement of 35 U.S.C. § 112, ¶ 1 if, for example, the specification describes a reason to exclude the relevant subject matter from the invention. *See Santarus, Inc. v. Par Pharm., Inc.*, 694 F.3d 1344, 1351 (Fed. Cir. 2012). The '873 patent specification fails to mention the negative limitation, much less describe any disadvantages associated with "user input" at the second device. *See* RX-0460C (Almeroth DWS) Q/A 315. Moreover, the evidence shows that one of ordinary skill would not understand the benefits of excluding user input on the second device when reading the specification and the embodiments discussed therein. *See* Almeroth Tr. 665-666. Accordingly, one of ordinary skill would conclude that the applicant was not in possession of the "without user input" negative limitation when the original application was filed. *See* RX-0460C (Almeroth DWS) Q/A 315. All of the asserted claims are therefore invalid under 35 U.S.C. § 112, ¶ 1.

Although the *Santarus* opinion was published only recently, the Patent Trial and Appeal Board has applied the *Santarus* rule and 35 U.S.C. § 112, ¶ 1 to reject numerous claims with negative limitations.

For example, in *Ex parte Miyashita,* the claim at issue recited an Internet-based chat system comprising a server and multiple clients. *Ex parte Miyashita*, Appeal 2010-010626, 2013 WL 1401042, at *1 (Patent Tr. & App. Bd. Mar. 29, 2013). The limitation at issue in *Miyashita*, requiring that the server receives information and forwards the information to a client "without solicitation from the [client]," is similar to the "without user input" limitation at issue here. *Id.* The applicant in *Miyashita* cited to a flow chart showing communications between the server and clients, and argued that there is written description support for the negative limitation because the flow chart does not show solicitation by any client. *See id.* at *3. In affirming the rejection,

the Board applied the *Santarus* rule and held that "Appellant's Specification neither explicitly describes the negative limitation of excluding a solicitation . . . nor indicates possession of this feature by describing any advantage of excluding a solicitation or disadvantage of including a solicitation." *Id.* at *3. With regard to the flow chart, the Board determined that "silence in the Specification is not enough to show possession of the claimed exclusion of a solicitation." *Id.*

In *Ex parte Lazaridis*, the claim at issue recited a method for launching software applications, wherein the launch occurs "without the user having entered a delimiter denoting an end of the text string." *Ex parte Lazaridis*, Appeal 2010-005137, 2013 WL 1331529, at *2-4 (Patent Tr. & App. Bd. Mar. 12, 2013). Therefore, the limitation in *Lazardis* concerned performing an action without a user input. The specification did not explain the negative limitation, but provided an example where entering the text "e_j" would cause the application to send mail. *Id.* at *3. The Board affirmed the rejection, holding that because the exemplary embodiment "requiring only two key strokes to invoke the email composer application" does not explain any disadvantages to command-ending delimiters, the claim "effectively introduces a new concept that is not reasonably supported by the original disclosure." *Id.*

Additional opinions from the Patent Trial and Appeal Board are consistent with *Santarus*. *See Ex parte Jung*, Appeal 2011-007279, 2013 WL 6698804, at *3-4 (Patent Tr. & App. Bd. Dec. 18, 2013); *Ex Parte Ho*, Appeal 2011-004664, 2013 WL 5667032, at *2 (Patent Tr. & App. Bd. Oct. 15, 2013); *Ex Parte Hullot*, Appeal 2011-002453, 2013 WL 5406700, at *2-3 (Patent Tr. & App. Bd. Sept. 17, 2013); *Ex parte Loretz*, Appeal 2010-009480, 2013 WL 1332674, at *3-4 (Patent Tr. & App. Bd. Feb. 27, 2013); *Ex parte Bright*, Appeal 2013-003725, 2013 WL 663563, at *2-3 (Patent Tr. & App. Bd. Feb. 21, 2013); *Ex parte Chu*, Appeal 2011-011442, 2013 WL 574284, at *2-3 (Patent Tr. & App. Bd. Feb. 5, 2013); *Ex parte Pyka*, Appeal 2010-

005667, 2012 WL 6772010, at *2-3 (Patent Tr. & App. Bd. Dec. 31, 2012); *Ex parte Kimura*, Appeal 2010-010869, 2012 WL 6114315, at *3-4 (Patent Tr. & App. Bd. Nov. 27, 2012).

Recent opinions from the Federal Circuit and from the Northern District of California have also applied Section 112 to reject claims that include negative limitations when the specification lacks written description support. *See In re Bimeda Research & Development Ltd.*, 724 F.3d 1320, 1323-24 (Fed. Cir. 2013) (finding that the negative limitation "is not supported in the disclosure as originally filed"); *Tse v. Google, Inc.*, Nos. C 13-0194, 13-1204, WL 6502478, at *3-6 (N.D. Cal. Dec. 11, 2013) (finding that there is nothing in the original disclosure that conveys to a skilled artisan that the applicant was in possession of the "no-charge" negative limitation).

As the law of written description is applied in *Santarus* and its progeny, where a claim expressly contains a negative limitation, the specification must show that the applicant possessed such an invention when the application was filed. In the case of the '873 patent, the applicant added the "without user input" limitations during prosecution to distinguish the claims from the prior art, but there is no indication in the specification that the inventor was in possession of an invention that excluded "user input via the second device" at the time the application was filed. Accordingly, it is determined that each asserted claim of the '873 patent is invalid under 35 U.S.C. § 112, ¶ 1.

3. Indefiniteness

Respondents allege that the device claims, 23, 30, 34, 37, and 45, of the '873 patent are invalid under §112, ¶ 2 as indefinite. In particular, Respondents allege that the "without user input" limitation renders the claims indefinite. *See, e.g.*, RX-0460C.066., RX-0788C (Almeroth WS and errata) Q/A 317. It is alleged that "one of ordinary skill in the art cannot determine

whether an accused 'device for selecting a media item' infringes without also looking at the selected 'second device' . . . to determine whether any 'user input via the second device' is required." *See id.* However, a claim is not indefinite unless the claims do not, when "viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus, Inc. v. Biosig Instruments, Inc.*, __ U.S. __, No. 13-369, at 11 (June 2, 2014).

Here, the evidence shows that a person of ordinary skill in the art would consider the claim language amenable to construction following a review of the claim language itself in view of the specification and prosecution history. The '873 device claims are directed to a first device (*e.g.*, a mobile device) configured to facilitate directing a second device to receive media without user input at the second device. Inasmuch as Dr. Loy understood the claims to the extent he was able to formulate infringement opinions with respect to the accused products demonstrates that a person of ordinary skill in the art would be informed about the scope of the invention with reasonable certainty.

Therefore, Respondents have not shown by clear and convincing evidence that the asserted '873 claims are invalid for indefiniteness.

4. Validity Analysis in View of the Prior Art

Although it was determined above that the asserted claims of the '873 patent are invalid for lack of a written description under 35 U.S.C. § 112, ¶ 1, the record evidence regarding anticipation and obviousness of these claims is summarized below for completeness. As discussed below, based on the parties' arguments and the record evidence, there would be no impediment to finding the asserted claims invalid for anticipation and/or obviousness if the

patent disclosure adequately conveyed to a person having ordinary skill in the art that the inventor had possession of the claimed subject matter as of the filing date.

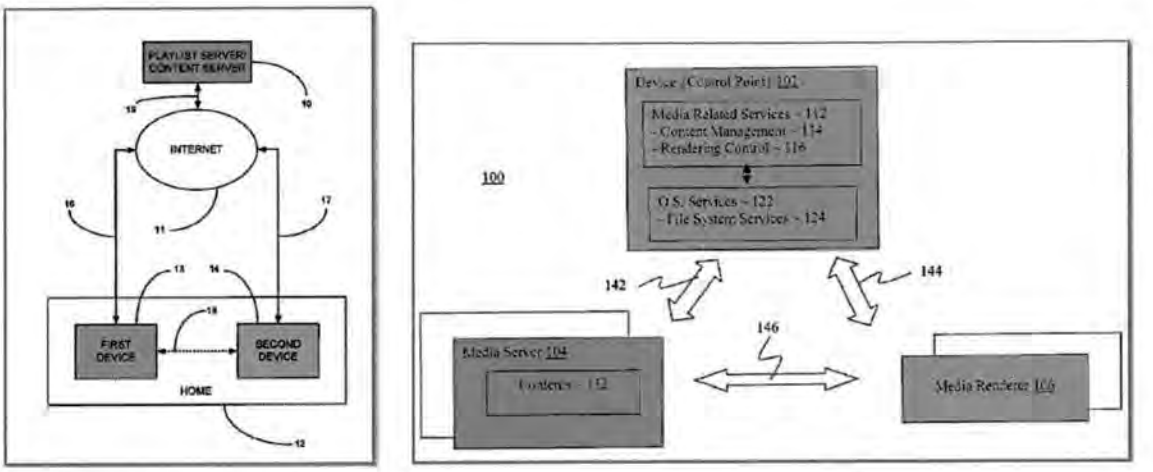
a. Priority Date

The '873 patent is a continuation of Application No. 10/840,109, which was filed on May 5, 2004, and ultimately issued as the '323 patent. *See* JX-0003 ('873 patent). The priority date for the '873 patent is therefore May 5, 2004. *See id.*

b. Weast – Anticipation of Claims 1, 5, 8, 17, 22, 23, 30, 34, and 37

U.S. Patent No. 7,454,511 ("Weast"), titled "Visibility of UPnP Media Renderers and Initiating Rendering via File System User Interface," was filed on May 29, 2003. *See* RX-0075 (Weast). Weast qualifies as prior art to the '873 patent under § 102(e).

Weast describes an implementation of the UPnP AV Architecture. Weast discloses "a user friendly technique to employ UPnP media renderers to render media content available from UPnP media servers." *Id.* at col. 1, lns. 8-10. The UPnP A/V Media Server provides media contents, the UPnP A/V Media Renderers play the provided media contents, and the control point controls the cooperation between the complying media servers and the complying media renderers. *Id.* at col. 1, lns. 40-46. The control point may be "a desktop computer, a laptop computer, a tablet computer, a palm-sized computing device, a PDA, a set-top box, an entertainment center controller, a wireless mobile phone, and so forth." *Id.* at col. 5, lns. 10-15. The 3-box architecture disclosed in the '873 patent (below, left) is identical to the architecture disclosed in Weast (below, right):



RDX-0004.005 (JX-0003 ('873 patent) FIG. 1); RDX-0005.003 (RX-0075 (Weast) at Fig. 1).

The communication protocols employed by the control point to interact with and control UPnP media servers and UPnP renderers are depicted in various figures in the Weast patent. As shown in Figure 3a, the control point requests an identification of media content and the corresponding metadata from a UPnP media server, and the UPnP media server provides the requested identification of media content and metadata to the control point:

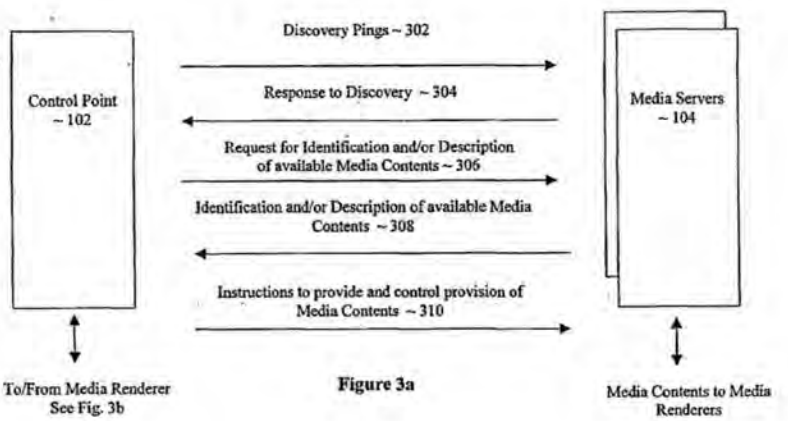


Figure 3a

Id. at Fig. 3a elements 306, 308; *see also id.* at col. 5, lns. 29-39. The control point receives information relating to the available media content and displays it to the user via a user interface on the control point. *See id.* at col. 5, lns. 40-44; Fig. 4a. As shown in Figure 3b, a control point

discovers the presence of UPnP media renderers in a network domain by issuing discovery pings, and the media renderers respond to the control point with description information:

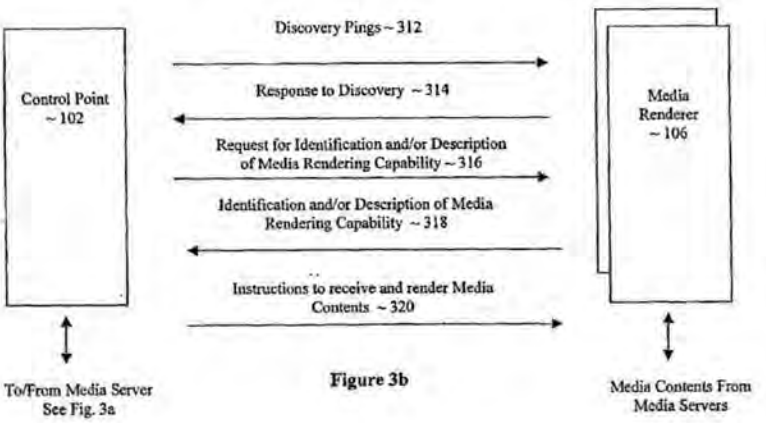


Figure 3b

Id. at Fig. 3b elements 312, 314; *see also id.* at col. 5, ln. 59 – col. 6, ln. 6; Fig. 5b. The control point displays this information to a user via the control point user interface. *See id.* at col. 6, lns. 7-11.

According to Weast, a user may use the control point to select the media content and the media renderer on which the content is to be played, and the control point instructs the applicable renderer to receive and render the selected media content from the media server. *See id.* at Fig. 6b; Fig. 5b; col. 6, ln. 19-23; Fig. 3b element 320. Thereafter, the control point operates as a remote control for the rendering device by, for example, pausing or stopping playback and adjusting the volume. *See id.* at col. 8, lns. 53-64.

Through his direct witness statement, Dr. Almeroth testified that Weast anticipates asserted claims 1, 5, 8, 17, 22, 23, 30, 34, and 37 under any of the proposed claim constructions. *See* RX-0460C (Almeroth DWS) Q/A 150-210. BHM's expert, Dr. Loy, did not dispute that Weast discloses the vast majority of the limitations recited in these claims. *See* CX-1401C (Loy RWS) Q/A 107-19. Dr. Loy disputes that Weast discloses the following limitations:

- "receiving, on the first device, a playlist" and "selecting at least one media item identifier from the received playlist" (claim 1, and similar "playlist" limitations in other asserted claims); and
- "directing the at least one second device to send information representative of the at least one media item name to a content server" (claim 23).

See id. The disputed limitations are discussed below.

BHM does not dispute that Weast discloses a "playlist" under the adopted construction or the construction by Staff. BHM contends that Weast does not disclose a "playlist" under BHM's proposed construction, which defines the term as "a list referencing media items arranged to be played in a sequence."

Weast discloses that a control point requests an identification of media items available from the media server, along with corresponding metadata describing the available media items. *See* RX-0075 (Weast) at col. 5, lns. 29-35; Fig. 3a. The control point then receives the identification of media and corresponding metadata from the media server, which may include information such as the title, size, version, date of creation, media type, and artist of the media, and displays the information to the user via a user interface on the device. *See id.* at col. 5, lns. 36-47; Almeroth Tr. 662. Figure 4a in Weast (at right) is an example of the music playlist received by the control point, which consists of multiple songs.

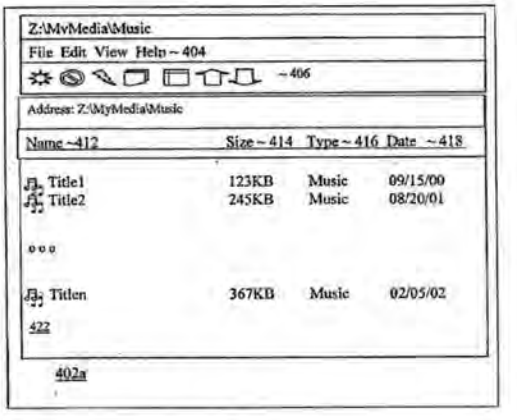


Figure 4a

Applying the methodology that Dr. Loy applies for purposes of infringement, Weast discloses a "playlist" under BHM's proposed construction. Specifically, the list of songs disclosed in Weast

is received by the control point from the media server and is arranged to be played in a sequence determined, for example, by song title. *See* RX-0075 (Weast) at col. 8, lns. 34-64; Fig. 7; RX-0460C (Almeroth DWS) Q/A 165-67, 175.

BHM's expert testified that Weast fails to disclose a "playlist" under BHM's proposed construction because the content displayed at the control point resembles a "Windows-type interface that merely lists the files available," the "files could be sorted, for example, by the date column, or the size column," and such a list does not "enable, or intend, playback in sequence." CX-1401C (Loy RWS) Q/A 107. Dr. Loy's opinion conflicts with his opinions on infringement, in which he pointed to music files stored in a Windows Explorer folder as evidence that Respondents' accused mobile devices satisfy the "receiving a playlist" limitation under BHM's proposed construction. *See* RX-0671C (Lipoff RWS) Q/A 193-203; CPX-0141C (Test Video 502); Loy Tr. 406-423. Moreover, the list of songs received by the control point in Weast is "capable of" being played in the sequence in which they are listed, which satisfies one of Dr. Loy's interpretations of BHM's construction. *See* Loy Tr. 417; *see also* RX-0460C (Almeroth DWS) Q/A 175. To the extent Dr. Loy testified that loading the songs into a media player is an additional requirement of BHM's construction, Weast also discloses this feature. *See* Loy Tr. 417, 500; CDX-0132.061. Figure 7 discloses an embodiment wherein the user may drag and drop songs into a "Music Player" folder for a rendering device, which causes the songs to be "queued" in a specific order for the renderer to play. *See* RX-0075 (Weast) at col. 8, lns. 34-64; Fig. 7; Loy Tr. 1732-1734.

Weast states that the media renderer "pulls" the content item from the media server in response to an instruction received from the control point. *See* RX-0075 (Weast) at col. 5, lns. 50-57; col. 6, lns. 19-23; Fig. 3b element 320. Therefore, one of ordinary skill would understand

that the media renderer sends information representative of the selected media item to the media server so that the server can retrieve the item from its memory and transfer the content to the renderer. *See* RX-0460C (Almeroth DWS) Q/A 194. BHM's expert Mr. Zatkovich testified that one of ordinary skill would understand that in a "pull" operation, the renderer makes a request to the media server for the media item that it should receive, and that the request includes "an identifier" for the item. Zatkovich Tr. 1564-1566; *see also* RX-0142 (ContentDirectory:1) (UPnP_000215) (a request by a renderer for the content item includes a URI for the media item).

BHM's other expert Dr. Loy testified differently. Dr. Loy stated, "Weast makes no mention as to which device sends the media item identifier to the media server," and testified that the control point might do so instead. *See* CX-1401C (Loy RWS) Q/A 114. However, this hypothetical scenario describes a "push" protocol, wherein the media server receives a description of the selected item from a control point, retrieves the item, and transfers the content to the renderer. *See* RX-0460C (Almeroth DWS) Q/A 119; Zatkovich Tr. 1564-1565. As noted, Weast expressly discloses the use of a "pull" protocol, wherein the renderer receives a description of the selected item from a control point and makes a request to the media server for the content by passing the description of the selected content to the server. *See* RX-0460C (Almeroth DWS) Q/A 194; Zatkovich Tr. 1564-1566.

As for the additional limitations recited in asserted claims 1, 5, 8, 17, 22, 23, 30, 34, and 37 of the '873 patent, Dr. Almeroth provided an element-by-element invalidity analysis for each of these asserted claims. *See* RX-0460C (Almeroth DWS) Q/A 157-175 (claim 1), 176 (claim 5), 177-178 (claim 8), 182-183 (claim 17), 185 (claim 22), 186-195 (claim 23), 205-206 (claim 30), 207 (claim 34), 208 (claim 37).

c. UPnP AV 1.0 – Anticipation of Claims 1, 8, 16, 17, 19, 22, 23, 30, 37, and 45

The UPnP AV Architecture specification ("UPnP AV 1.0"), dated June 25, 2002, "defines the general interaction between UPnP Control Points and UPnP AV devices" in scenarios involving the flow of content from one device to another device over a network. RX-0140 (UPnP AV 1.0) (UPnP_000051-052). "[T]hree distinct entities are involved: the Control Point, the source of the media content (called the 'Media Server'), and the sink for the content (called the 'Media Renderer')." *Id.* (UPnP_000053). The Control Point "coordinates and manages the operation of the Media Server and Media Renderer as directed by the user (*e.g.*, play stop, pause) in order to accomplish the desired task (*e.g.*, play "MyFavorite" music)." *Id.* (UPnP_000054). UPnP AV 1.0 explains that the Control Point device may be a "wireless PDA-like device with a small display," while the Media Renderer may be a "TV, stereo, network-enabled speakers, MP3 players," etc. *Id.* (UPnP_000053, UPnP_000054). UPnP AV 1.0 depicts a 3-box architecture in Figure 3 (illustrated below). *Id.* (UPnP_000053).

According to UPnP AV 1.0, "the Media Server contains (entertainment) content that the user wants to render (*e.g.*, display or listen to) on the Media Renderer." *Id.* Using the Control Point, a user may "enumerate (i.e., browse or search for) content items that are available for the user to render." *Id.* (UPnP_000054-055). For example, using the "Browse" action, a Control Point obtains identification of and metadata about the various content items that are available on the Media Server, including properties such as name or artist, and this playlist is then displayed on

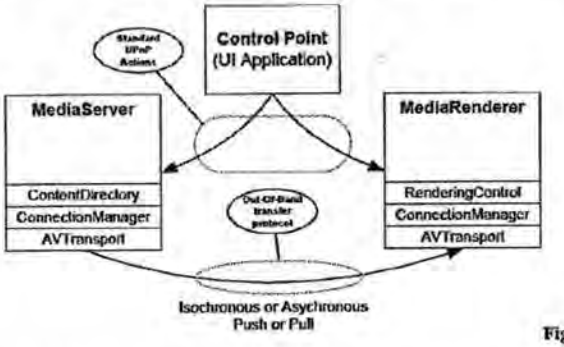


Figure 3

the user interface ("UI") of the Control Point. *See id.* "The user interacts with the Control Point's UI to locate and select the desired content on the Media Server and to select the target Media Renderer." *Id.* (UPnP_000053).

After a content item has been selected, the Control Point "initiates the transfer of the content" from the Media Server to the Media Renderer, which causes the Media Server to transfer the content directly to the Media Renderer using any compatible transfer protocol and data format. *See id.* (UPnP_000054, UPnP_000052, UPnP_000063). As shown above in Figure 3, examples of such transfer protocols include a "push" by a Media Server or a "pull" by a Media Renderer. *Id.* (Fig. 3). When a "pull" protocol is used, the Control Point provides the Media Renderer with a string of characters, also known as a URI, that identifies the selected media item and the address of the device on the network from which the media item can be obtained. *Id.* (UPnP_000057) ("invoke the SetAVTransportURI() action to identify the content item that needs to be transferred"); Loy Tr. 448-449, 450. The Media Renderer uses the URI that it received from the Control Point to request the item from the Media Server (*e.g.*, using an HTTP-GET request), and the content item is streamed or otherwise transferred from the Media Server to the Media Renderer to be played. *See id.* (UPnP_000053, UPnP_000063).

The Control Point may then operate as a remote control for the Media Renderer. For example, UPnP AV 1.0 states that a user may use the Control Point "to control how content is rendered (*e.g.*, Brightness, Contrast, Volume, Mute, etc.)." *Id.* (UPnP_000055).

Through his direct witness statement, Dr. Almeroth has provided evidence that UPnP AV 1.0 anticipates asserted claims 1, 8, 16, 17, 19, 22, 23, 30, 37 and 45.[50] *See* RX-0460C (DWS

[50] It is argued that UPnP AV 1.0 renders these claims obvious if the ALJ adopts Respondents and Intervenor's proposed construction of "device identifier," but that under all other proposed

Almeroth) Q/A 85-144. BHM's expert, Dr. Loy, did not dispute that UPnP AV 1.0 discloses the majority of the limitations recited in these claims. *See* CX-1401C (Loy RWS) Q/A 67-82. Dr. Loy disputes that UPnP AV 1.0 discloses the following limitations:

- "displaying, on a first device, at least one device identifier identifying a second device" and "receiving user first input selecting the at least one device identifier" (claim 1, and similar "device identifier" limitations in other asserted claims);
- "receiving, on the first device, a playlist" and "selecting at least one media item identifier from the received playlist" (claim 1, and similar "playlist" limitations in other asserted claims);
- "requesting, by the second device, the song identified by the song identifier from a content server" (claim 19); and
- "directing the at least one second device to send information representative of the at least one media item name to a content server" (claim 23).

See id. The disputed limitations are discussed below.

UPnP AV 1.0 states that "[t]he user *interacts with the Control Point's UI* to locate and select the desired content on the Media Server and *to select the target Media Renderer*." RX-0140 (UPnP AV 1.0) (UPnP_000053) (emphases added). The ability to select a Media Renderer using the UI of the Control Point, which may take the form of a "wireless PDA-like device with a small display," discloses to one of ordinary skill the display and selection of a device identifier on the Control Point. *Id.*; *see* RX-0460C (Almeroth DWS) Q/A 92, 106.

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constructions for the agreed-upon and disputed terms, these claims are anticipated by UPnP AV 1.0. *See* RX-0460C (Almeroth DWS) Q/A 95.

Faced with this disclosure, BHM's expert testified regarding a scenario in which a user might select a target Media Renderer using the Control Point's UI in a manner that would not involve the display of a device identifier on the Control Point. *See* CX-01401C (Loy RWS) Q/A 70. Specifically, Dr. Loy discussed a hypothetical Control Point with a UI that includes buttons that are each dedicated to a renderer (*e.g.*, a button with "TV" printed on it, and a button with "Stereo" printed on it), and wherein the selection of the Media Renderer takes place via the press of a button. *See id.*; CDX-0132.0023 (Loy Demonstrative) (illustrated at right). UPnP AV 1.0 does not envision or discuss such a Control Point device, and Dr. Loy does not point to real-world examples in which such a UI has been implemented on a Control Point. Nevertheless, Dr. Loy's hypothetical scenario would satisfy the claim limitation. In the case of a Control Point that includes buttons that each identify a different renderer device, the buttons would literally display, on a first device, at least one device identifier identifying a second device and also may receive user input selecting the device identifier.

BHM does not dispute that UPnP AV 1.0 discloses a "playlist" under the adopted construction and that proposed by the Staff. BHM argues only that UPnP AV 1.0 does not disclose a "playlist" under BHM's construction, which defines the term as "a list referencing media items arranged to be played in a sequence."

UPnP AV 1.0 states that "[t]he user **interacts with the Control Point's UI to locate and select the desired content** on the Media Server." RX-0140 (UPnP AV 1.0) (UPnP_000053) (emphasis added). The "Content Directory Service" permits the Control Point to identify, retrieve and display content items that are available on the Media Server for the user to play

using a "Browse" or "Search" action. *See id.* (UPnP_000054-055). The Media Server may store a variety of entertainment content, including music for playback on network-enabled speakers. *See id.* (UPnP_000053-054). Elsewhere, UPnP AV 1.0 discloses that the Control Point may receive playlists of content that are customized to the user's preferences, such as "MyFavorite" music. RX-0140 (UPnP AV 1.0) (UPnP_000054).

Using the methodology that Dr. Loy employed in his infringement analysis, UPnP AV 1.0 discloses a "playlist" under BHM's proposed construction. *See* RX-0460C (Almeroth DWS) Q/A 98, 106; Almeroth Tr. 660-661. In particular, Dr. Loy identified the same UPnP-based Content Directory "Browse" action, which retrieves an identification of and metadata about the available content items stored on the server, as evidence of infringement. *See* CX-1068C (Loy DWS) Q/A 260 (identifying the "plurality of media item identifiers representing songs available on the BHM-02 computer"), 272 ("mobile device makes a ContentDirectory request to the content server"). Accordingly, to the extent Dr. Loy opined that the "Browse" action and receipt of music content is evidence of infringement, that same operation is disclosed in UPnP AV 1.0.

After a content item is selected at the Control Point, UPnP AV 1.0 discloses that the Control Point "initiates" the transfer of content from the Media Server to the Media Renderer. RX-0140 (UPnP_000054). The content may be transferred using a "pull" protocol, such as HTTP-GET. *See id.* (UPnP_000063-065, Fig. 3). In this circumstance, the Control Point invokes the "SetAVTransportURI() action," which causes the Control Point to send the Media Renderer a "URI" (*i.e.*, a string of characters that identifies the selected content as well as the address of the device on the network from which that content can be obtained). *See id.* (UPnP_000057, UPnP_000063). UPnP AV 1.0 discloses that the Media Renderer uses the URI

received from the Control Point to make a request to the Media Server for the selected content item. *See id.*; *see also* RX-0460C (Almeroth DWS) Q/A 100, 119, 130.

Dr. Loy identified the same "SetAVTransportURI" action to establish that the accused DLNA-compliant video display devices request a media item from a content server. *See* CX-1068C (Loy DWS) Q/A 162, 205, 292; Loy Tr. 448-449, 450. Yet, with respect to a validity analysis, Dr. Loy disputes that the same operation in UPnP AV 1.0 performs the same function.

As for the additional limitations recited in asserted claims 1, 8, 16, 17, 19, 22, 23, 30, 37, and 45 of the '873 patent, Dr. Almeroth provided an element-by-element invalidity analysis for each of these asserted claims. *See* RX-0460C (Almeroth DWS) Q/A 92-106 (claim 1), 109-110 (claim 8), 111-113 (claim 16), 114-117 (claim 17), 118-121 (claim 19), 122 (claim 22), 123-130 (claim 23), 139-140 (claim 30), 142 (claim 37), 143 (claim 45).

d. UPnP Version 1.0 – Anticipation of Claims 1, 8, 16, 17, 19, 22, 23, 30, 37, and 45

The UPnP AV 1.0 reference, discussed above, is part of an inter-related collection of documents that Respondents argue are meant to be read together and comprise Version 1.0 of the UPnP AV Standard. *See* Resps. Br. at 85. This set of documents, *i.e.*, UPnP AV 1.0, MediaRenderer:1, ContentDirectory:1, and AVTransport:1 (hereinafter, "UPnP Version 1.0"), provides additional details regarding the functionalities of the UPnP Control Point, Media Server, and Media Renderer. For example, the ContentDirectory:1 Service Template defines the Content Directory Service, which allows UPnP devices to locate content stored on a Media Server, including songs, movies, and pictures. *See* RX-0142 (ContentDirectory:1) (UPnP_000167). The AVTransport:1 Service Template defines a service for enabling "control over the transport of audio and video streams," which may be used to control media devices such

as CD players, VCRs and MP3 players. RX-0146 (AVTransport:1) (UPnP_000075). The UPnP MediaRenderer:1 Device Template defines, among other things, identification information that a Media Renderer provides to the Control Point during the UPnP *Discovery* phase. *See* RX-0143 (MediaRenderer:1) (UPnP_000260).

It is argued that the UPnP Version 1.0 documents should be treated as a single anticipatory prior art reference because they all were developed by the same UPnP AV working committee, relate to the same version of the UPnP AV Standard, were made publicly available by the UPnP Forum on the same day via the same web site, and share overlapping individual authors. Resps. Br. at 86 (citing JX-0081 (Murray Dep.) at 23-27, 27-28). The UPnP AV 1.0 document references the additional "UPnP AV Device and Service templates" in the Introduction, and discusses the Content Directory Service, the AV Transport Service, and the Media Renderer Device Template in Section 5. *See* RX-0140 (UPnP AV 1.0); *see also* RX-0075 (Weast) at col. 1, lns. 36-46; col. 2, lns. 44-56 (describing the UPnP AV Architecture Version 1.0 specifications). The evidence demonstrates that persons of ordinary skill in the art, including engineers at Samsung, that make products that can operate as control points and renderers and that may be used with each other or with other manufacturer's products, would look to the entirety of the disclosure to ensure that their products are complaint with the standards. *See* RX-0676C (Cho RWS) Q/A 23-27. UPnP AV 1.0 describes the overall architecture for the standard and cross-references the accompanying Device and Service Templates, while the ContentDirectory:1 Service Template, AVTransport:1 Service Template, and MediaRenderer:1

Device Template each provide additional details regarding the features and protocols of the UPnP AV 1.0 specification.[51]

Through his direct witness statement, Dr. Almeroth has provided evidence that UPnP Version 1.0 anticipates asserted claims 1, 8, 16, 17, 19, 22, 23, 30, 37, and 45 under any of the proposed claim constructions. *See* RX-0460C (Almeroth DWS) Q/A 145-149. According to Dr. Almeroth, in addition to the disclosures provided by UPnP AV 1.0, the additional UPnP Version 1.0 documents provide the following additional disclosures relating to the asserted claims.

The MediaRenderer:1 Device Template provides details regarding the "device identifiers" described in UPnP AV 1.0. For example, it states that a media renderer may be identified by several different device characteristics, including friendly name, manufacturer name, model name or number, serial number, universally unique identifier, or Universal Product Code. *See* RX-0143 (MediaRenderer:1) (UPnP_000260). Dr. Almeroth therefore argues that UPnP Version 1.0 discloses a "device identifier" under any of the proposed constructions for that term, including the adopted construction, which requires a "device identifier" that uniquely identifies the second device. *See* RX-0460C (Almeroth DWS) Q/A 147.

The ContentDirectory:1 and AVTransport:1 documents provide support regarding the receipt of a "playlist" by a Control Point. For example, ContentDirectory:1 states that a Control Point may retrieve a playlist containing media items in a music album, and explains that an album is "typically a fixed published sequence of songs," such as an audio CD. RX-0142

[51] It is argued that, "[r]egardless of whether the UPnP Version 1.0 documents are treated as a single reference for purposes of anticipation, one of ordinary skill in the art would have been motivated to combine UPnP AV 1.0 with UPnP ContentDirectory, UPnP AVTransport, and/or UPnP MediaRenderer." Resps. Br. at 87 n.13. The evidence shows UPnP AV 1.0 explicitly references the other documents, the subject matter is interrelated, and one of ordinary skill would be motivated to consult the additional UPnP Version 1.0 specifications to obtain more detailed information about the pertinent protocols and services. *See id.*

(ContentDirectory:1) (UPnP_000246). It also states that the Control Point may retrieve a "playlistItem," which represents a "playable sequence of resources." *Id.* The AVTransport:1 Service Template, moreover, explains that the Control Point may retrieve content from the MediaServer in several formats, such as a single song, or a collection of contents, such as a "CD disc or playlist." RX-0146 (AVTransport:1) (UPnP_000108).

During the hearing, BHM argued that Respondents and Intervenor cannot prove that the UPnP Version 1.0 documents qualify as prior art to the '873 patent under 35 U.S.C. § 102. It is argued that "[t]his argument was not set forth in BHM's prehearing brief, as required by Ground Rule 7.c, and accordingly, the argument is waived." Resps. Br. at 88. Even if BHM did not waive this argument, Respondents adduced evidence, summarized below, showing that the UPnP Forum published the UPnP Version 1.0 documents on its public website (http://www.upnp.org) on June 26, 2002, and made them available to hundreds of members of the UPnP Forum before that date. *See* RX-0140 (UPnP AV 1.0); JX-0081 (Murray Dep.) at 23-27, 27-28, 49-50. It is therefore argued that the UPnP Version 1.0 documents qualify as prior art to the '873 patent under § 102(b). Resps. Br. at 89.

Upon application by the Samsung Respondents, the administrative law judge issued a Subpoena *Duces Tecum* and *Ad Testificandum* to the UPnP Forum. In response to the subpoena, the UPnP Forum produced from its official files "true and correct copies" of various UPnP specifications that bear a date of June 25, 2002, including those marked as RX-0140 (UPnP AV 1.0), RX-0142 (ContentDirectory:1), RX-0143 (MediaRenderer:1), and RX-0146 (AVTransport:1) (collectively, "UPnP Version 1.0"). JX-0081 (Murray Dep.) at 13-14. These documents are deemed authentic under Ground Rule 9.j. The UPnP Forum also designated its Executive Director, Aja Murray, to testify at deposition concerning topics set forth in the

subpoena, including the public availability of the UPnP Version 1.0 documents. Ms. Murray has worked for the UPnP Forum for approximately six years and is familiar with UPnP's general procedures, policies, and record-keeping practices. *See id.* at 9-11, 11-12. At the deposition, Ms. Murray testified that the UPnP Forum published the UPnP Version 1.0 documents (*i.e.*, the versions of these documents entered as exhibits in this investigation) on its public website on June 26, 2002:

> Exhibit 4, this is going to be a series of documents all of which relate to UPnP Version 1.0 and all of which are dated June 25th, 2002. The Bates range for these documents are UPnP_000049-UPnP_000338.
>
> ***
>
> [C]an you tell, based on your review of the documents when, if at all, the various documents that make up Exhibit 4 were made publicly available on the UPnP website?
>
> They were made publicly available on June 26th, 2002.

JX-0081 (Murray Dep.) at 23, 27-28, 49-50.

Contemporaneous documents support the proposition that UPnP Version 1.0 was not only in the public domain well before May 2004, but also that persons of ordinary skill had access to and understood the disclosures provided therein. For example, a July 2003 article titled "Overview of UPnP AV Architecture" discusses the UPnP Version 1.0 documents in detail and cites to UPnP's public website as the source for the information. *See* RX-0166 (Overview of UPnP AV Architecture) (882PRIOR00031073 n.[3]). The Weast patent, filed on May 29, 2003, defines certain terms used in the patent (*e.g.*, "control point," "media server," "media renderer") by referencing their use in the UPnP AV Architecture Specification Version 1.0 (RX-0140) and related specifications, which it states were "available at the time of filing the present application." *See* RX-0075 (Weast) at col. 2, lns. 50-56. Martin Weel, the named inventor of the

'873 patent, testified at his deposition that the UPnP standards, including the UPnP AV Architecture Specification Version 1.0 (RX-0140), were "publicly available" and that he reviewed them in or around 2002. *See* JX-0100C (Weel Dep.) at 58-59, 95, 175-176; CX-1401C (Loy RWS) Q/A 33 (affirming that Mr. Weel became aware of the UPnP standards when they were made public).

e. Encarnacion – Anticipation of Claims 1, 16, 17, 19, 23, 27, 30, and 45

U.S. Patent No. 7,668,939 ("Encarnacion"), titled "Routing of Resource Information in a Network," was filed on December 19, 2003. *See* RX-0082 (Encarnacion). Encarnacion qualifies as prior art to the '873 patent under § 102(e).

Encarnacion describes an implementation of the UPnP AV Architecture. Encarnacion cites to the UPnP Forum's web site (http://upnp.org/) as providing "more detailed information regarding the UPnP architecture and related topics." *Id.* at col. 3, lns. 1-3. Encarnacion relates to "a strategy for selectively routing metadata and media content to recipients via a local network, such as a home network." *Id.* at col. 1, lns. 20-24. According to Encarnacion, a UPnP network comprises several types of devices, including "one or more control point entities for coordinating the transfer of information from the source entity(ies) to the recipient entity(ies)." *Id.* at col. 5, lns. 19-25. Encarnacion explains that "[e]xemplary media servers can include various types of computers, various kinds of jukeboxes, and so on";

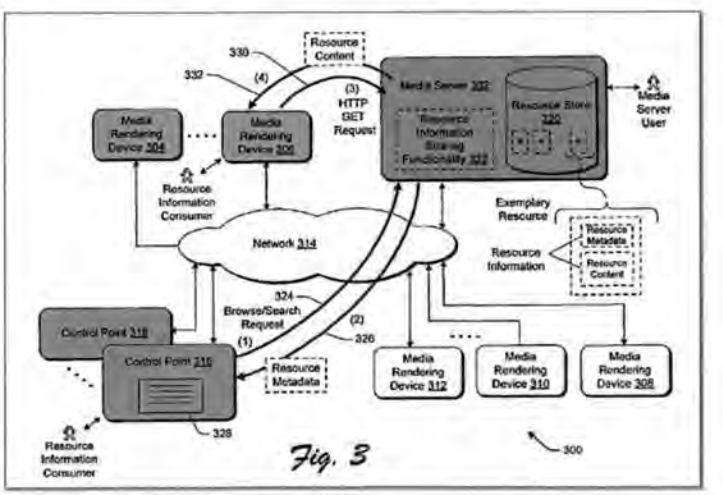

Fig. 3

"[e]xemplary rendering devices can include various types of computers, stereo system, speakers, TVs, hand-held audio players, and so on"; and "[a]n exemplary control point may be implemented using various types of computers, Personal Digital Assistants (PDAs), application specific logic modules, and so on." *Id.* at col. 8, lns. 4-23. The exemplary UPnP architecture is shown in Figure 3 (illustrated above, at right). RDX-0006.004 (RX-0082 (Encarnacion) at Fig. 3 annotated).

As shown above, Encarnacion discloses that a consumer may use a control point to issue a browse/search request to a media server and receive from the media server information pertaining to the resources stored thereon. *See* RX-0082 (Encarnacion) at Fig. 3 elements 324, 326; *see also id.* at col. 8, lns. 51-62; col. 13, lns. 1-20; col. 13, ln. 56 – col. 14, ln. 21; col. 25, lns. 11-48. Using the control point, the user may select content from the list retrieved from the media server for presentation at a selected rendering device. *See id.* at col. 8, lns. 62-65; col. 14, lns. 31-36; col. 25, lns. 48-55. The control point then sets up the transfer of the content from the media server to the selected rendering device by supplying a resource locator (*e.g.*, a "URL") to the selected rendering device. *See id.* at col. 8, ln. 65 – col. 9, ln. 4; col. 14, lns. 36-42; col. 25, lns. 48-55. The selected rendering device submits this resource locator to the media server, which uses the resource locator to locate the selected resource content and send the selected resource content back to the rendering device. *See id.* at col. 8, ln. 65 – col. 9, ln. 4; col. 14, lns. 42-63.

Through his direct witness statement, Dr. Almeroth has provided evidence that Encarnacion anticipates asserted claims 1, 16, 17, 19, 23, 27, 30, and 45.[52] *See* RX-0460C

[52] It is argued that, in the event the administrative law judge adopts Respondents and Intervenor's proposed construction of "device identifier," Encarnacion renders these claims obvious.

(Almeroth DWS) Q/A 211-267. BHM's expert, Dr. Loy, does not dispute that Encarnacion discloses the majority of the limitations recited in these claims. *See* CX-1401C (Loy RWS) Q/A 123-35. Dr. Loy disputes that Encarnacion discloses the following limitations:

- "displaying, on a first device, at least one device identifier identifying a second device" and "receiving user first input selecting the at least one device identifier" (claim 1, and similar "device identifier" limitations in other asserted claims); and
- "receiving user second input selecting at least one media item identifier from the received playlist" (claim 1, and similar "selecting" limitations in other asserted claims).

See id. The disputed limitations are discussed below.

Encarnacion states that using a control point, a user may investigate the content stored on the media server and "select resource content for presentation **at a selected rendering device**." RX-0082 (Encarnacion) at col. 8, lns. 62-67 (emphasis added); *see also id.* at col. 14, lns. 31-47. Encarnacion discloses to one of ordinary skill that available media renderers are displayed to a user for selection via the control point, otherwise there would be no way for the control point to perform the described selection of a rendering device for the content's presentation. *See* RX-0460C (Almeroth DWS) Q/A 216-218. Figure 9 of Encarnacion shows one example of how a user interface can display a list of available media renderers (although this particular example is on a media server display, not a control point display). RX-0082 (Encarnacion) at Fig. 9; col. 43, ln. 29 – col. 44, ln. 9.

Otherwise, it is argued that these claims are anticipated by Encarnacion under all other proposed constructions for the agreed-upon and disputed terms. *See* RX-0460C (Almeroth DWS) Q/A 220.

Encarnacion discloses a "playlist" under each of the proposed constructions, including under BHM's requirement of songs "arranged to be played in a sequence." Encarnacion even uses the term "playlist" to refer to a list of songs received by the control point from the media server. *See* RX-0082 (Encarnacion) at col. 14, lns. 8-21. Encarnacion also discloses that the user of the control point may select a media item from the received playlist. For example, it states that using the control point's UI, a user may investigate the content that is available on the media server and "can select resource content associated with a resource for presentation at a selected rendering device." *Id.* at col. 8, lns. 54-65; *see also id.* at col. 14, lns. 31-35; col. 25, lns. 48-55; col. 37, lns. 36-45. The evidence shows that one of ordinary skill would understand that Encarnacion discloses selecting a media item from the playlist. *See* RX-0460C (Almeroth DWS) Q/A 226.

With respect to the additional limitations recited in asserted claims 1, 16, 17, 19, 23, 27, 30, and 45 under each of the proposed claim constructions, Dr. Almeroth has provided an element-by-element invalidity analysis for each of these asserted claims. *See* RX-0460C (Almeroth DWS) Q/A 215-233 (claim 1), 238 (claim 16), 239-240 (claim 17), 241 (claim 19), 243-252 (claim 23), 253-261 (claim 27), 262-263 (claim 30), 266 (claim 45).

f. UPnP AV 1.0 – Obviousness of Claims 5, 27, and 34

i. UPnP AV 1.0 Alone

Respondents and Intervenor have provided evidence to show that UPnP AV 1.0 renders obvious claims 5, 27, and 34 under any of the proposed claim constructions. *See* RX-0460C (Almeroth DWS) Q/A 107-08, 131-38, 141.

ii. UPnP AV 1.0 Alone or in Combination with Weast

Dependent claims 5 and 34 specify that "the first device comprises a mobile phone." Respondents and Intervenor provided evidence to show UPnP AV 1.0 renders obvious claims 5 and 34 alone or in combination with Weast.

UPnP AV 1.0 is "independent of any particular device type, content format, and transfer protocol." RX-0140 (UPnP AV 1.0) (UPnP_000051). The specification is designed to be device agnostic so that the standard may be implemented in a wide array of devices manufactured by a range of companies. *See* RX-0460C (Almeroth DWS) Q/A 108. Dr. Almeroth testified that it would have been straightforward for one of ordinary skill to implement UPnP's Control Point functionality on a mobile phone. *See id.* The industry was already moving in the direction of building into mobile phones the features used in laptop computers and PDA devices. *See id.* By the late 1990s and early 2000s, several companies released mobile phones with wireless-Internet capability, and phones began to appear on the market that had the ability to play files in either Windows Media or MP3 format. *See id.*

Weast expressly states that the UPnP Control Point may take the form of a mobile phone. *See* RX-0075 (Weast) at col. 5, lns. 10-15. Dr. Almeroth testified that one of ordinary skill would have been motivated to combine UPnP AV 1.0 with Weast, which itself describes an implementation of UPnP AV 1.0 and expressly references that standard, to gain a more complete understanding regarding the manner in which the UPnP AV Architecture may be implemented. *See* RX-0460C (Almeroth DWS) Q/A 108.

iii. UPnP AV 1.0 Alone or in Combination with Encarnation

Claim 27 of the '873 patent recites a method for directing a second device from a first device, including "sending, from the first device, at least one attribute of a playlist corresponding to a selected playlist name to a playlist server." Respondents and Intervenor provided evidence to show UPnP AV 1.0 renders obvious this limitation alone or in combination with Encarnacion.

UPnP AV 1.0 states that using the Content Directory Service, the Control Point may "Browse" content that is available on the server and, in response, the control point receives an identification of available content and associated metadata (*e.g.*, name, artist). *See* RX-0140 (UPnP AV 1.0) (UPnP_000055). Dr. Almeroth testified that one of ordinary skill would have understood from the disclosure in UPnP AV 1.0 that content may be stored on the server in multiple folders. Upon user selection of a particular folder (*e.g.*, MyMusic-Artist) the Control Point would send an indication of the selected folder to the Media Server and the Media Server responds with an identification of content in that folder. *See* RX-0460C (Almeroth DWS) Q/A 134. For example, the control point may discover that the media server has two albums by the artist Usher, each indicated by a separate folder entry. Upon selection of the first album folder, the control point sends an indication of this selection to the media server and the media server responds by providing the control point with a list of tracks in the first album. *See id.*

In addition, Encarnacion discloses sending an attribute of a playlist corresponding to a selected playlist name to a playlist server. Encarnacion states that a resource collection, such as a playlist, may have a resource locator associated therewith, which may be used to retrieve the playlist based on a request from the control point. *See* RX-0082 (Encarnacion) at col. 14, lns. 8-21, col. 37, lns. 6-17. Dr. Almeroth testified that one of ordinary skill would have been

motivated to combine UPnP AV 1.0 with Encarnacion to gain a more complete understanding regarding the manner in which the UPnP AV Architecture may be implemented, and because both references concern media sharing among UPnP devices. *See* RX-0460C (Almeroth DWS) Q/A 134.

g. UPnP Version 1.0 – Obviousness of Claims 5, 27, and 34

Respondents and Intervenor have provided evidence to show that UPnP Version 1.0 renders obvious claims 5, 27, and 34 under any of the proposed claim constructions. *See* RX-0460C (Almeroth DWS) Q/A 145-49.

Dr. Almeroth testified that, if the UPnP Version 1.0 documents are not treated as a single reference for purposes of anticipation, one of ordinary skill in the art would have been motivated to combine UPnP AV 1.0 with UPnP ContentDirectory, UPnP AVTransport, and/or UPnP MediaRenderer. *See* RX-0460C (Almeroth DWS) Q/A 148. The UPnP AV 1.0 document describes the general architecture and protocols for communications among a Control Point, Media Renderer, and Media Server. *See* RX-0140 (UPnP AV 1.0). The additional Version 1.0 documents, which were published on the UPnP Forum's public website on the same day and cross-reference one another, provide additional details about the UPnP Control Point, Media Renderer, Media Server, and related features and protocols described in UPnP AV 1.0. According to Dr. Almeroth, one of ordinary skill would have been motivated to combine the UPnP Version 1.0 documents to achieve a more complete understanding of the UPnP network or system. *See* RX-0460C (Almeroth DWS) Q/A 148.

Dr. Almeroth further testified that, for the same reasons applicable to UPnP AV 1.0, one of ordinary skill would conclude that UPnP Version 1.0 renders obvious claims 5 and 34 of the '873 patent in combination with Weast. He also testified that, for the reasons applicable to UPnP

AV 1.0, one of ordinary skill would conclude that UPnP Version 1.0 renders obvious claim 27 of the '873 patent in combination with Encarnacion. *See id.* at Q/A 147-148.

h. Weast – Obviousness of Claims 16, 19, 27, and 45

Respondents and Intervenor have provided evidence to show that Weast renders obvious claims 16, 19, 27, and 45 under any of the proposed claim constructions. *See* RX-0460C (Almeroth DWS) Q/A 179-81, 184, 196-204, 209.

i. Weast Alone or in Combination with UPnP AV 1.0 or Encarnacion

Dependent claims 16, 19 and 45 of the '873 patent each require the second device to "stream" the selected media content from the content server. *See* JX-0003 ('873 patent). The parties agree that the term "stream" means "playing a media item in real-time as it is received, which may include buffering the media item." *See* RX-0404 (Joint List of Proposed Constructions) at 20.

Weast discloses that the control point instructs media renderers to pull and render media contents. *See* RX-0075 (Weast) at col. 6, lns. 19-23. Dr. Almeroth testified that, at the time of the purported inventions, one of ordinary skill would have been aware of the advantages associated with delivering content from a server to a media renderer via streaming, as opposed to downloading, such that media may be more quickly rendered for the user of the media renderer. *See* RX-0460C (Almeroth DWS) Q/A 179.

In addition, UPnP AV 1.0 and Encarnacion, which also describes the UPnP AV Architecture, disclose that the control point may direct a media renderer to stream a media item from a content server. *See* RX-0140 (UPnP AV 1.0) (UPnP_000055); RX-0082 (Encarnacion) at col. 14, lns. 50-59. Dr. Almeroth testified that one of ordinary skill would have been motivated

to combine Weast with UPnP AV 1.0 or Encarnacion to gain a more complete understanding regarding the manner in which the UPnP AV Architecture may be implemented. *See* RX-0460C (Almeroth DWS) Q/A 179.

ii. Weast Alone or in Combination with Encarnacion or Khedouri

Claim 27 of the '873 patent recites a method for directing a second device from a first device, including "sending, from the first device, at least one attribute of a playlist corresponding to a selected playlist name to a playlist server." *See* JX-0003 ('873 patent).

Weast discloses that the control point interface may include file system entries displayed to the user in a tree-like structure, with each entry containing a list of media items. *See* RX-0075 (Weast) at Fig. 4a. The name of each of the displayed folders in the tree-like structure corresponds to the recited "playlist name," and may be selected by the user. *See* RX-0460C (Almeroth DWS) Q/A 198. Dr. Almeroth testified that one of ordinary skill would understand that upon user selection of a folder, the control point sends an indication of the selected folder to the media server and the media server would return to the control point a list of media items within the selected folder, in similar fashion to the way in which a file manager allows a user to navigate through a hierarchy of files or folders stored on his or her personal computer. *See* RX-0460C (Almeroth DWS) Q/A 198; Almeroth Tr. 660-662.

Other prior art references, such as Encarnacion and Khedouri, also teach sending an attribute of a playlist corresponding to a selected playlist name to a playlist server. The disclosure in Encarnacion is discussed above in connection with UPnP AV 1.0. Dr. Almeroth testified that one of ordinary skill would have been motivated to combine Weast with Encarnacion's playlist feature at least because both references are implementations of the UPnP

protocol. In addition, U.S. Patent No. 8,160,495 discloses this limitation. *See* RX-0086 (Khedouri). For example, Khedouri states that a user may "use the touch-screen to select an artist, after which, they are presented with a listing of tracks by that artist, which may be scrolled through or searched in another easy way." *Id.* at col. 23, lns. 21-33; *see also id.* at col. 9, lns. 60-67; col. 15, lns. 1-20; Fig. 8; Fig. 15. Dr. Almeroth testified that one of ordinary skill would have been motivated to combine Weast with Khedouri's playlist feature at least because both references relate to sharing playlists and media between connected devices. RX-0460C (Almeroth DWS) Q/A 200.

i. Encarnacion – Obviousness of Claims 5, 8, 22, 34, and 37

Respondents and Intervenor have provided clear and convincing evidence to show that Encarnacion renders obvious claims 5, 8, 22, 34, and 37 under any of the proposed claim constructions. *See* RX-0460C (Almeroth DWS) Q/A 234-37, 242, 264-65.

i. Encarnacion Alone or in Combination with Weast

Dependent claims 5 and 34 specify that "the first device comprises a mobile phone."

Encarnacion describes an implementation of the UPnP AV Architecture, which is designed to be "independent of any particular device type, content format, and transfer protocol." RX-0140 (UPnP AV 1.0) (UPnP_000051). Encarnacion discloses that the control point device may be a handheld portable device, such as a PDA. *See* RX-0082 (Encarnacion) at col. 8, lns. 14-28. Dr. Almeroth testified that it would have been straightforward for one of ordinary skill to implement control point functionality on a mobile phone. *See* RX-0460C (Almeroth DWS) Q/A 108. The industry was already moving in the direction of building into mobile phones the features used in laptop computers and PDA devices, and by the late 1990s and early 2000s several companies released mobile phones with wireless-Internet capability. *See id.*

Dr. Almeroth also testified that one of ordinary skill in the art would have been motivated to combine Encarnacion with the Weast reference, which describes an implementation of UPnP AV 1.0, to gain a more complete understanding regarding the manner in which the UPnP AV Architecture may be implemented. *See id.* Weast states that the UPnP Control Point may take the form of a mobile phone. *See* RX-0075 (Weast) at col. 5, lns. 10-15.

ii. Encarnacion Alone or in Combination with UPnP AV 1.0 or Weast

Dependent claims 8, 22 and 37 each specify that the claimed first device is capable of adjusting the volume on the second device. *See* JX-0003 ('873 patent).

Dr. Almeroth testified that using a control point to adjust the volume of a media renderer would have been obvious to one of ordinary skill in view of the common knowledge in the art. *See* RX-0460C (Almeroth DWS) Q/A 236. For example, he testified that at the time of the purported inventions, one of ordinary skill would have known that the control point, which is described in Encarnacion as controlling the media rendered on a media rendering device, might also be used to adjust the volume, tone, or balance of the media rendering device. *See id.* UPnP AV 1.0 and Weast both disclose that a control point may be used to adjust the volume of a media rendering device. *See* RX-0140 (UPnP AV 1.0) (UPnP_000056); RX-0075 (Weast) at col. 8, lns. 53-64. Mr. Almeroth further testified that one of ordinary skill in the art would have been motivated to combine Encarnacion with either of these references to obtain a more complete understanding regarding the manner in which the UPnP AV Architecture may be implemented. *See* RX-0460C (Almeroth DWS) Q/A 236.

j. Secondary Considerations

With respect to secondary considerations of nonobviousness, BHM's expert relies on the alleged commercial success achieved by devices manufactured by Respondents and BHM's licensees. *See* CX-1401C (Loy RWS) Q/A 174-185. The alleged evidence of commercial success, however, is given little weight with regard to an obviousness determination, because Dr. Loy has not identified the required nexus between any alleged commercial success and the specific inventions claimed in the '873 patent. *See Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1327-28 (Fed. Cir. 2008).

For example, any commercial success of the Respondents' accused products could be due to the various noninfringing uses of the accused devices and components. *See, e.g.*, RX-0671C (Lipoff RWS) Q/A 334-45; RX-0673C (Polish RWS) Q/A 229-30; RX-0667C (Goldberg RWS) Q/A 348-54, 384; RX-0674C (Schonfeld RWS) Q/A 105, 118-22. Alternatively, the alleged commercial success of the accused products could be due to other factors, such as other unclaimed features of the accused products, brand recognition and reputation for producing high-quality products, or the advertising and marketing of the accused products. The same holds true for the [ ] products alleged to practice the asserted patents.

Accordingly, it is determined that the evidence of secondary considerations adduced by BHM would fail to overcome a finding that the asserted claims of the '873 patent are obvious.

VI. The '652 and '952 Patents

A. Overview of the Technology

The '652 and '952 patents were filed November 27, 2006, share a common specification, and are continuations of U.S. Patent Application No. 09/805,470 filed March 12, 2001. JX-0009 ('652 patent); JX-0007 ('952 patent). Each claims priority to U.S. Provisional Application No.

60/246,842, filed November 8, 2000. JX-0009 ('652 patent); JX-0007 ('952 patent); *see* RX-0463C (Jeffay DWS) Q/A 14, 16; CX-1067C (Zatkovich DWS) Q/A 38. The '652 and '952 patents disclose "a network-enabled audio device for listening to a variety of audio sources." JX-0007 ('952 patent) at col. 1, lns. 15-17; RX-0463C (Jeffay DWS) Q/A 18. The audio sources include music identified by a playlist assigned to an electronic device and Internet radio broadcasts streamed from a website. RX-0463C (Jeffay DWS) Q/A 18; JX-0007 ('952 patent) at col. 2, lns. 33-62. Software modules stored on the audio device provide the claimed playlist and/or Internet radio broadcast. RX-0463C (Jeffay DWS) Q/A 19; JX-0007 ('952 patent) at col. 2, lns. 33-56.

One software module is "configured to use the modem to connect to an Internet service provider to receive assignments of playlists" that include "references to audio." RX-0463C (Jeffay DWS) Q/A 19; JX-0007 ('952 patent) at col. 2, lns. 37-45. After receiving a playlist, the software module "connect[s] through an Internet service provider to web sites to download audio files." RX-0463C (Jeffay DWS) Q/A 19; JX-0007 ('952 patent) at col. 2, lns. 37-45. Another module for Internet radio is "configured to use the modem to connect to an Internet service provider to receive digitized audio broadcasts from the Internet service provider" such that, "to the user, reception of a broadcast from the World Wide Web is no more complicated than listening to a local FM or AM radio station." RX-0463C (Jeffay DWS) Q/A 19; JX-0007 ('952 patent) at col. 1, lns. 29-42; col. 1, lns. 44-51; col. 2, lns. 47-56. The internet radio broadcast functionality is discussed in the first half of the specification, and the playlist functionality is discussed in the remaining portion. *See* JX-0007 ('952 patent) at col. 7, ln. 28 – col. 16, ln. 28; col. 16, ln. 29 – col. 33, ln. 67.

B. Claim Construction

1. Level of Ordinary Skill in the Art

As proposed by Respondents, it is determined that one of ordinary skill in the art as of the priority date of the '952 and '652 patents would have a Bachelor of Science degree in electrical engineering, computer engineering, computer science, or equivalent thereof, and one to two years of experience with computer and multimedia networking. *See* RX-0463C (Jeffay DWS) Q/A 14, 16. More education could substitute for experience, and that experience, especially when combined with training, could substitute for formal college education.[53] *See id.*

2. Disputed Claim Terms

a. "assigned to the electronic device" ('652 patent claim 1 / '952 patent claims 9, 14)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction	Staff's Proposed Construction
"assigned to the electronic device"	"directed to the electronic device"	"[receive the playlist] designated for use on the specific electronic device"	Playlist is directed/instructed to selected electronic device

The claim term "assigned to the electronic device" appears in claim 1 of the '652 patent and claims 9 and 14 of the '952 patent. BHM and Respondents contend that the plain and ordinary meaning of this term should apply, but also provide proposed constructions in the event it is determined that construction is necessary. *See* Compl. Br. at 280-83; Resps. Br. at 112-14. BHM construes the term "assigned to the electronic device" to mean "directed to the electronic

[53] BHM's expert Mr. Zatkovich testified that there is no material difference between his opinion regarding the relevant field and the appropriate level of ordinary skill in the art and that of Respondents' expert Dr. Jeffay. CX-1400C (Zatkovich RWS) Q/A 11.

device," and Respondents construe this term to mean "[receive the playlist] designated for use on the specific electronic device." Compl. Br. at 280-83; Resps. Br. at 112-14. The Staff argues that the claim term "assigned to the electronic device" "limits the playlist to one which has been purposefully directed/instructed to a selected electronic device." *See* Staff Br. at 137-40.

As proposed by Respondents, the claim term "assigned to the electronic device" is construed to mean "[receive the playlist] designated for use on the specific electronic device." This construction is supported by the intrinsic evidence, comports with the understanding of a person having ordinary skill in the art, and is consistent with the Staff's proposed construction.

The specification describes assigning each particular playlist for use on a specific electronic device. *See* RX-0463C (Jeffay DWS) Q/A 79; JX-0007('952 patent) at col. 3, lns. 51-54; col. 22, lns. 36-48; col. 24, lns. 44-60; col. 28, lns. 11-20; Figs. 17C; Fig. 19B. As illustrated in Figure 17C, a "user can choose the menu option of 'Make Available On' to assign the playlist" to a selected device in the drop down menu. JX-0007('952 patent) at col. 24, lns. 50-53; Fig. 17C. Likewise, Figure 17 E illustrates a schedule playlist feature wherein a playlist is selected for a particular time and "on a particular device" by the user from a drop-down menu. *Id.* at col. 25, lns. 3-10; Fig. 17E.

The adopted construction is also consistent with the way in which the inventors described and developed a product that allegedly embodied the claims. For example, named inventor Sheppard testified that a user would assign a playlist by selecting the specific device on which he wanted the playlist to appear. JX-092C (Sheppard Dep.) at 132, 133. Once a user selected the device to which the playlist would be assigned, the playlist was associated with that device. *Id.* The product that allegedly embodied the invention operated in a similar way. An AudioRamp Document explains that "Playlists can be flagged for download to specific devices." RX-0387C

(AudioRamp) at BHM-ITC-093715. This is illustrated in one of the figures, showing that a user may select a playlist for use on specific devices by selecting check boxes corresponding to those devices. *Id.* at 17. A user may also select the "Send To" button shown in this figure to "execute the Exporter System to let the user select a personal audio device to send the current playlist to." *Id.* at 19.

BHM argues that the adopted construction excludes a "preferred" embodiment. *See* Compl. Br. at 282. BHM cites to column 22, lines 47-48 of the specification as disclosing that a playlist is assigned to a device when the device connects to the network. Compl. Br. at 282 n.26. The specification, however, fails to indicate that this embodiment is "preferred" over any other embodiment. *See* JX-0007 ('952 patent). Further, the surrounding discussion makes clear that a user assigns the playlist to the device before the device connects to the network. JX-0007 ('952 patent) at col. 22, lns. 39-41. Moreover, Dr. Jeffay testified that this portion of the specification explains the timing of the assignment and does not imply that establishing a connection results in the assignment of a playlist. Jeffay Tr. 906-907. He testified that the specification "isn't saying that log-in or connections results in assignment. It just says when the assignment occurs." *Id.*

BHM also cites to column 25, lines 54-56 in support of its proposed construction. *See* Compl. Br. at 282. This portion of the specification describes "new files and updates automatically downloaded" to a device when such device is added to the network. JX-0007 ('952 patent). BHM argues that this passage teaches automatic downloading of a playlist. *See* Compl. Br. at 282. Contrary to BHM's position, the patentee drew a distinction between "playlists" and "files" throughout the specification. *See* Resps. Br. at 114. Specifically, this passage from the specification demonstrates that the new "files" refer to "audio files," and not playlists. JX-0007 ('952 patent) at col. 25, lns. 55-58. The next sentence in the specification

makes this clear, explaining that a "device can become a dedicated MP3 server by downloading files to the device every time an *audio file* is downloaded to any other device." JX-0007 ('952 patent) at col. 25, lns. 56-58 (emphasis added). Thus, this portion of the specification does not support BHM's proposed construction.

Therefore, the claim term "assigned to the electronic device" is construed to mean "[receive the playlist] designated for use on the specific electronic device."

b. "obtain[ing] the ones of the plurality of songs [that are not stored on the electronic device] from [the] at least one remote source" ('652 patent claim 1 / '952 patent claims 9, 14)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction	Staff's Proposed Construction
"obtain[ing] the ones of the plurality of songs [that are not stored on the electronic device] from [the] at least one remote source"	Plain and ordinary meaning, no construction required. Not clear what Respondents wish to construe. If a construction is necessary: "receiving from the at least one remote source the at least one of the plurality of songs that is not stored on the electronic device" "wherein ones of the plurality of songs are not stored on the electronic device" means: "wherein at least one of the plurality of songs is not stored on the electronic device"	"downloading and storing on the electronic device all of the songs on the playlist, that are not already stored on the electronic device, from a source that is separate from the electronic device"	obtain = "download a file" (e.g. download file equivalent to those "stored"/identified as "not stored")

The claim term "obtain[ing] the ones of the plurality of songs [that are not stored on the electronic device] from [the] at least one remote source" appears in claim 1 of the '652 patent and claims 9 and 14 of the '952 patent.

BHM argues that the plain and ordinary meaning of this term should apply and that no construction is needed. *See* Compl. Br. at 266. If it is determined that construction is necessary, BHM proposes that the "obtain . . ." claim term should be construed as "receive from the at least one remote source the at least one of the plurality of songs that is not stored on the electronic device." Compl. Br. at 267. BHM also proposes that the related "obtaining . . ." claim term should be construed as "receiving from the at least one remote source the at least one of the plurality of songs that is not stored on the electronic device." *Id.* BHM further proposes that the antecedent claim term "wherein ones of the plurality of songs are not stored on the electronic device" should be construed to mean "wherein at least one of the plurality of songs is not stored on the electronic device." *Id.*

Respondents propose that the claim term "obtain[ing] the ones of the plurality of songs [that are not stored on the electronic device] from [the] at least one remote source" should be construed to mean "downloading and storing on the electronic device all of the songs on the playlist, that are not already stored on the electronic device, from a source that is separate from the electronic device." *See* Resps. Br. at 266-71. The Staff's proposal is that the term "obtain" should be construed to mean "download." *See* Staff Br. at 122-23.

As proposed by Respondents, the claim term "obtain[ing] the ones of the plurality of songs [that are not stored on the electronic device] from [the] at least one remote source" is construed to mean "downloading and storing on the electronic device all of the songs on the playlist, that are not already stored on the electronic device, from a source that is separate from

the electronic device." This construction is consistent with the intrinsic evidence, comports with the understanding of a person having ordinary skill in the art, and is consistent with the Staff's proposed construction.

The claim language reflects that the "obtained" audio files are ones that are not previously stored on the device. *See* RX-0463C (Jeffay DWS) Q/A 46; JX-0007 ('952 patent) at claim 9. The purpose of "obtaining" audio files is to store them on the device. *See* RX-0463C (Jeffay DWS) Q/A 46. The specification describes the claimed invention the same way, by referring to different ways to download songs or audio files not yet stored on the device. RX-0463C (Jeffay DWS) Q/A 46; JX-0007 ('952 patent) at col. 2, lns. 41-45: col. 4, ln. 60 – col. 5, ln. 3; col. 17, lns. 10-31; col. 22, lns. 49-58; Figs. 19A-C. These disclosures demonstrate that the intended purpose of the claimed invention is to download the audio files or songs not yet stored on the device.

By contrast, BHM's proposed construction of the disputed claim term contradicts the claim language. For example, claim 9 recites "receiving" and "obtaining" as different acts with different meanings. *See* RX-0463C (Jeffay DWS) Q/A 48; JX-0007 ('952 patent) at claim 9. Indeed, BHM's expert Mr. Zatkovich testified at the hearing that the terms "obtaining" and "receiving" apply to different steps and have different meanings. Zatkovich Tr. 115.

BHM takes the position that "obtaining" does not require downloading and storing because the specification includes an embodiment where the audio content corresponding to items of the playlist is streamed to the electronic device and not stored when, for example, the electronic device "has no disk for data storage space." *See* Compl. Br. at 269-70 (citing JX-0009 at col. 4, lns. 4-9; JX-0007 at col. 3, lns. 57-58). The passage cited by BHM in support of this argument, however, fails to state that the device completely lacks storage, but rather states that

the device has no disk. RX-0463C (Jeffay DWS) Q/A 49. Lack of a disk in a specific embodiment does not mean that the device is incapable of storage, and does not preclude the application of the adopted claim construction proposed by Respondents. *See id.* If the opposite were true the diskless embodiment would either not be enabled or would not be covered by the claims, because the device would be unable to execute software or receive playlists, all of which would require storage. *See id.*

Accordingly, the claim term "obtain[ing] the ones of the plurality of songs [that are not stored on the electronic device] from [the] at least one remote source" is construed to mean "downloading and storing on the electronic device all of the songs on the playlist, that are not already stored on the electronic device, from a source that is separate from the electronic device."

c. "playlist" ('652 patent claim 1 / '952 patent claims 9, 14)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction	Staff's Proposed Construction
"playlist"	Plain and ordinary meaning or "a list referencing media items arranged to be played in a sequence"	"a list of one or more audio files for playback"	One or more audio files listed for audio playback

The disputed term "playlist" appears in claim 1 of the '652 patent and claims 9 and 14 of the '952 patent. BHM takes the position that the plain and ordinary meaning of the term should apply and that this term does not need construction, but if it is determined that the term requires construction, that it should be construed to mean "a list referencing media items arranged to be played in a sequence." *See* Compl. Br. at 275-79. Respondents argue that the term should be

construed to mean "a list of one or more audio files for playback." *See* Resps. Br. at 66-67. The Staff takes the position that the term should be construed to mean "one or more audio files listed for audio playback." *See* Staff Br. at 115-121.

As proposed by Respondents, the claim term "playlist" is construed to mean "a list of one or more audio files for playback." This construction comports with the understanding of a person having ordinary skill in the art, and is consistent with the construction proposed by the Staff. *See* RX-0463C (Jeffay DWS) Q/A 42-43.

The '952 patent teaches that a playlist "is a list of audio files and associated URL's of where the audio files were retrieved from." JX-0007 ('952 patent) at col. 21, lns. 62-65; RX-0463C (Jeffay DWS) Q/A 42. The '952 patent explains that the URLs within the playlist "indicate the location from which the audio files associated with the song titles in the playlist can be downloaded." JX-0007 ('952 patent) at col. 22, lns. 47-50; RX-0463C (Jeffay DWS) Q/A 42. Inasmuch as the playlist includes a list of audio files that have been (or will be) downloaded, one of ordinary skill in the art would understand that the list references audio files or songs to be played back from the device. RX-0463C (Jeffay DWS) Q/A 42.

The construction proposed by BHM provides that a "playlist" encompasses "media items" as opposed to "songs" or "audio." *See* Compl. Br. at 275-79. This proposed construction contradicts claim language that recites songs, and not "media items." *See* RX-0463C (Jeffay DWS) Q/A 44. Moreover, the '952 patent specification references "songs" and "audio files" when describing the content of a playlist, such that construing the claimed "playlist" as referencing such items is consistent with the intrinsic evidence.

Furthermore, evidence adduced at the hearing demonstrates that one of ordinary skill in the art would not interpret the term "playlist" as limited to "items to be played in a sequence," as

proposed by BHM. *See* RX-0463C (Jeffay DWS) Q/A 44. As support for its position, BHM identifies the patent specification's reference to an optional, single embodiment in which a "user can click the shuffle button to 'randomize' the playlist as opposed to playing the playlist in the same order." JX-0007 ('952 patent) at col. 24, lns. 38-40; *see* RX-0463C (Jeffay DWS) Q/A 44. This single, optional disclosure, however, does not mandate that a "playlist" be limited to items "arranged to be played in a sequence."

Accordingly, the claim term "playlist" is construed to mean "a list of one or more audio files for playback."

d. "Internet radio broadcast" ('652 patent claim 1)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction	Staff's Proposed Construction
"Internet radio broadcast"	Plain and ordinary meaning or "broadcast audio programming made available over the Internet"	"a radio broadcast streamed for listeners via the Internet"	"radio broadcast (e.g. FM, AM, satellite broadcasts) transmitted via the internet for listeners (e.g. people in a car listening to FM, AM, satellite radio)"

The claim term "Internet radio broadcast" appears in claim 1 of the '652 patent. BHM takes the position that the plain and ordinary meaning of the term should apply and that this term does not need construction, but if it is determined that the term requires construction, that it should be construed to mean "broadcast audio programming made available over the Internet." *See* Compl. Br. at 288. Respondents argue that the term should be construed to mean "a radio broadcast streamed for listeners via the Internet." *See* Resps. Br. at 119-20. The Staff takes the position that the term should be construed to mean "radio broadcast (e.g. FM, AM, satellite

broadcasts) transmitted via the internet for listeners (e.g. people in a car listening to. FM, AM, satellite radio)," which reflects the plain and ordinary meaning of the term. *See* Staff Br. at 127-28.

The parties' proposed constructions for the term "Internet radio broadcast" are similar, and it does not appear that any issue raised in this investigation would be affected by adopting one proposed construction over another.[54] Therefore, the claim term "Internet radio broadcast" is construction to mean "a radio broadcast streamed for listeners via the Internet."

e. "playlist mode of operation" ('652 patent claim 1)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction	Staff's Proposed Construction
"playlist mode of operation"	Plain and ordinary meaning or "a user selectable mode of operation of the electronic device, where the electronic device is capable of playing audio content indicated by a playlist"	"a mode of operation of the electronic device where the electronic device carries out playback of audio files on a playlist"	Plain and ordinary meaning – such as user selectable mode of operation where electronic device plays audio files indicated by playlist

The claim term "playlist mode of operation" appears in claim 1 of the '652 patent. BHM takes the position that the plain and ordinary meaning of the term should apply and that this term does not need construction, but if it is determined that the term requires construction, that it should be construed to mean "a user selectable mode of operation of the electronic device, where the electronic device is capable of playing audio content indicated by a playlist." *See* Compl. Br. at 289-90. Respondents argue that the term should be construed to mean "a mode of operation of

[54] The parties all agree that an "Internet radio broadcast" does not include podcast-type programming. *See* Compl. Br at 288; Resps. Br. at 119-20; Staff Br. at 127-28.

the electronic device where the electronic device carries out playback of audio files on a playlist." *See* Resps. Br. at 120-21. The Staff takes the position that the term should be construed to mean "user selectable mode of operation where electronic device plays audio files indicated by playlist," which reflects the plain and ordinary meaning of the term. *See* Staff Br. at 128-29.

As proposed by Respondents, the term "playlist mode of operation" is construed to mean "a mode of operation of the electronic device where the electronic device carries out playback of audio files on a playlist." This construction reflects the understanding of a person having ordinary skill in the art, especially in light of the constructions adopted above for the terms "playlist" and "obtaining . . ." *See* RX-0463C (Jeffay DWS) Q/A 59. This construction is also consistent with the construction proposed by the Staff. *See* RX-0463C (Jeffay DWS) Q/A 60.

f. "Internet radio mode of operation" ('652 patent claim 1)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction	Staff's Proposed Construction
"Internet radio mode of operation"	"a user selectable mode of operation of the electronic device, where the electronic device is capable of playing an Internet radio broadcast"	"a mode of operation of the electronic device where the electronic device receives and plays an Internet radio broadcast"	Plain and ordinary meaning – such as user selectable mode of operation where electronic device plays Internet radio broadcast

The claim term "Internet radio mode of operation" appears in claim 1 of the '652 patent. BHM takes the position that the plain and ordinary meaning of the term should apply and that this term does not need construction, but if it is determined that the term requires construction, that it should be construed to mean "a user selectable mode of operation of the electronic device,

where the electronic device is capable of playing an Internet radio broadcast." *See* Compl. Br. at 290-91. Respondents argue that the term should be construed to mean "a mode of operation of the electronic device where the electronic device receives and plays an Internet radio broadcast." *See* Resps. Br. at 121-22. The Staff takes the position that the term should be construed to mean "user selectable mode of operation where electronic device plays Internet radio broadcast," which reflects the plain and ordinary meaning of the term. *See* Staff Br. at 128-29.

As proposed by Respondents, the term "Internet radio mode of operation" is construed to mean "a mode of operation of the electronic device where the electronic device receives and plays an Internet radio broadcast." This construction is supported by the specification, which does not use the term "Internet radio mode of operation," but does reference "a Web radio mode" wherein the device receives a list of Web broadcasts and access to the Internet so that the various Web broadcasts are received. RX-0463C (Jeffay DWS) Q/A 62, 63; JX-0009 ('652 patent) at col. 10, lns. 49-63. The adopted construction is also consistent with the Staff's proposed construction. *See* RX-0463C (Jeffay DWS) Q/A 64.

g. "playback" ('652 patent claim 1)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction	Staff's Proposed Construction
"playback"	The claim language is "enable playback." Plain and ordinary meaning, no construction required. If a construction is necessary: "enable playback" means "capable of placing media into a form suitable for presentation to an output device such as a speaker"	"playing audio content stored on the electronic device"	"playing back audio content"

The claim term "playback" appears in claim 1 of the '652 patent. BHM takes the position that the claim at issue is "enable playback" and that this term does not need construction, but proposes the construction of "capable of placing media into a form suitable for presentation to an output device such as a speaker" in the event it is determined that construction is needed. *See* Compl. Br. at 271-75. Respondents argue that the term "playback" should be construed to mean "playing audio content stored on the electronic device." *See* Resps. Br. at 122-23. The Staff proposes that the term "playback" should be construed to mean "playing back audio content," which is the term's plain and ordinary meaning. *See* Staff Br. at 129-30.

As an initial matter, the disputed claim term briefed by BHM (*i.e.*, "enable playback") differs from the disputed claim term briefed by Respondents and the Staff (*i.e.*, "playback"). Ground Rule 11.a requires that "the claim terms briefed by the parties must be identical." Order No. 14 (Amended Ground Rules) (Aug. 6, 2013). The Joint Outline of Issues filed by the parties identifies the claim term in dispute as "playback." *See* Joint Outline of Issues at 14. Accordingly, this initial determination shall construe the term "playback," and BHM's arguments with respect to the construction of "enable playback" are disregarded. *Cf.* Order No. 14 (Amended Ground Rules) at G.R. 11.a (Aug. 6, 2013) ("For example, if the construction of the claim term 'wireless device' is disputed, the parties must brief that exact claim term. If a party briefs only a portion of the claim term such as 'wireless' or 'device,' that section of the brief will be stricken.").

Having considered the arguments of Respondents and the Staff with respect to the construction of "playback," it is determined that this term should be construed to mean "playing audio content stored on the electronic device." This construction is consistent with the specification and the claim language. *See, e.g.*, RX-0463C (Jeffay DWS) Q/A 66-69. In

particular, the language of claim 1 specifies that the control "system enabl[es] playback of audio content from a playlist" as "indicated by the playlist." *Id.*; JX-0009 ('652 patent) at claim 1. As explained in the context of the term "obtaining," the claims specify that the audio files obtained are the ones that are not yet stored on the device. *See* RX-0463C (Jeffay DWS) Q/A 67. Thus, the purpose of the "system enabling playback" is to play the songs from the device's storage, including those songs that will eventually be obtained by the device. *Id.*

h. "central system" ('652 patent claim 1)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction	Staff's Proposed Construction
"central system"	"server hardware and/or software"	"hardware and/or software that is separate from but connected to the electronic device"	Plain and ordinary meaning – such as component (i.e. hardware with software)

The claim term "central system" appears in claim 1 of the '652 patent. BHM takes the position that that the plain and ordinary meaning of the term should apply and that this term does not need construction, but if it is determined that the term requires construction, that it should be construed to mean "server hardware and/or software." *See* Compl. Br. at 291-92. Respondents argue that the term should be construed to mean "hardware and/or software that is separate from but connected to the electronic device." *See* Resps. Br. at 124. The Staff takes the position that the term should be given its plain and ordinary meaning: "An example of such a meaning could be a specific component that transmits an assigned playlist and 'information enabling the device to obtain.'" *See* Staff Br. at 136.

The constructions proposed by the parties are similar, the major difference being that Respondent's proposed construction requires that the hardware and/or software be separate but

connected to the claimed electronic device, a requirement not found in the constructions proposed by BHM and the Staff.

It is determined that the claim term "central system" is construed to mean "hardware and/or software that is separate from but connected to the electronic device." This construction is consistent with the patent specification, which discloses a server or server site including hardware and/or software that is shown as separate but connected to various electronic devices. RX-0463C (Jeffay DWS) Q/A 71; JX-0009 ('652 patent) at col. 3, lns. 35-42; col. 16, lns. 56-60; col. 21, lns. 40-61; Fig. 2; Fig. 15.

i. "enable [-ing]" and "adapted to" ('652 patent claim 1)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction	Staff's Proposed Construction
"enable [-ing]" vs. "adapted to"	Plain and ordinary meaning, no construction required.	"enable": "to put [putting] into an operative condition for" "adapted to": "configured to"	Enable = having functionality Adapted to = specific for

The terms "enable [-ing]" and "adapted to" appears in claim 1 of the '652 patent. BHM takes the position that the plain and ordinary meaning of these terms would be understood by a person having ordinary skill in the art, and that no construction is required. *See* Compl. Br. at 287. Respondents argue that "enable" should be construed to mean "to put into an operative condition for," and that "adapted to" should be construed to mean "configured to." *See* Resps. Br. at 124-25. The Staff contends that "enable" should be construed to mean "having functionality," and that "adapted to" should be construed to mean "specific for." *See* Staff Br. at 136-37.

It is determined that the term "enable" is construed to mean "to put into an operative condition for," and that the term "adapted to" is construed to mean "configured to." The adopted constructions are consistent with the language of the claim and supported by the specification, which discloses a system "enabling" playback that performs some function to put the electronic device in an operative condition to play back songs. RX-0463C (Jeffay DWS) Q/A 83. In particular, receiving information that provides directions to the location of a particular audio file puts the electronic device in operative condition to obtain the songs. RX-0463C (Jeffay DWS) Q/A 83.

Moreover, a system is "adapted to" perform a series of tasks when that system is configured to, or has all the necessary functionality to, perform the series of tasks. RX-0463C (Jeffay DWS) Q/A 83. In the context of the claimed invention, one of ordinary skill would understand that an electronic device is "adapted to" or "configured to" perform a series of tasks when it contains computer code or program instructions sufficient to perform the operations recited without additional modification or the addition of further program instructions. *Id.*

j. "identifying" ('652 patent claim 1)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction	Staff's Proposed Construction
"identifying"	Plain and ordinary meaning, no construction required.	"[the playlist] identifying [a plurality of songs]" means: "[the playlist] indicating [a plurality of songs]" "identifying [ones of the plurality of songs in the playlist that are not stored on the electronic device]" means: "determining [ones of the plurality of songs in the play list that are not stored on the electronic device]"	"playlist identifying a plurality of songs" – "identifying" as performed by playlist is different from identifying as method step "identifying ones of the plurality of songs in the playlist" - "identifying" here is operation performed by device performing the method

The claim term "identifying" appears in claim 1 of the '652 patent. BHM takes the position that that the plain and ordinary meaning of the term should apply and that this term does not need construction. *See* Compl. Br. at 283-86. Respondents argue that the term "identifying," which appears in two separate contexts within claim1, should be construed two different ways depending on the context. *See* Resps. Br. at 125-26. Specifically, Respondents argue that "[the playlist] identifying [a plurality of songs]" should be construed to mean "[the playlist] indicating [a plurality of songs]," and that "identifying [ones of the plurality of songs in the playlist that are not stored on the electronic device]" should be construed to mean "determining [ones of the plurality of songs in the play list that are not stored on the electronic device]." *See id.* The Staff also argues that the two instances of "identifying" should be construed differently depending on context. *See* Staff Br. at 133-35.

It is determined that the two instances of the term "identifying" should be construed differently depending on its context within the claim. The phrase "[the playlist] identifying [a plurality of songs]" is construed to mean "[the playlist] indicating [a plurality of songs]," and the phrase "identifying [ones of the plurality of songs in the playlist that are not stored on the electronic device]" is construed to mean "determining [ones of the plurality of songs in the play list that are not stored on the electronic device]." These constructions reflect the understanding of a person having ordinary skill in the art when reading the claim language. *See* RX-0463C (Jeffay DWS) Q/A 75.

k. Order of Steps ('652 patent claim 1 / '952 patent claim 9)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction	Staff's Proposed Construction
"user sending status"	"information indicating whether the user has selected, or the device is configured, to send data to or respond to requests from other mobile communication devices or the server"	"information indicating whether the device is currently able to send data or requests to other mobile communications devices or the central server"	"playing back audio content"

With respect to whether the claim elements need to be performed in any specific order, BHM argues as follows:

> The claim elements are not required to be performed in any specific order. First, claim 1 of the '652 Patent is an apparatus claim, not a method claim. As a result, there is no specific order of steps at issue. Second, with respect to claim 9 of the '952 patent, which is a method claim, the use of antecedent basis alone to refer back to previously recited claim terms does not necessarily limit the claims to a specific order of steps. Here, nothing in the claim or specification requires a specific order (e.g., there is nothing in the claim that would prevent the "playlist" and the "information enabling …" from being received simultaneously).

Compl. Br. at 286.

The Staff argues that, "with respect to certain elements, but not all elements, the syntax of the claims requires a particular order." Staff Br. at 131-33. Nevertheless, "the Staff is not proposing that the claim requires completion of the steps prior to advancing in a particular order. The Staff's position merely reflects that reversing, or rendering ineffective, certain claimed steps would not be logical in light of the language of the claims." *Id.* at 132.

The Respondents did not brief the issue of whether or not the elements recited in the asserted claims require a certain order. *See* Joint Outline of Issues at 15.

Having reviewed asserted method claim 9 of the '952 patent, it is the determination of the administrative law judge that the "receiving . . . information enabling the electronic device to obtain the ones of the plurality of songs" step needs to be performed before the "obtaining the ones of the plurality of the songs" step, but there is no requirement that one "receiving" step needs to be performed before the other "receiving" step, or vice versa.

3. Undisputed Claim Terms[55]

a. "network interface" ('652 patent claim 1)

The claim term "network interface" appears in claim 1 of the '652 patent. The parties agree that this claim term should be construed to mean "hardware and/or software to couple the electronic device to a communications network." *See* Joint List of Proposed Constructions at 18.

[55] As before, although this initial determination construes only the disputed claim terms set forth in the Joint Outline of Issues, the parties' proposed construction of undisputed claim terms identified as needing construction is included here for completeness.

b. "system" ('652 patent claim 1)

The claim term "system" appears in claim 1 of the '652 patent. The parties agree that this claim term should be construed to mean "hardware and/or software." *See* Joint List of Proposed Constructions at 18.

c. "control system" ('652 patent claim 1, 11, 13)

The claim term "control system" appears in claims 1, 11, and 13 of the '652 patent. The parties agree that this term should be construed to mean "hardware and/or software for controlling operations on the electronic device." *See* Joint List of Proposed Constructions at 19.

d. "remote source" ('652 patent claim 1 / '952 patent claims 9, 14)

The claim term "remote source" appears in claim 1 of the '652 patent and claims 9 and 14 of the '952 patent. The parties agree that this term should be construed to mean "a source that is separate from the electronic device." *See* Joint List of Proposed Constructions at 19.

C. Infringement Analysis of Samsung Accused Products

1. Accused Applications and Functionalities

As summarized above, BHM accuses certain Samsung devices of infringing the '952 and '652 patents when combined with one or more software applications or functionalities. Specifically, BHM has accused the following combinations of devices and applications or functionalities of infringing the'952 patent:

- Samsung Mobile and Player Devices with "DLNA" - claims 9 and 14
- Samsung Player Devices with Spotify or Pandora - claim 9
- Samsung Mobile Devices with Slacker - claim 9
- Samsung Mobile Devices with Google Play Music[56] - claims 9 and 14

[56] The infringement analysis of Samsung products incorporating Google Play Music is set forth

See CX-0669C (Houh RWS) Q/A 342.

BHM also accuses the following combinations of devices and applications of infringing claim 1 of the '652 patent:

- Samsung Player Devices with vTuner and "DLNA," Spotify or Pandora
- Samsung Player Devices with a web browser and "DLNA," Spotify or Pandora
- Samsung Mobile Devices with Slacker

See CX-0669C (Houh RWS) Q/A 342.

Asserted claims 11 and 13 of the '652 patent depend from claim 1. Although BHM has also accused combinations including "DLNA" and Slacker of infringing claim 1, BHM has only accused Spotify, Pandora and Google Play Music of meeting the additional limitations of dependent claims 11 and 13. Specifically, BHM has accused the following combinations of infringing these dependent claims:

- Samsung Player Devices with Spotify and vTuner or a web browser - claims 11 and 13
- Samsung Player Devices with Pandora and vTuner or a web browser - claims 11 and 13
- Samsung Mobile Devices with Slacker and Google Play Music - claim 11

CX-0669C (Houh RWS) Q342.

a. DLNA (Mobile and Player Devices)

BHM has accused Samsung Mobile and Player Devices with what it refers to as "DLNA" of infringing claims 9 and 14 of the '952 patent and, when combined with other accused applications, claim 1 of the '652 patent. Under the heading "DLNA," BHM groups several applications, libraries, and functionalities together, including Nearby Devices, AllShare,

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in a separate section below.

AllShare Play, and Samsung Link. BHM, however, has not specified how it contends any one of these technologies meets all the limitations of any asserted claim. RX-0669C (Houh RWS) Q82-83.

As discussed above in connection with the '873 patent, DLNA refers to a set of guidelines incorporating preexisting public standards that define a set of interoperability protocols that allow devices to communicate and share media, even when the devices are designed and manufactured by different companies. RX-0669C (Houh RWS) Q84.

BHM's allegations regarding infringement of the '952 and '652 patents focus on the "two-box model" implementation of DLNA. RX-0669C (Houh RWS) Q88. The two-box model includes a server, which is a device that stores the content, and a renderer or a player, which is a device that can display or play the content. [

]. RX-0669C (Houh RWS) Q87-88, 156. [

]. *Id.*

b. Slacker (Mobile Devices Only)

BHM has accused Samsung Mobile Devices with Slacker of infringing claim 9 of the '952 patent, claim 1 of the '652 patent alone or in combination with other accused applications, and claims 11 and 13 of the '652 patent when used in combination with Google Play Music. Slacker is a network-based streaming music service provided by Slacker, Inc. that allows users to browse a library of digital music, listen to songs, and create playlists. RX-0669C (Houh RWS) Q93-97. Users can also listen to custom radio stations personalized for an individual user's account based on song ratings provided by the user of that account. *Id.* Slacker offers a free option and two levels of paid service: Slacker Radio Plus and Slacker Premium. *Id.*

c. Spotify (Player Devices Only)

BHM has accused Samsung Player Devices with Spotify of infringing claim 9 of the '952 patent and, when used in combination with vTuner or the web browser, of infringing claims 1, 11, and 13 of the '652 patent. Spotify is a network-based streaming music service provided by the Swedish company Spotify AB. Spotify has both a free service and two tiers of paid service, including "unlimited" and "premium" services. RX-0669C (Houh RWS) Q100-05. The "premium" account costs $9.99 per month and allows users of mobile devices to download music and listen to that music offline. *Id.* In order to use Spotify on the Samsung Player Devices, the user must have a premium paid account. *Id.*

d. Pandora (Player Devices Only)

BHM has accused Samsung Player Devices with Pandora of infringing claim 9 of the '952 patent and, when used in combination with vTuner or the web browser, of infringing claims 1, 11 and 13 of the '652 patent. Pandora is a network-based streaming music service, which may be personalized for an individual account based on song ratings provided by the user of that account. RX-0669C (Houh RWS) at Q106-08. Pandora is offered as a free service and as a premium service called Pandora One. *Id.*

e. vTuner (Player Devices Only)

BHM has accused vTuner on Samsung Player Devices of infringing claims 1, 11 and 13 of the '652 patent, but only when used in conjunction with either Pandora or Spotify. vTuner is a network-based streaming service that allows users to stream audio via various Internet-based sources. RX-0669C (Houh RWS) at Q109.

f. Web Browser (Player Devices Only)

BHM has accused the web browser on Samsung Player Devices, in conjunction with either Pandora or Spotify, of infringing claims 1, 11 and 13 of the '652 patent. RX-0669C (Houh RWS) at Q110-11. BHM has alleged that the web browser on Samsung Player Devices meets the Internet radio broadcast limitations of the these claims. Specifically, BHM has alleged that Internet radio broadcasts can be played from www.shoutcast.com using the web browser. The web browser on Samsung Player Devices is similar to those commonly used on personal computers and other web-enabled devices to access websites on the Internet. *Id.* Nevertheless, Samsung's expert, Dr. Houh, was unable to use the web browser on several of the accused Player Devices to play the alleged Internet radio broadcasts from www.shoutcast.com. *Id.*

2. Importation of the Accused Applications and Functionalities

The record evidence demonstrates that many of the software applications accused of infringing the '952 and '652 patents are not installed on the accused Samsung devices prior to importation. As discussed above, they therefore cannot form the basis of a claim for direct or induced infringement in this investigation because the accused functionality is not present at the time of importation.

The record evidence further shows that BHM's expert Mr. Zatkovich did not independently determine which applications are preinstalled on the accused devices at the time of importation. Mr. Zatkovich testified that he was not present when many of the devices he tested were unpacked and activated, and that he did not provide any record indicating which devices, if any, he participated in unpacking and activating. Zatkovich Tr. 102-103, 104-106. Therefore, he was unable to determine which applications, if any, were preinstalled on the devices at the time of importation. *See id.* Moreover, Mr. Zatkovich updated the software on

some devices, meaning that the software he tested was not the software present on the device at the time of importation. *See* Zatkovich Tr. 104. Mr. Zatkovich relied upon Samsung's verified interrogatory responses to determine which software applications come preinstalled on the Samsung products, and those responses show that [

]. *See* CX-1183C (Samsung Supp. Responses to Interrogatory Nos. 57 and 60, includes Appendix B); CX-1185C (Samsung Appendix C to Supp. Responses to Interrogatory Nos. 57, 60, 70, 71, 72); CX-1189C (Samsung Supp. Responses to First Set of Interrogatory Nos. 1-10, 29-32, 49, 54 and 57).

Once installed on the accused products, each of the applications requires that users take additional steps before accessing the accused functionality. For example, in cases where a paid account is needed, the user would need to sign up for a paid account and log in to that account, an action that could occur only after importation into the United States. Mr. Zatkovich testified that he analyzed only paid accounts for Pandora, Slacker, and Spotify. *See* Zatkovich Tr. 106-107, 136.

In addition, all of the asserted claims of the '952 and '652 patents require interaction with a network. For Samsung Mobile Devices, users need to either activate the device on a mobile network with a data plan from a carrier, such as AT&T, or connect the Mobile Device to a network, such as a WiFi network, by selecting a router and, if required, entering a password. RX-0669C (Houh RWS) Q/A 114. Similarly, for Samsung Player Devices, users need to take a series of active steps, such as entering passwords and/or connecting cables, in order to connect

the device to a network. *Id.* at Q/A 118. Only when set up correctly do such Mobile and Player Devices have the required network connectivity and/or device functionality to carry out the allegedly infringing functions of the accused applications. *Id.* at Q/A 155.

a. Third Party Applications on Samsung Mobile Devices (Slacker, Google Play Music)[57]

The record evidence shows that [

].

CX-1185C (Samsung Appendix C to Supp. Responses to Interrogatory Nos. 57, 60, 70, 71, 72); CX-1189C (Samsung Supp. Responses to First Set of Interrogatory Nos. 1-10, 29-32, 49, 54 and 57) ([ ]); RX-0669C (Houh RWS) Q/A 116-18, 221-22. [

]. *Id.*

[ ]. *Id.* A stub is an icon that can be used to download the application if the user chooses to click on it. If the Slacker application is not preinstalled on the device or is not offered as a stub, the user would have to search for the application and download it to the device. *See* Samsung Br. at 63-64.

Once installed, the user must take additional steps post-importation to access the accused functionality of the Slacker applications. In order to use Slacker in the manner accused by BHM of infringement, the user must connect the device to the Internet, set up a user account, log into that user account, purchase a premium Slacker account, and take some action on the device that

[57] Google Play Music is discussed in a separate section below.

causes it to interact with one or more servers over the Internet. RX-0669C (Houh RWS) Q/A 93-97, 221-222. All of these required actions occur after importation. *Id.* at Q/A 155-58.

b. Third Party Applications on Samsung Player Devices (Spotify, Pandora, vTuner, web browser)

The record evidence shows that the accused third-party applications [

]. CX-1183C (Samsung Supp. Responses to Interrogatory Nos. 57 and 60, includes Appendix B); RX-0669C (Houh RWS) Q/A 116-18, 281-85, 310. [

]. *See* RX-0669C (Houh RWS) Q/A 116-18, 281-85, 310. If not [ ], the application will only be installed on the accused product if the end user elects to search for and download the application after importation. *See id.* The user is not required to download an accused application, but instead may choose to watch TV or Blu-ray discs without enabling the network-based features. *See id.*

BHM's expert Mr. Zatkovich argues that [

]. CX-1067C (Zatkovich DWS) Q/A 184. The evidence shows, however, that a user of a Samsung Player Device [

]. RX-0669C (Houh RWS) Q/A 101-05. In order to use Spotify on a Samsung Player Device, [

]

[ ], all of which must be done after importation. *Id.* [

]. *Id.*

In order to use Pandora on a Samsung Player Device, the user must [

]. RX-0669C (Houh RWS) Q/A 106-08; RX-0491 (Houh Pandora TV opening screen); Zatkovich Tr. 136.

[

]. *See* RX-0669C (Houh RWS) Q/A 106-08.

The evidence also shows that a vTuner [

]. RX-0669C (Houh RWS) Q/A109.

In addition, in order to use the accused functionality of the web browser on Samsung Player Devices, the user would need to [

]. RX-0669C (Houh RWS) Q/A 110.

c. DLNA on Samsung Player and Mobile Devices

BHM accuses DLNA functionality on the Samsung accused devices of infringing the '652 and '952 patents. Although the evidence shows that [

]

[

]. RX-0669C (Houh RWS) Q/A 91. [

].

Id. [

]. *Id.* [

]. *Id.*

In order to share media using the Samsung S4 phone, the "File Sharing" option had to be turned on as shown in Mr. Zatkovich's test video. *Id*; CPX-0275 (video of DLNA testing done by BHM); RX-0669C (Houh RWS) Q/A 92. Further, Dr. Houh testified that he had to [

]. RX-0669C (Houh RWS) Q/A 92. Only then was he able to [ ]. *Id.* The same was true for [ ]. *Id.*

3. Direct Infringement Analysis

a. BHM's Identification of Representative Products

BHM's expert, Mr. Zatkovich, identified two representative products, a Samsung [ ] phone, model number [ ], and a Samsung TV, model number [ ], when he then analyzed for infringement. CX-1067C (Zatkovich DWS) Q/A 107-08. BHM relies on this analysis to argue that all accused Samsung products infringe the

'952 and '652 patents. *Id.* BHM has failed to show, however, that the "representative" products are the same as the other accused products in all relevant respects. Samsung did not stipulate that any particular products are "representative," and the evidence does not support BHM's contention that all accused devices are the same.

As Samsung's expert Dr. Houh testified, there are differences across different models with respect to the state of the device at the time of importation. RX-0669C (Houh RWS) Q/A 112-15; Houh Tr. 1198-1200. For example, a phone is not representative of a tablet, and a TV is not representative of a Blu-Ray player or a Home Theatre, as there are necessarily hardware differences. *Id.* Moreover, one specific phone or TV is not even necessarily representative of all other phones or TVs because these devices also may differ with respect to hardware, operating systems, and/or other software installed at the time of importation. *Id.* For example, the [

]. *Id.* In addition, Dr. Houh's testing indicated that [

]. *Id.*

Therefore, it is determined that the Samsung [ ] and the Samsung TV [ ] that BHM analyzed for infringement purposes is not representative of all accused Samsung Mobile Devices and Player Devices, respectively. Any finding of infringement with respect to these two accused Samsung products will be limited solely to these two products, and will not be extended to the entire corpus of Samsung accused products.

b. Assignment of Playlists to Accused Devices

The evidence adduced by BHM at the hearing fails to shows that the accused products satisfy the "playlist assigned to the electronic device" limitation recited in all asserted claims of the '952 and '652 patents. The evidence does shows that [

].

The construction of "playlist assigned to the electronic device" adopted above is "designated for use on a specific electronic device." The playlists identified by Mr. Zatkovich are [

]. Moreover, Mr. Zatkovich very little evidence or analysis of the "assigned to an electronic device" limitation under the adopted construction of this term. RX-0669C (Houh RWS) Q235-36.

BHM and Mr. Zatkovich have held various positions as to when and how they allege that a playlist is assigned to a device. First, Mr. Zatkovich testified that playlists are [

], consistent with BHM's proposed construction, which equates "directing" and "assigning." CX-1067C (Zatkovich DWS) Q160-61, 175, 178, 198, 216. During cross examination, however, he testified that [

]. *See* Zatkovich Tr. 93-94.

During cross examination, Mr. Zatkovich also testified that the "playlists" in the accused applications [ ]. *See* Zatkovich Tr. 119-122, 124-125, 174-175, 175-176. Mr. Zatkovich, however, also testified that [

]. Zatkovich Tr. 125, 127, 134, 136-137, 150.

Indeed, Mr. Zatkovich testified that playlists [

]. *Id.* Mr. Zatkovich further testified that a playlist [

]. *See* Zatkovich Tr. 152.

As Dr. Houh explained, one of skill in the art would not consider the mere receipt of [

] to meet the "assigned to the electronic device" limitation. RX-0669C (Houh RWS) Q43-44. When a user uses a device to access an online service, data is necessarily sent to or received by that device. *Id.* When a user [

]. *Id.* Similarly, if a user [

]. *Id.*; Zatkovich Tr. 125, 175-176.

In some instances, Mr. Zatkovich also relied on [

]. CX-1067C (Zatkovich DWS) Q175. Such reliance is misplaced. As Dr. Houh explained, [

]. RX-0669C (Houh RWS) Q291. [

]. *Id.* [

].

As detailed below for each of the accused applications, the evidence establishes that playlists [ ]. Therefore, the accused Samsung Devices do not meet the "playlist assigned to the electronic device" under limitation under any proposed construction of the term, including the construction adopted

above, and therefore cannot infringe any asserted claim of the '952 or '652 patents. *See* RX-0669C (Houh RWS) Q234-39, 297-302, 311-331,.

i. Slacker

The record evidence shows that Samsung Mobile Devices with Slacker do not satisfy the "playlist assigned to an electronic device" limitation of claim 9 of the '952 patent or claim 1 of the '652 patent. Slacker [

]. RX-0669C (Houh RWS) Q96, 223. [

]. *Id.* at Q223. [

]. *Id.* at Q223.

In his allegations regarding Samsung Mobile Devices with Slacker, Mr. Zatkovich relies on packet trace evidence from an LG device, which cannot prove how a Samsung device operates. RX-0669C (Houh RWS) Q224; CX-1067C (Zatkovich DWS) Q160; CX-0224C (Slacker packet trace for LG). Mr. Zatkovich does not identify any device-specific identifier used by the Slacker application, and he does not identify a device-specific identifier associated with requests made to the server that result in the receipt of an alleged playlist. Instead, Mr. Zatkovich points to the model number of the device, which is not device specific, and to [ ]. CX-1067C (Zatkovich DWS) Q160; RX-0669C (Houh RWS) Q227. Mr. Zatkovich testified, however, that he assumed that there was some unique identifier passed when a playlist was requested, and that he was not sure because he would need to look at the source code to do that analysis. *See* Zatkovich Tr. 151. Yet, Mr. Zatkovich did not review any Slacker source code in this investigation. *See id.* Further, the LG packet trace he relies on fails to show

that the playlist request includes a unique identifier for the device because it only included the model number [ ]. RX-0669C (Houh RWS) Q226. [

]. *Id.* at Q225-28; CPX-0217 (165_Slacker_LGE970); Zatkovich Tr. 93-94; RDX-0525C.018-019.

Moreover, [

]. RX-0669C (Houh RWS) Q230-33; RX-0555C (Slacker API document) at SLACK001-0000176.

Mr. Zatkovich also points to photographs of a Samsung phone that appears to be running the Slacker application to prove satisfaction of this claim limitation. CX-1067C (Zatkovich DWS) Q160; RX-0669C (Houh RWS) Q224. These photographs show only what is displayed on the device at a particular moment in time, and do not provide any evidence that any limitation, including the "assigned to an electronic device" limitation, of the asserted claims is met. *Id.* Mr. Zatkovich also points to [

]. RX-0669C (Houh RWS) Q395.

ii. Spotify

The record evidence shows that Samsung Player Devices with Spotify do not satisfy the "playlist assigned to an electronic device" limitation of claim 9 of the '952 patent or claim 1 of the '652 patent. A user must log in to a Spotify account, via Spotify or Facebook, before using

any accused Spotify functionality. RX-0669C (Houh RWS) Q287; RPX-0255 (Spotify video produced by BHM); Zatkovich Tr. 172. Spotify [

]. *Id.* In fact, the evidence shows that [

]. CX-1403C (M. Ericsson Decl.) ¶12; Zatkovich Tr. 174. As with the other accused applications, Mr. Zatkovich testified that [

]. *See* Zatkovich Tr. 175-176.

Samsung's expert Dr. Houh tested the application on Samsung devices, analyzed the source code, and determined that the [ ]. RX-0669C (RWS Houh) Q288-93. Mr. Zatkovich points to

] as evidence in support of his infringement analysis, but [

]. *Id.* at Q291; CX-0661C ([ ]) (SPOT-BHM-00094). In fact, the user [

]. *Id.* [

]. RX-0669C (RWS Houh) Q292-95; RPX-0174C (Spotify Source Code) (SPOT-BHM-SC-000876); RPX-0083C (Spotify Source Code) (SPOT-BHM-SC-000232-242).

iii. Pandora

The record evidence shows that Samsung Player Devices with Pandora do not satisfy the "playlist assigned to an electronic device" limitation of claim 9 of the '952 patent or claim 1 of the '652 patent. Pandora [

]. *See* Zatkovich Tr. 137. According to BHM's expert Mr. Zatkovich, [

]. *See* Zatkovich Tr. 137.

As explained by a Pandora representative, [

]. *See* JX-0015C (C. Edwards Decl.) ¶ 7(i). As Mr. Zatkovich testified, [

]. *Id.*; Zatkovich Tr. 143, 144. Moreover, as shown in the [

]. *See* JX-0015C (C. Edwards Decl.) ¶ 7(i), CX-0383C (Pandora API) (PNDRA_000029-31, 75-76); RX-0669C (Houh RWS) Q311-17.

Mr. Zatkovich also points to [

]. CX-1067C (Zatkovich DWS) Q214. The evidence shows that [

]. CX-0383C (Pandora API)

(PNDRA_000080-83); RX-0669C (Houh RWS) Q311-17. [

]. CX-0383C (Pandora API) (PNDRA_000082-83). [

]. *Id.* (PNDRA_0000137-138); RX-0669C (Houh RWS) Q314. [

]. *Id.* [

]. *Id.* [

]. *Id.* [

]. CX-0383C (Pandora API) (PNDRA_000080-81); RX-0669C (Houh RWS) Q317. [

]. *Id.*

iv. DLNA

With respect to the accused "DLNA" functionality, Mr. Zatkovich has not identified a "playlist" that is sent to a device, and has not established that a playlist is "assigned to an electronic device" as required by all asserted claims of the '952 and '652 patents. RX-0669C (Houh RWS) Q185-90. [

]. RX-0669C (Houh RWS) Q171. [

]. *Id.*

Dr. Houh examined the source code for Samsung's implementations of "DLNA," reviewed the testimony of Samsung's witnesses, and conducted testing of Samsung's devices. As a result, he concluded that [

]. RX-0669C (Houh RWS) Q171-90. For example, [

]. *Id.* at Q171-72. [

]. RX-0669C (Houh RWS) Q171-72; RPX-0077C (AllShare Framework Source Code); RPX-0078C (AllShare Framework Source Code); RPX-0081C (AllShare Framework Source Code). [

]. *Id.* [

]. *Id.*

Similarly, for Samsung Link and AllShare Play, [

].

RX-0669C (Houh RWS) Q174. [

]. *Id.* [

]. *Id.*

Dr. Houh also conducted a test in which he [

]. RX-0669C (Houh RWS) Q177-81; RX-0548 (Houh photographs of TV during "DLNA" testing); RX-0549 (Houh photographs of [ ] during "DLNA" testing). [

]. *Id.* This test demonstrates that [

]. *Id.*

c. Download and Storage of Songs

Each of the asserted claims of the '952 and '652 patents require that the device either carry out or be adapted to carry out the following functions: 1) receive a "playlist," 2) the playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device, and 3) obtain the ones of the plurality of songs.

All proposed constructions of the term "obtaining the ones of the plurality of songs," including the construction adopted above, requires that the songs be downloaded and stored on the device. Further, the adopted construction of "playlist," which is "a list of one or more audio files for playback," includes the term "playback" that is construed to mean "playing audio content stored on the electronic device." Therefore, under the adopted constructions, the term "playlist" also requires that the songs be downloaded and stored on the device.

As discussed further below, BHM has not provided evidence establishing that the accused applications download and store songs. BHM also has not provided evidence establishing that an entire song is stored on any accused Samsung device in connection with any accused application, let alone that multiple songs are stored as required by the claims. On the

contrary, [

].

i. DLNA

Mr. Zatkovich provides no evidence to show that songs are downloaded and stored on the accused Samsung Mobile and Player Devices using any of the functionalities or applications he refers to as "DLNA." RX-0669C (Houh RWS) Q191. Mr. Zatkovich does cite to photographs [ ], but neither the photographs nor the [ ]. CX-1067C (Zatkovich DWS) Q117-18.

Dr. Houh's own testing and examination of the Samsung AllShare Framework source code confirms that [ ]. RX-0669C (Houh RWS) Q194; RPX-0099C (Source code for AllShare Framework); RPX-0079C (Source code for AllShare Framework); RPX-0080C (Source code for AllShare Framework). Dr. Houh conducted several tests where he [ ]. RX-0669C (Houh RWS) Q195-97. Inasmuch as the evidence establishes that [ ], when using the accused "DLNA" functionality, Samsung Mobile and Player Devices with the accused "DLNA" functionality do not infringe any asserted claim of the '952 or '652 patents. *See* RX-0669C (Houh RWS) Q191-211.

ii. Slacker

Similarly, Mr. Zatkovich does provide evidence showing that [

]

[ ]. RX-0669C (Houh RWS) Q240-42; JX-0076C (Kindig Dep.) at 46-47. Inasmuch as the evidence establishes that [ ], Samsung Mobile Devices with the Slacker application do not infringe any asserted claim of the '952 or '652 patents. *See* RX-0669C (Houh RWS) Q240-44.

iii. Spotify

Mr. Zatkovich does not provide evidence showing that songs are downloaded and stored using the accused functionality of the Spotify application. Dr. Houh testified that, [ ]. RX-0669C (Houh RWS) Q303-04. [ ]. *Id.* Samsung Player Devices with the Spotify application thus do not infringe any asserted claim of the '952 or '652 patents. RX-0669C (Houh RWS) Q303-06.

iv. Pandora

Mr. Zatkovich also does not provide evidence to show that songs are downloaded and stored using the accused functionality of the Pandora application. Dr. Houh testified, consistent with the Pandora Declaration, that [ ]. RX-0669C (Houh RWS) Q335-36; JX-0015C (C. Edwards Decl.) ¶ 7 (v-vii). [ ]. *Id.* Samsung Player Devices with the Pandora application thus do not infringe any asserted claim of the '952 or '652 patents. *See* RX-0669C (Houh RWS) Q335-36, 339-40.

d. Receipt of a Playlist

i. DLNA

Mr. Zatkovich and BHM have not established that Samsung Devices with "DLNA" receive a "playlist" as required by all of the asserted claims. They instead point to the *display* of

alleged playlists. As Dr. Houh explained, Mr. Zatkovich mischaracterized the testing that he relies on for his opinion that the alleged "playlist" is received by an electronic device using Samsung Link. *See* CPX-0278 (video of test 502 without audio). In that test, which was actually conducted by Dr. Loy, a folder is labeled "Test Playlist" is copied into the shared Music folder on the PC. *Id.* Mr. Zatkovich claims that the test shows that the playlist is then received by electronic device. CX-1067C (DWS Zatkovich) Q112. On the contrary, the folder was not a list of audio files but rather a folder containing *actual* audio files. RX-0669C (RWS Houh) Q202; CPX-0278 (video of test 502 without audio). Dr. Houh attempted to replicate test 502 and [

]. RX-0669C (RWS Houh) Q203-11; RX-0550 (Houh photographic evidence regarding DLNA); RX-0551 (Houh photographic evidence regarding DLNA); RX-0552 (Houh photographic evidence regarding DLNA); RX-0553 (Houh photographic evidence regarding DLNA); RX-0690 (Screenshot of Windows Media Player); RX-0691 (Screenshot of files in ZatkovichTestFolder); RX-0692 (Screenshot of files outside ZatkovichTestFolder). Further, the audio files themselves are not transferred to the device in the step Mr. Zatkovich points to and he presented no evidence of what data is actually transferred or in what form it is transferred. *Id.*

Furthermore, as discussed above with respect to the '873 patent, BHM argues that Weast fails to disclose the playlist limitation of the '873 patent because the system disclosed in Weast "merely lists the files available." CX-1401C (DWS Loy) Q107; Tr. (Loy) 406:12-407:20. Applying that same argument to the '952 and '652 patents, where BHM proposes the same construction for playlist, Samsung Link and AllShare Play do not provide or receive a "playlist" under BHM's construction because these applications [

]. RX-0678C (RWS Yook) Q48. Likewise, applications that use

the AllShare Framework, AllShare, or Nearby Devices [

]. Similarly, Mr. Zatkovich has attempted to distinguish the Ninja Jukebox reference from the '952 and '652 patents by arguing that "[a] catalog of songs is not a playlist . . . Rather, the full catalog, by definition, is the full universe of songs that could potentially be accessed via the system, not a set of songs that is assigned or directed to a user's device." CX-1400C (RWS Zatkovich) Q48. Again, applying Mr. Zatkovich's interpretation of playlist from his invalidity analysis, devices using the functionalities that Mr. Zatkovich refers to as "DLNA" also do not receive "a playlist assigned to the device" because they receive "the full listing of songs that could be potentially accessed via the system."

Finally, as discussed earlier, devices using [

]. *See, e.g.*, RX-0669C (RWS Houh) Q198-201.

ii. Pandora

Similarly, even if the one were to apply BHM's construction of "playlist," Samsung Player Devices with Pandora do not infringe. The Wireshark packet traces that BHM previously relied upon and that Dr. Houh analyzed demonstrate that the response to the "getPlaylist" function of Pandora includes references to media items that are not played at all, and thus the media items are not arranged to be played in a sequence as required by BHM's construction. RX-0669C (RWS Houh) Q337-38.

Further, Mr. Zatkovich's testimony establishes that Pandora does not fall within his understanding of the claimed playlist because [ ]

[ ]. When attempting to distinguish the RealPlayer prior art reference, Mr. Zatkovich testified that the metafile in the Real Player system was not a playlist because the contents of the metafile were not identified to the user. CX-1400C (RWS Zatkovich) Q74-75. Specifically, in RealPlayer, a song title is not displayed until the song starts playing. *Id.* [

]. *See* Tr. (Zatkovich) 135:14-25. Thus, if the metafile in Real Player is not a playlist because the user does not see the names of the songs on the list until they are played, the [ ].

e. Additional Limitations of '952 Patent Claim 14

i. DLNA

BHM also asserts claim 14 of the '952 patent against Samsung Mobile and Player Devices with "DLNA." Inasmuch as claim 14 depends from claim 9, Samsung Mobile and Player Devices with "DLNA" do not infringe claim 14 for the same reasons discussed above with respect to claim 9. In addition, Samsung Mobile and Player Devices do not infringe claim 14 because they do not satisfy the additional limitation requiring that "the personal audio network server enables a user to assign a playlist to the electronic device."

Mr. Zatkovich has not identified the personal audio network server, nor has he established that there is a personal audio network server that enables the user to assign a playlist to a device. Mr. Zatkovich argues that the limitation is met because [

]. CX-1067C (Zatkovich DWS) Q119. However, as Dr. Houh

explained, [

]. RX-0669C (Houh RWS) Q214-17; CX-0735 (Galaxy Note II FAQ - DLNA). Allowing a device to [

] is not the same as enabling the user to assign a playlist to the device. *Id.*

Moreover, the server does not "enable a user to assign a playlist to the electronic device" as required by claim 14 of the '952 patent. Instead, the user [

]. *See* RX-0669C (Houh RWS) Q214-17.

[

]. *Id.* [

]. *Id.*

Similarly, allowing devices to register with a content delivery system and associate with each other and cloud storage does not enable a user to assign a playlist to a device. RX-0669C (Houh RWS) Q217. Such registration and any related association between devices merely allows devices to communicate with each other; it does not result in the "assigning" of media to any device or set of devices. *Id.*

f. Additional Limitations of the '652 Asserted Claims

The evidence shows that Samsung Mobile and Player Devices do not infringe claims 1, 11 or 13 of the '652 patent. As an initial matter, Mr. Zatkovich and BHM rely on the same analysis for the playlist limitations of the asserted claims of the '652 patent as relied upon for the asserted claims of the '952 patent. Therefore, for the reasons discussed above as to why Samsung Mobile and Player Devices do not infringe the asserted claims of the '952 patent, they do not infringe the asserted claims of the '652 patent. *See* RX-0669C (Houh RWS) Q349-60. In

addition, Samsung Mobile and Player Devices also do not infringe the '652 patent for the additional reasons set forth below.

i. Required Structural Elements

Claim 1 of the '652 patent, from which claims 11 and 13 depend, requires a) a network interface enabling the electronic device to receive an Internet radio broadcast and being further adapted to communicatively couple the electronic device to a central system, b) a system enabling playback of audio content from a playlist assigned to the electronic device via the central system, and c) a control system associated with the network interface and the system enabling playback of the audio content indicated by the playlist. Mr. Zatkovich has not identified the underlined structural elements for any of the accused devices and has not provided evidence that any accused device meets these limitations of the asserted claims. *See* RX-0669C (Houh RWS) Q348.

Mr. Zatkovich also has not specifically identified the "central system" for "DLNA," Slacker, Spotify, or Pandora. Thus, BHM has not established that accused devices "receive the playlist assigned to the electronic device *from the central system*" or "receive information *from the central system* enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source," as required by claim 1 of the '652 patent. RX-0669C (Houh RWS) Q351, 354, 356, 358, 360; JX-0009 ('652 patent) at claim 1 (emphasis added).

Further, BHM has not established that the accused devices with "DLNA" "receive information from the central system enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source" as required by claim 1 of the '652 patent. As demonstrated by the record evidence, [

]

[

]. RX-0669C (Houh RWS) Q351. [

]. *Id.* This means that [

]. *Id.* The claims, however, require that the central system provide the information that enables obtaining, but that the songs be obtained from a remote source. *Id.* The server cannot be both the central system and the remote source at the same time.

ii. Internet Radio Limitations

Claim 1 of the '652 patent also requires that the accused device be able to operate in an "internet radio" mode of operation in which the device can "receive and play an internet radio broadcast." JX-0009 ('652 patent) at claim 1. BHM has failed to show that vTuner, the web browser, or Slacker provides an "internet radio" mode of operation as required by claim 1.

For vTuner, the only evidence Mr. Zatkovich cited in support of an "internet radio" mode of operation is two photographs. CX-1067C (Zatkovich DWS) Q229; CX-0451 (Photographs). Photographs do not show whether the device was playing audio, and Mr. Zatkovich provides no evidence or explanation of what the alleged audio was or how it was received. RX-0669C (Houh RWS) Q361; CX-0451 (Photographs). Similarly, for the web browser, Mr. Zatkovich cited only photographs illustrating a web-browser with access to www.shoutcast.com. CX-1067C (Zatkovich DWS) Q246; CX-0449 (Photographs). These photographs also do not establish that the device was actually playing audio, or if audio was playing, what the audio was or from where it was received. RX-0669C (Houh RWS) Q362. Moreover, Dr. Houh's own testing showed that [ ].

Id. Therefore, Mr. Zatkovich has not established that vTuner or the web browser is capable of playing an internet radio broadcast. *Id.* at Q361-62.

Mr. Zatkovich also relied on a photograph to show that Slacker meets the internet radio broadcast limitation. CX-1067C (Zatkovich DWS) Q254; CX-0391 (Photographs). Again, the photograph does not establish whether the device was playing audio, or if it was, what audio was being played or from where that audio was received. RX-0669C (Houh RWS) Q363. Even if the device were playing audio, other aspects of the photograph, such as the presence of a "pause" button and the label "SC Digital Update," suggest that it was playing a recorded audio clip and not an internet radio broadcast. *Id.* Thus BHM has failed to show that the Slacker application meets the internet radio broadcast limitation. *See* RX-0669C (Houh RWS) Q263-64.

iii. Internet Radio and Playlist Modes of Operation

Claim 1 of the '652 patent requires that a device "enable a user of the electronic device to select a desired mode of operation from a plurality of modes of operation," namely, the internet radio mode and playlist mode. JX-0009 ('652 patent) at claim 1. In many cases, BHM's infringement allegations rely on two separate applications to satisfy the "internet radio mode" and "playlist mode" of operation. For example, BHM accuses Samsung Player Devices with both the vTuner (internet radio) and Spotify (playlist) applications of infringing. As Dr. Houh testified, the fact that a user can install multiple applications on a device to provide different functionalities does not create two "modes of operation" for the device; rather, it provides two separate applications for use on the device. RX-0669C (Houh RWS) Q365.

4. Indirect Infringement

BHM alleges that Samsung has contributed to and/or induced infringement of certain asserted claims.[58] As discussed in further detail below, BHM has not shown that Samsung is liable for indirect infringement of the asserted claims of the '952 and '652 patents.

a. Predicate Acts of Direct Infringement

BHM has failed to adduce evidence showing direct infringement of the '652 and '952 patents by a third party, which is a necessary predicate for its indirect infringement claims. BHM has pointed to use by certain Samsung employees to prove direct infringement, but BHM has not presented any evidence that a Samsung employee has actually performed the claim elements. For example, Mr. Zatkovich cites to testimony that certain employees of SEA and STA have used Samsung Link on accused devices in the United States, but use of Samsung Link is not enough to prove direct infringement, particularly given the many noninfringing ways it can be used. *See* CX-1067C (Zatkovich DWS) Q123.

BHM presented two categories of evidence relating to alleged infringement by customers: (1) user manuals, product specifications and other marketing materials and (2) [

]. This evidence is not sufficient to show direct infringement by customers, for it merely demonstrates that Samsung may have promoted the use of certain applications, those applications may have been used on a Samsung device in the United States. In particular, as discussed below, the accused devices and applications can be used in noninfringing ways. For example, for the '952 and '652 patents, Mr. Zatkovich cited to

[58] It is not entirely clear for which claims BHM still alleges indirect infringement. The Joint Outline of Issues indicates that BHM is asserting direct infringement only for the asserted device claims from the '873 patent (claims 23, 30, 34, 37 and 45) and the '652 patent (claims 1, 11 and 13). BHM presumably alleges indirect infringement of all other asserted claims, as well as possibly the asserted device claims.

user manuals, service guides, instructional videos, and marketing materials as evidence of "active encouragement" and use. *See, e.g.*, CX-1067C (DWS Zatkovich) Q121-22, 169, 223, 676; *see also* RX-0669C (RWS Houh) Q395, 399, 404 (responding to evidence presented by BHM). Mr. Zatkovich also offered evidence of [

]. *See, e.g.*, CX-1067C (DWS Zatkovich) Q121-22, 188, 223. This evidence does not establish direct infringement, however, for it does not show that any end user actually performed the specific elements or steps recited in the asserted claims.

b. Knowledge and Specific Intent

To prevail in its claims of contributory infringement and inducement, BHM must prove that Samsung knew of the asserted patents and specifically intended to contribute to or induce infringement at the time of the allegedly infringing acts. The record establishes that Samsung did not have notice of the asserted patents until [

]. *See* JX-0078 (Kwon Dep.) at 40. Complaints filed with the Commission and in a related district court action alone are insufficient to show the required knowledge to support an indirect infringement claim. *See, e.g.*, *Certain Video Game Systems and Wireless Controllers and Components Thereof*, Inv. No. 337-TA-770, Comm'n Op. at 32 (Nov. 6, 2012) (where the only evidence complainant cites for a respondent's knowledge of the patent are complaints filed with the Commission and in district court, "[t]his is insufficient evidence of the required knowledge to show contributory infringement.").

The evidence further shows that the accused devices and applications were already in the market and capable of many substantial noninfringing uses before Samsung had notice of the

patents. *See* RX-0669C (Houh RWS) Q/A 418. In addition, the fact that many of the accused applications were designed by third parties, and not by Samsung, weighs against a finding that Samsung had a specific intent to induce or contribute to infringement of the asserted patents. *See, e.g.*, RX-0668C (RWS Heppe) Q30.

c. Substantial Noninfringing Uses

BHM has failed to show that the accused devices and functionalities lack substantial noninfringing uses, both at the device level and at the application level, thereby forestalling a finding of indirect infringement.

If the accused devices are considered as the component at issue for the indirect infringement analysis, the record evidence demonstrates that the accused mobile devices, televisions, Blu-ray players and home theater systems are capable of many substantial noninfringing uses. The accused mobile devices are multi-use devices capable of being used to communicate, such as through a cellular communication system or network, or by accessing the Internet via a WiFi access point. *See* RX-0668C (Heppe RWS) Q33. They are also capable of using hundreds, if not thousands, of different applications offered for Android devices. They can be used without a cellular or Internet connection in airplane mode as a PDA or to play music or games or watch videos. *Id.* They also can be used to make phone calls, send and receive texts and e-mails, access information, monitor health, view videos, and access productivity tools and applications. *Id.*; RX-0669C (Houh RWS) Q428. Similarly, Samsung televisions can be used to watch television shows or movies. RX-0669C (Houh RWS) Q429; *see also* RX-0671C (Lipoff RWS) Q334-39.

It the accused applications are treated as the component at issue for the indirect infringement analysis, the record evidence demonstrates that the applications are capable of

substantial noninfringing uses. For instance, the functionality that Mr. Zatkovich refers to as "DLNA" has other substantial noninfringing uses such as browsing, sharing and displaying pictures, and playing videos saved on other devices over a wireless access point or the Internet. *See* RX-0669C (Houh RWS) Q432. It can also be used to play a single audio file. In the case of the '652 patent, "DLNA" must be used along with another application, such as vTuner or a web browser on the player devices and Slacker on the mobile devices. *Id.* A user could use one application or the other, but not both, thereby employing noninfringing uses. *Id.*

The various third-party applications accused in conjunction with the Samsung device also are capable of substantial noninfringing uses. For example, with Slacker, a user can [

]. *See* RX-0669C (Houh RWS) Q/A 433. Similarly, Spotify has substantial noninfringing uses such as [

]. *See id.* Q/A 435. Further, the Spotify application [

]. *See id.* The application also includes [

]. *See* RX-0669C (Houh RWS) Q407. With respect to the '652 patent, a web browser also has substantial noninfringing uses, including browsing the web generally. *See* RX-0669C (Houh RWS) Q437.

D. Infringement Analysis of LG Accused Products

1. Overview of BHM's Infringement Allegations Against LG

BHM asserts infringement of claims 9 and 14 of the '952 patent and claims 1, 11, and 13 of the '652 patent with respect to various applications. Order No. 49 at 2; RX-0670C (Jeffay

RWS) Q/A 17-20; CX-1067C (Zatkovich DWS) Q/A 269-397; RX-0740C (Email Identifying Accusations).

2. Overview of Accused LG Products and Accused Applications

BHM accuses two categories of LG products of infringing claims of the '952/'652 patents: (1) LG Player Devices[59] and (2) LG Mobile Devices.[60] Collectively these products are referred to as LG's Accused Products. The LG Accused Products are not a homogenous group, for the evidence shows that there are significant differences in software between them. RX-0632C (LG App. A); RX-0670C (Jeffay RWS) Q/A 40, 42. Not only do [

]. *Id.*; RX-0680C (H. Park DWS) Q/A 20-26.

BHM alleges that LG's Accused Products infringe based on the installation and operation of certain LG and third-party applications associated with them.[61] RX-0670C (Jeffay RWS) Q/A 44. BHM's infringement allegations are directed to LG Mobile Devices associated with Smart Share, Google Play Music, and Slacker, and LG Player Devices associated with Smart Share, Google Play Music, Spotify, Pandora, vTuner, and a web browser for accessing Shoutcast, collectively called the Accused Applications. RX-0670C (Jeffay RWS) Q/A 44. BHM has

[59] The accused LG Player Devices include [ ] models of LG televisions, [ ] models of LG Blu-ray players, and five models of LG home theater systems. RX-0632C (LG App. A); RX-0670C (Jeffay RWS) Q/A 41; CX-1067C (Zatkovich DWS) Q/A 397.

[60] The accused LG Mobile Devices include [ ] models of LG phones and [ ] tablet. RX-0632C (LG App. A); RX-0670C (Jeffay RWS) Q/A 38; CX-1067C (Zatkovich DWS) Q/A 397.

[61] BHM's infringement allegations with respect to the '952/'652 patents and Google Play Music are addressed in a separate section below.

withdrawn and therefore waived its previous infringement allegations with respect to Aupeo, Rhapsody, Amazon Cloud/MP3 Player, and iHeartRadio.

While a few of the Accused Applications are [

]. RX-0670C (Jeffay RWS) Q/A 44; RX-0632C (LG App. A). [

]. *Id.* For example, [

]. *Id.*

[

]. RX-0670C (Jeffay RWS) Q/A 46-54; RX-0680C (H. Park DWS) Q/A 27, 29-31, 35; JX-0073C (J. Kim Dep.) at 143; JX-0066C (D. Ghosh Dep.) at 187-188; JX-0076C (B. Kindig Dep.) at 82. To the extent [

]. *See id.*; RX-0670C (Jeffay RWS) Q/A 54; RX-0680C (H. Park DWS) Q/A 27-35.

a. Pandora

BHM asserts infringement of claim 9 of the '952 patent by LG Player Devices associated with Pandora and claims 1, 11, and 13 of the '652 patent by LG Player Devices associated with Pandora in combination with vTuner or a web browser for accessing the Shoutcast website. CX-1067C (Zatkovich DWS) Q/A 358-70, 374-76, 384-85; RX-0670C (Jeffay RWS) Q/A 199-200. In asserting infringement, BHM did not analyze or rely on any client or server-side

source code for Pandora. RX-0670C (Jeffay RWS) Q/A 64; CX-1067C (Zatkovich DWS) Q/A 358-70.

The record evidence shows that Pandora is a third-party streaming music application allowing users to create custom "stations" to listen to music based on their preferences. RX-0670C (Jeffay RWS) Q/A 59. [

]. *Id.*; CX-0383C ([ ]) at PNDRA_00027. [

]. CX-0383C ([ ]) at PNDRA_00029; RX-0670C (Jeffay RWS) Q/A 59.

[

]. RX-0670C (Jeffay RWS) Q/A 60; JX-0015C (Pandora Decl.) ¶ 7; CX-0383C ([ ]) at PNDRA_00029. To use Pandora, a user login account is required. RX-0670C (Jeffay RWS) Q/A 59. Music is thus streamed to a user's account. As a result, "[

]." *Id.* [

]. *Id.* Q/A 62; JX-0015C (Pandora Decl.) ¶ 7(v).

[

]. RX-0670C (Jeffay RWS) Q/A 63; JX-0015C (Pandora Decl.) ¶ 7(vi). "[

]."

RX-0670C (Jeffay RWS) Q/A 63; JX-0015C (Pandora Decl.) ¶ 7(vi). [ ]

[ ].

RX-0670C (Jeffay RWS) Q/A 63; JX-0015C (Pandora Decl.) ¶¶ 7(v), 7(vi). The evidence shows that [ ]. RX-0670C (Jeffay RWS) Q/A 63; JX-0015C (Pandora Decl.) ¶ 7(vii). Rather, [

]. RX-0670C (Jeffay RWS) Q/A 63; JX-0015C (Pandora Decl.) ¶ 7(vii).

The record evidence shows that [

]. RX-0670C (Jeffay RWS) Q/A 61; JX-0015C (Pandora Decl.) ¶ 7(iv). [

]. *Id.*

b. Spotify

BHM asserts infringement of claim 9 of the '952 patent by LG Player Devices associated with Spotify and asserts infringement of claims 1, 11, and 13 of the '652 patent by LG Player Devices associated with Spotify in combination with vTuner or a web browser accessing the Shoutcast website. CX-1067C (Zatkovich DWS) Q/A 343-57, 374, 376, 377-78. Spotify's code and [ ] were made available for inspection in this investigation. RX-0670C (Jeffay RWS) Q/A 78. [ ]. *Id.* at Q/A 68, 78; RX-0744C (Spotify Decl.); CPX-0038C (SPOT-BHM-SC-000001-960). [

]. RX-0670C (Jeffay RWS) Q/A 66-67; RPX-0009C ([ ]); RPX-0010C ([ ]). In addition, BHM's expert did not review Spotify code

for the purpose of determining what code is used by the accused LG Player Devices. RX-0670C (Jeffay RWS) Q/A 261.

Spotify is a third-party social networking and music application. RX-0670C (Jeffay RWS) Q/A 70, 95. In addition to playlist-related functionality, Spotify users can connect with friends and listen to "stations" based on a category or genre of music. *Id.* at Q/A 95. To use Spotify, [ ]. *Id.*; CX-0650C ([ ]) at SPOT-BHM 000602; RX-0670C (Jeffay RWS) Q/A 79; RX-0733C (Spotify Decl.). [ ]. RX-0670C (Jeffay RWS) Q/A 71; CX-0650C ([ ]) at SPOT-BHM 000594. [ ]. RX-0670C (Jeffay RWS) Q/A 71-78; RX-0680C (H. Park DWS) Q/A 16-17; RX-0733C (Spotify Decl.). On LG Player Devices, [ ]. *Id.*; *see also* RX-0670C (Jeffay RWS) Q/A 79, 84-90; RX-0733C (Spotify Decl.).

[ ]. RX-0670C (Jeffay RWS) Q/A 76-80, 91, 92, 107-09; RX-0733C (Spotify Decl.). For example, [ ]. *Id.* Similarly, [ ]. *Id.* Dr. Jeffay's analysis of Spotify confirms that [ ]. RX-0670C (Jeffay RWS) Q/A 91-94; CPX-0038C (Spotify Code) at 0237-241, 254-256, 263, 366, 564-568, 634-636, 736. [ ]

[ ]. RX-0670C (Jeffay RWS) Q/A 76-80, 91; RX-0733C (Spotify Decl.).

The evidence shows that [ ]. RX-0670C (Jeffay RWS) Q/A 84-90, 93, 94; CPX-0038C (Spotify Code), (SPOT-BHM-SC-000161–162, 438-439, 413 (lines 1248-1274), 505-506, 633 (lines 557-598), 471 (lines 281-287, 289-291)); RPX-0010C ([ ]); RPX-0009C ([ ]). LG's expert, Dr. Jeffay, analyzed [ ]. RX-0670C (Jeffay RWS) Q/A 87-90. BHM's expert does not dispute this fact. *Id.* at Q/A 93-94; Zatkovich Tr. 166-168.

c. LG Smart Share

BHM asserts infringement of claims 9 and 14 of the '952 patent by LG Mobile Devices and LG Player Devices associated with LG's Smart Share application, claims 1 and 11 of the '652 patent by LG Player Devices associated with LG's Smart Share application and vTuner or a web browser accessing the Shoutcast website, and claim 1 of the '652 patent by LG Mobile Devices associated with LG's Smart Share application in combination with Slacker. CX-1067C (Zatkovich DWS) Q/A 280-88, 301-06, 374, 376, 384-85, 392.

The evidence shows that LG Smart Share is an application allowing users to share media (*i.e.*, pictures and video) among devices connected to one another on the same network. RX-0670C (Jeffay RWS) Q/A 96. For example, [ ]. *Id.* That is, [ ]

[ ]. *Id.* [

]. *Id.* at Q/A 97.

[ ]. *Id.* [

]. *Id.* For example, [

]. *Id.* [

]. *Id.*

LG made its Smart Share source code available to BHM in this Investigation. RX-0670C (Jeffay RWS) Q/A 98. BHM did not cite to or rely on any Smart Share source code in its infringement allegations. *Id.* at Q/A 98-100; CX-1067C (Zatkovich DWS) Q/A 280-312. LG's expert, Dr. Jeffay, analyzed the Smart Share source code, and his analysis shows that [

]. RX-0670C (Jeffay RWS) Q/A 415-17. In addition, [

]. RX-0670C (Jeffay RWS) Q/A 409-18.

d. Slacker

BHM asserts infringement of claim 9 of the '952 patent by the LG Mobile Devices associated with Slacker, claim 1 of the '652 patent by the LG Mobile Devices associated with Slacker alone or in combination with LG Smart Share, and claims 1, 11, and 13 of the '652 patent by the LG Mobile Devices associated with Slacker alone or in combination with Google Play Music. CX-1067C (Zatkovich DWS) Q/A 327-36.

Slacker is a third-party streaming music application with different subscription levels. RX-0670C (Jeffay RWS) Q/A 105, 110; RX-0570C ([ ]), (SLACK-001-00001); RX-0572C ([ ]), (SLACK-001-0000368). [

]. RX-0670C (Jeffay RWS) Q/A 105, 110; RX-0570C ([ ]), (SLACK-001-0000007, 126, 139-40). [

]. RX-0670C (Jeffay RWS) Q/A 105-07; JX-0076C (B. Kindig Dep.) at 83. The record evidence demonstrates that, [

]. RX-0670C (Jeffay RWS) Q/A 108; JX-0076C (B. Kindig Dep.) at 83. Thus, [

].

Id.

BHM does not cite to or rely on any Slacker source code, but relies instead on Wireshark traces. RX-0670C (Jeffay RWS) Q/A 111; CX-1067C (Zatkovich DWS) Q/A 331-42, 387-96. Among other things, BHM relies on [

]. *Id.*; Zatkovich Tr. 1544-1546.

e. vTuner

BHM asserts infringement of claims 1 and 11 of the '652 patent by LG Player Devices associated with vTuner and LG Smart Share and claims 1, 11, and 13 of the '652 patent by LG Player Devices associated with vTuner and either Pandora or Spotify. CX-1067C (Zatkovich DWS) Q/A 372-79.

vTuner is a third-party application that allows a user to listen to radio streams. RX-0670C (Jeffay RWS) Q/A 112. [

]. RX-0670C (Jeffay RWS) Q/A 112-13; JX-0095C (A. Storti Dep.) 13, 92. In alleging infringement, BHM does not analyze or rely on any vTuner source code. RX-0670C (Jeffay RWS) Q/A 114; CX-1067C (Zatkovich DWS) Q/A 372-79.

f. Web Browser (Shoutcast)

BHM asserts infringement of claims 1 and 11 of the '652 patent by LG Player Devices associated with LG Smart Share and a web browser accessing the Shoutcast website and claims 1, 11, and 13 of the '652 patent by LG Player Devices associated with a web browser accessing the Shoutcast website and either Spotify or Pandora. CX-1067C (Zatkovich DWS) Q/A 380-86.

Shoutcast is a website, not an application, allowing a user to listen to genre stations, such as pop stations, as well as radio stations. RX-0670C (Jeffay RWS) Q/A 115. The evidence shows that Shoutcast has been available and was well known since before the '952/'652 patents. RX-0463C (Jeffay DWS) Q/A 34; JX-0027 (The MP3 Guide), (3669-70); RX-0109 (Ninja), (3640, 3647).

3. Identification of Representative Products

BHM contends that the products its expert analyzed are "representative" of the operation and function of all of LG's Accused Products. *See, e.g.*, Compl. Br. at 343-47. Out of [ ] accused LG products, BHM tested only two LG mobile phones, one LG television, one LG Blu-ray, and one LG home theater system, and concluded that 1) the single LG phone is representative of all LG Mobile Devices, 2) the single LG television it tested is representative of all LG Player Devices, and 3) the single LG Blu-ray player it tested is representative of all "LG

Player Devices that include Spotify." *See* CX-1067C (Zatkovich DWS) Q/A 397, 270-74; RX-0632C (LG App. A), (1-32); RX-0670C (Jeffay RWS) Q/A 134.

Specifically, BHM claims that [ ] is "representative" of LG Mobile Devices. CX-1067C (Zatkovich DWS) Q/A 397; RX-0670C (Jeffay RWS) Q/A 134. BHM also claims that [ ] is "representative" of LG Player Devices and that [ ] is "representative" of LG devices that include Spotify. *Id.*

BHM does not, however, provide any testing or analysis of LG's Accused Products to establish that the [ ] are "representative" of any other device. CX-1067C (Zatkovich DWS) Q/A 379; RX-0670C (Jeffay RWS) Q/A 135. BHM asserts that it tested LG Smart Share on different devices, claiming they have the "same or substantially similar" operation, but does not provide evidence to support its claim. *Id.*

BHM also contends that a particular application operates the same regardless of which device is being used to access or use the application. RX-0670C (Jeffay RWS) Q/A 137; CX-1067C (Zatkovich DWS) Q/A 397. For example, BHM argues that certain functionalities within the third-party applications must be used by all products including that application, but that does not show that the devices are "representative." *Id.* Different devices can be designed and function in different ways, and yet still run the same or similar applications. RX-0670C (Jeffay RWS) Q/A 137.

The record evidence demonstrates that [

].

RX-0632C (LG App. A); RX-0670C (Jeffay RWS) Q/A 139-43. For example, [

]

[

]. *Id.* Similarly, [

]. *See*

RX-0670C (Jeffay RWS) Q/A 138.

Moreover, [

]. RX-0670C (Jeffay RWS) Q/A 142. BHM fails to identify the version of the applications it tested, and fails to show that different versions of the applications operate in the same manner. *Id.*

Accordingly, it is determined that BHM has failed to show that the two LG products it claims are representative of all LG products accused of infringing the '652 and '952 patents are indeed representative for purposes of infringement. Therefore, inasmuch as BHM did not analyze the following products separately, but instead relied on their assertion that the products functioned similar to the "representative" products in relevant aspect, BHM has failed to show that any of the following products infringe any claim of the '952 or '652 patent.

[ ]			
[ ]			
[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]
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[ ]						
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

[ ]							
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

4. Direct Infringement

a. LG Player Devices with Pandora

To show that LG's Player Devices with Pandora infringe the '952 and '652 patents, BHM relies on evidence from [ ], which it claims is a "representative" device. CX-1067C (Zatkovich DWS) Q/A 359. The evidence shows that [

]. *See* RX-0632C (LG App. A), (11); RX-0670C (Jeffay RWS) Q/A 199-200. In order to perform its infringement analysis, BHM [

]. *Id.* Inasmuch as [ ], BHM cannot establish that LG Player Devices associated with Pandora infringe the asserted claims of the '952 and '652 patents.[62]

i. '952 Patent – Claim 9

The first element of claim 9[63] ("'952-9a") includes two separate requirements: 1) "receiving, at an electronic device, a playlist . . ., the playlist identifying a plurality of songs,

---

[62] Even though [ ], this initial determination includes a technical analysis of Pandora on LG Player Devices for completeness.

[63] Claim 9 of the '952 patent reads:

9. A method comprising:

wherein ones of the plurality of songs are not stored on the electronic device," and 2) the playlist is "assigned to the electronic device." *See* RX-0670C (Jeffay RWS) Q/A 202.

The record evidence shows that LG Player Devices associated with Pandora do not meet '952-9a under any party's construction. *See, e.g.*, *id.* at Q/A 202-17. BHM relies on a picture, [ ], and a declaration from Pandora as supporting that claim element '952-9a is met. *Id.* at Q/A 202. The picture shows a television playing a song, but does not show that LG Player Device: (1) has a playlist; (2) receives that playlist; (3) that the playlist identifies a plurality of songs (as opposed to one); or (4) that the playlist was assigned to the device. *Id.* at Q/A 203. [

]. *See id.* at Q/A 204. The Pandora declaration [

]. *Id.* at Q/A 205. It is therefore determined that the evidence adduced by BHM is insufficient to prove that LG Player Devices associated with Pandora satisfy limitation '952-9a.

BHM argues that the LG Player Devices associated with Pandora satisfy claim limitation '952-9a because [

]. *See* CX-1067C (Zatkovich DWS) Q/A 363. BHM's argument is based on its contention that [ ]

---

receiving, at an electronic device, a playlist assigned to the electronic device, the playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device;

receiving, at the electronic device, information enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source; and

obtaining the ones of the plurality of songs from the at least one remote source.

[ ]. *See* CX-1067C (Zatkovich DWS) Q/A 362. [ ]. RX-0670C (Jeffay RWS) Q/A 208.

BHM also relies on the [ ] as meeting step '952-9a. CX-1067C (Zatkovich DWS) Q/A 361. [ ]. RX-0670C (Jeffay RWS) Q/A 205. For example, [ ]. *Id.*; JX-0015C (Pandora Decl.) at ¶ 7 (i) ("[ ]."); CX-0383C ([ ]) at PNDRA_00029-30. [ ].

Inasmuch as [ ]. *See* RX-0670C (Jeffay RWS) Q/A 205. At the hearing, Mr. Zatkovich testified that [ ]. Zatkovich Tr. 144-145. Yet, Mr. Zatkovich testified that [ ]. Zatkovich Tr. 145. Either way, BHM cannot escape the statement [ ]. JX-0015C (Pandora Decl.) at ¶ 7(i); RX-0670C (Jeffay RWS) Q/A 205.

The fact that the [ ]

[ ] as claimed by BHM and required by the '952 claim language. [

]. Zatkovich Tr. 148; *see id.* at 146-147; RX-0670C (Jeffay RWS) Q/A 209-10.

In arguing that the "playlist assigned to the electronic device" limitation is satisfied by Pandora, BHM's expert also conflated the "assigned" and "receiving" limitations of claim 9. RX-0670C (Jeffay RWS) Q/A 202, 211. If a user is logged in to an electronic device, then the playlist may be provided to that electronic device, but that does not establish that it is "assigned to" or directed to that electronic device; it is only provided to that electronic device because the user is logged in. *Id.* This is evident from the fact that "receiving" is different than "assigning," as Mr. Zatkovich testified, and that more is required for the claimed assigning than just sending the playlist. Zatkovich Tr. 114, 115; RX-0670C (Jeffay RWS) Q/A 212. Moreover, the fact that [

]. *See* Zatkovich Tr. 136.

BHM has also failed to show that LG Player Devices associated with Pandora satisfy limitations '952-9b and '952-9c of the '952 patent, which recite "receiving, at the electronic device, information enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source; and obtaining the ones of the plurality of songs from the at least one remote source." *See* RX-0670C (RWS Jeffay) Q/A 220-26.

As discussed above, BHM relies on [ ] and the Pandora declaration to show satisfaction of limitations '952-9b and '952-9c. CX-1067C (Zatkovich DWS) Q/A 366-67; RX-0670C (Jeffay RWS) Q/A 220, 224. None of these materials shows that LG Player Devices

associated with Pandora practice these limitations under any party's construction for the same reasons discussed above for limitation '952-9a. *See* RX-0670C (Jeffay RWS) Q/A 220, 224.

BHM relies on the Pandora declaration, [

]. JX-0015C (Pandora Decl.) at ¶ 7(i); CX-0383C ([ ]) at 0029; RX-0670C (Jeffay RWS) Q/A 220. The declaration, however, [

]. RX-0670C (Jeffay RWS) Q/A 220, 224. For example, nothing BHM relies on suggests that [

]. *Id.* Indeed, the Pandora Declaration [

]. JX-0015C (Pandora Decl.), (¶¶ 7(iv)-(vii)); RX-0670C (Jeffay RWS) Q/A 220. One would not be able to determine whether this limitation is met without reviewing source code or documentation describing the particular implementation of the Pandora application, but BHM did not do either of these things. RX-0670C (Jeffay RWS) Q/A 220, 224.

To the extent BHM relies on the photograph cited for '952-9a to show satisfaction of '952-9b and '952-9c, BHM still cannot show that the claim limitations are satisfied. *See* RX-0670C (Jeffay RWS) Q/A 221, 224. BHM does not correlate the photograph with any evidence showing that LG Player Devices needed to receive information in order to obtain the song, even under BHM's construction of "obtaining . . . ." *Id.* For example, BHM has not adduced evidence showing that [ ]

[ ]. *Id.* In fact, the Pandora Declaration [ ]. JX-0015C (Pandora Decl.), (¶ 7(vi)); RX-0670C (Jeffay RWS) Q/A 221, 224. Moreover, [ ]. *See* Zatkovich Tr. (108; RX-0670C (Jeffay RWS) Q/A 222, 225.

BHM also fails to allege that '952-9b and '952-9c are met under Respondents' and Staff's constructions of "enabling" and "obtain[ing]." RX-0670C (Jeffay RWS) Q/A 223, 226. In particular, BHM fails to show that [ ]. *Id.* There is no evidence that LG Player Devices associated with Pandora [ ]. *Id.* Rather, Mr. Zatkovich states that LG Player Devices associated with Pandora [ ]. CX-1067C (Zatkovich DWS) Q/A 366; RX-0670C (Jeffay RWS) Q/A 223, 226. Taking this allegation as true, the evidence shows that [ ]. RX-0670C (Jeffay RWS) Q/A 223, 226. Moreover, the Pandora Declaration states that "[ ]." JX-0015C (Pandora Decl.), (¶ 7(v)); RX-0670C (Jeffay RWS) Q/A 223, 226. Thus, BHM has not adduced evidence to show that LG Player Devices associated with Pandora "obtain[]" songs, under either Respondents' or Staff's constructions. *Id.*

Therefore, it is determined that BHM has not shown infringement of claim 1 of the '952 patent by LG Player Devices associated with Pandora.[64]

ii. '652 Patent – Claim 1

Independent claim 1 of the '652 patent is similar to independent claim 9 of the '952 patent, but recites several additional limitations.[65,66] *Compare* JX-0007 ('952 patent) at col. 35,

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[64] Inasmuch as asserted claim 14 of the '952 patent depends from claim 9, it is also determined that BHM has not shown infringement of claim 14 of the '952 patent by LG Player Devices with Spotify for the same reasons discussed with respect to claim 9.

[65] Claim 1 of the '652 patent reads as follows:

> 1. An electronic device comprising:
>
> a) a network interface enabling the electronic device to receive an Internet radio broadcast and being further adapted to communicatively couple the electronic device to a central system;
>
> b) a system enabling playback of audio content from a playlist assigned to the electronic device via the central system; and
>
> c) a control system associated with the network interface and the system enabling playback of the audio content indicated by the playlist, and adapted to:
>
> i) enable a user of the electronic device to select a desired mode of operation from a plurality of modes of operation comprising an Internet radio mode of operation and a playlist mode of operation;
>
> ii) receive and play the Internet radio broadcast when the desired mode of operation is the Internet radio mode of operation; and
>
> iii) when the desired mode of operation is the playlist mode of operation:
>
> receive the playlist assigned to the electronic device from the central system, the playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device;
>
> receive information from the central system enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source;
>
> obtain the ones of the plurality of songs from the at least one remote source; and
>
> play the audio content indicated by the playlist.

[66] To the extent limitations in claim 1 of the '652 patent mirror limitations in claim 9 of the '952 patent, the limitations of claim 1 are not satisfied for the same reasons discussed above with respect to claim 9.

lns. 23-32 *with* JX-0009 ('652 patent) at col. 34, lns. 6-35. BHM concedes that LG Player Devices associated with Pandora alone do not meet these additional limitations and thus relies on the combination of Pandora with either vTuner or a web browser (for accessing Shoutcast). CX-1067C (Zatkovich DWS) Q/A 372-74, 382-84; RX-0670C (Jeffay RWS) Q/A 227-28.

Claim 1 of the '652 patent has several additional limitations not recited by '952 patent claim 9, which BHM identifies as "playlist related elements," including, among others, a "central system" with certain requirements, selecting a "desired mode of operation from a plurality of modes of operation" including "playlist mode of operation," and playing the audio content indicated by the playlist. CX-1067C (Zatkovich DWS) Q/A 374, 384; RX-0670C (Jeffay RWS) Q/A 228. The evidence adduced by BHM, however, does not show that any of these elements are met by LG's Accused Products with Pandora. *Id.*

In addition, to the extent [

] as required by limitations '652-1c in conjunction with '652-1f through '652-1h. RX-0670C (Jeffay RWS) Q/A 229. In the context of the '652 patent claims, an electronic device is "adapted to," or "configured to" perform a series of tasks when the device contains computer code or program instructions sufficient to perform the operations recited in the clams without additional modification, configuration or the addition of further program instructions. *Id.* Inasmuch as [

]. *Id.*

Moreover, LG's Player Devices associated with Pandora do not infringe with respect to vTuner and a web browser/Shoutcast for the reasons stated below in the sections addressing Pandora and Shoutcast.

iii. '652 Patent – Claim 11

It is determined that LG Player Devices associated with Pandora do not infringe claim 11 of the '652 patent, because they do not infringe claim 1, from which claim 11 depends.

To show satisfaction of claim 11, BHM relies on the combination of Pandora with either vTuner or a web browser (for accessing Shoutcast). CX-1067C (Zatkovich DWS) Q/A 375-76, 385. BHM cites as evidence Wireshark traces and a photograph of an LG Player Device allegedly displaying the album cover image during playback of a song. CX-1067C (Zatkovich DWS) Q/A 375-76, 385; RX-0670C (Jeffay RWS) Q/A 231. This evidence is not sufficient to show satisfaction of claim 11 because 1) the timing of the display of the album art is not correlated with Wireshark traces, 2) nothing suggests a request was made, if at all, while the song was playing, and 3) nothing suggests supplemental information was received from a "remote server" and not a central system or remote source. RX-0670C (Jeffay RWS) Q/A 232.

Indeed, the Pandora declaration states that "[

]." RX-0670C (Jeffay RWS) Q/A 232; *see, e.g.*, JX-0015C (Pandora Decl.), (¶ 7(iv)); *see also* CX-1067C (Zatkovich DWS) Q/A 361 (relying on the Pandora Declaration). "[

]." *Id.*; RDX-1035C (JX-0015C (Pandora Decl.)).

The Wireshark data BHM cites do not shows that LG devices with Smart Share practice '652 patent claim 11. RX-0670C (Jeffay RWS) Q/A 233-36. In particular, the evidence shows

that [

]. RX-0670C (Jeffay RWS) Q/A 235; *see, e.g.*, RX-0730C (Frame 10775 of CPX-0150C); RX-0731C (Frame 11172 of CPX-0150C); CPX-0150C (Wireshark Trace); RDX-1036–1037 (RX-0670C (RWS Jeffay) Q/A 235). [

].

Id.; RX-0732C(Frame 11376); RDX-1039–1040 (RX-0670C (Jeffay RWS) Q/A 235).

[

]. RX-0670C (Jeffay RWS) Q/A 235. Rather, this confirms [

]. *Id.*; *see, e.g.*, JX-0015C (Pandora Decl.), (¶ 7(iv)). Claim 11, however, requires that the request is sent "in real-time while the song is playing." JX-0009 ('652 patent) at col. 34, lns. 65-67.

Therefore, it is determined that LG Player Devices associated with Pandora do not satisfy the additional limitations of claim 11 of the '652 patent.

iv. '652 Patent – Claim 13

It is determined that LG Player Devices associated with Pandora do not infringe '652 patent claim 13 because they do not infringe claim 1, from which claim 13 depends.

b. LG Player Devices with Spotify

BHM has failed to adduce evidence showing that LG Devices with Spotify infringe the asserted claims of the '952 and '652 patents. Inasmuch as [

]. *See*

RX-0670C (Jeffay RWS) Q/A 281; RX-0632C (LG App. A). Instead, [

]. CX-1067C (Zatkovich DWS) Q/A 343-57, 374, 376, 377-78. The evidence shows, [ ]. RX-0670C (Jeffay RWS) Q/A 241-55; RX-0632C (LG App. A). [

]. RX-0670C (Jeffay RWS) Q/A 248-55; RDX-1041C–1044C (RX-0670C (Jeffay RWS) Q/A 248-54); CX-1067C (Zatkovich DWS) Q/A 347-48, 376. Thus, BHM cannot show a violation of section 337 based on direct infringement at the time of importation.[67]

i. '952 Patent – Claim 9

Step '952-9a of method claim 9 has two requirements: first, a playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device; and second, that the electronic device receive a playlist assigned to the electronic device. JX-0007 ('952 patent) at col. 35, lns. 24-27; RX-0670C (Jeffay RWS) Q/A 257. BHM has not shown that LG Player Devices with Spotify meet '952-9a under any proposed construction. *See* RX-0670C (Jeffay RWS) Q/A 257-73.

For the first requirement, BHM alleges that LG Player Devices with Spotify receive a playlist. CX-1067C (Zatkovich DWS) Q/A 347. As discussed above, BHM's construction of "playlist" requires that the song titles returned in the alleged playlist are "arranged to be played in sequence." The adduced evidence does not show that this limitation is satisfied under BHM's construction, but rather [ ]. *See* CX-1067C (Zatkovich DWS) Q/A 347. The evidence also fails to show that [ ]

[67] Even though BHM has not shown that [ ], this initial determination includes a technical analysis of Spotify on LG Player Devices for completeness.

[ ] are "for [] playback," as required by the adopted construction, *i.e.*, "playing audio content stored on the electronic device." *Id.*; RX-0670C (Jeffay RWS) Q/A 269; Joint List of Proposed Constructions at 1, 4. The record evidence demonstrates that [

].

See RX-0670C (Jeffay RWS) Q/A 84-90, 93, 94; Zatkovich Tr. 166-168. BHM has also failed to show whether [

]. RX-0670C (Jeffay RWS) Q/A 124. Inasmuch as LG Player Devices with Spotify [

], there can be no infringement under the adopted construction of "playlist."

For the second requirement, BHM contends that the limitation of a "playlist assigned to the electronic device" is met when Spotify playlist information is directed to and received at "the unique IP address associated with the LG [Player] Device." CX-1067C (Zatkovich DWS) Q/A 347. In particular, BHM asserts [

]. *Id.* at Q/A 347, 349; RX-0670C (Jeffay RWS) Q/A 257, 258, 262, 263.

BHM's analysis is flawed because its expert testified that "[

]." CX-1067C (Zatkovich DWS) Q/A 349 (emphasis added). This testimony is consistent with the evidentiary record, which shows [

]. RX-0670C (Jeffay RWS) Q/A 264, 265, 267; CPX-0038C, (SPOT-BHM-SC-000254–256, 238–241, 564–568); RX-0733C (Spotify Decl.); CX-1403C (Spotify Decl.). [ ] does not satisfy claim 9 of the '952 patent because

the claim requires that the playlist is "assigned to the electronic device." RX-0670C (Jeffay RWS) Q/A 268.

In addition, the Spotify playlist information [

]. Rather, BHM's testing showed that [

]. RX-0670C (Jeffay RWS) Q/A 263. Even if BHM were correct in its contention, [

]. BHM's expert testified consistently, stating that [ ]. *Id.* at Q/A 259, 262; Zatkovich Tr. 109-112.

Moreover, BHM's argument conflates the "assigning" limitation with "receiving," as separately recited in claim 9 of the '952 patent. RX-0670C (Jeffay RWS) Q/A 258, 259. The claim requirement of "receiving" a playlist is different from the claimed "assigned to an electronic device," and to show both limitations requires two different operations. RX-0670C (Jeffay RWS) Q/A 258, 259; Zatkovich Tr. 113. BHM nevertheless argues that LG Player Devices with Spotify satisfy limitation '952-9a when [

]. CX-1067C (Zatkovich DWS) Q/A 347.

Turning now to limitations '952-9b and '952-9c, *i.e.*, "receiving, at the electronic device, information enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source; and obtaining the ones of the plurality of songs from the at least one

remote source," BHM has not adduced evidence to show that the LG Player Devices associated with Spotify satisfy these limitations under any construction.

To support its infringement analysis, BHM relies on a picture of a television showing a version of Spotify running on a single LG Player Device (allegedly a Blu-ray player), [ ], and a "display of song titles for songs not stored on the electronic device, coupled with the capability for a user to navigate to and select any one of the songs in the playlist for playback." *See* CX-1067C (Zatkovich DWS) Q/A 352, 353.

BHM argues that, inasmuch as a photograph of an LG TV allegedly shows the output of an LG Blu-ray player, [ ], playing a song, the LG device must have necessarily practiced '952-9b and '952-9c. *See* RX-0670C (Jeffay RWS) Q/A 276, 279; CX-1067C (Zatkovich DWS) Q/A 352, 353. The photographs, however, do not establish that information [ ] was received, enabling the electronic device to obtain any songs, as required by '952-9b and '952-9c. BHM fails to correlate the photograph with any evidence showing that the LG Player Device actually "obtained" a song under BHM's construction. There is also no evidence that LG Player Devices with Spotify [ ]. RX-0670C (Jeffay RWS) Q/A 276, 277. LG Player Devices with Spotify thus cannot satisfy '952-9b or '952-9c under BHM's proposed construction.

[

]. CX-1067C (Zatkovich DWS) Q/A 352, 353. For the same reasons explained above with respect to '952-9a, [

]

[ ].

RX-0670C (Jeffay RWS) Q/A 276, 277; Zatkovich Tr. 108.

BHM did not allege that '952-9b and '952-9c are met under OUII's and Respondents' (adopted above) proposed constructions of "enabling" and "obtain[ing]." RX-0670C (Jeffay RWS) Q/A 275-280. BHM cannot show [

]. *See* RX-0670C (Jeffay RWS) Q/A 87-90, 93-94; Zatkovich Tr. 166-168. The experts for LG and BHM both testified that [ ], such that LG Player Devices with Spotify are unable to "obtain[]" songs under the adopted claim construction. RX-0670C (Jeffay RWS) Q/A 275-80.

Therefore, it is determined that BHM has not shown infringement of claim 1 of the '952 patent by LG Player Devices associated with Spotify.[68]

ii. '652 Patent – Claim 1

Independent claim 1 of the '652 patent is similar to independent claim 9 of the '952 patent, but recites several additional limitations.[69] *Compare* JX-0007 ('952 patent) at col. 35, lns. 23-32 *with* JX-0009 ('652 patent) at col, 34, lns. 6-35. BHM concedes that LG Player Devices with Spotify alone do not meet these additional limitations and thus relies on the combination of Spotify with either vTuner or a web browser (for accessing Shoutcast). *See* CX-1067C (Zatkovich DWS) Q/A 372-74, 382-84; RX-0670C (Jeffay RWS) Q/A 282-84.

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[68] Inasmuch as asserted claim 14 of the '952 patent depends from claim 9, it is also determined that BHM has not shown infringement of claim 14 of the '952 patent by LG Player Devices with Spotify for the same reasons discussed with respect to claim 9.

[69] To the extent limitations in claim 1 of the '652 patent mirror limitations in claim 9 of the '952 patent, the limitations of claim 1 are not satisfied for the same reasons discussed above with respect to claim 9.

BHM relies on its analysis of '952 patent claim 9 to show that what it deems "playlist related elements" are met with respect to '652 patent claim 1. As discussed above, the LG Player Devices with Spotify do not satisfy the limitations of '652 patent claim 1 for the same reasons they do not satisfy the limitations of '952 patent claim 9.

Claim 1 of the '652 patent has several additional limitations not recited by '952 patent claim 9, which BHM identifies as "playlist related elements," including, among others, a "central system" with certain requirements, selecting a "desired mode of operation from a plurality of modes of operation" including "playlist mode of operation," and playing the audio content indicated by the playlist. CX-1067C (Zatkovich DWS) Q/A 374, 384; RX-0670C (Jeffay RWS) Q/A 283. The evidence adduced by BHM does not show that any of these elements are met by LG's Player Devices with Spotify. *See id.*

In addition, [

]. RX-0670C (Jeffay RWS) Q/A 284. In the context of the '652 patent claims, [

]. *Id.*; *see also* RX-0463C (Jeffay DWS) Q/A 284. [

]. RX-0670C (Jeffay RWS) Q/A 284.

LG Player Devices with Spotify also do not infringe '652 patent claim 1 with respect to vTuner and a web browser with Shoutcast for the reasons identified below in the sections addressing vTuner and Shoutcast.

iii. '652 Patent – Claim 11

LG Player Devices associated with Spotify do not infringe claim 11 of the '652 patent, because they do not infringe claim 1 from which claim 11 depends.

To show satisfaction of claim 11, BHM relies on the combination of Spotify with either vTuner or a web browser (for accessing Shoutcast). CX-1067C (Zatkovich DWS) Q/A 375-76, 385. BHM cites as evidence Wireshark traces and photographs of an LG Player Device with Spotify allegedly displaying the album cover image during playback of a song, but BHM does not explain how those traces and the pictures show infringement of '652 patent claim 11. *See* CX-1067C (Zatkovich DWS) Q/A 375-76, 385; RX-0670C (Jeffay RWS) Q/A 285. The evidence is not sufficient to show infringement because 1) BHM fails to correlate the timing of the display of the album art with the Wireshark traces, 2) nothing suggests that a request was made while the song was playing, and 3) nothing suggests [

]. RX-0670C (Jeffay RWS) Q/A 285.

iv. '652 Patent – Claim 13

It is determined that LG Player Devices with Spotify do not infringe '652 patent claim 13 because, as discussed above, they do not infringe claim 1 from which claim 13 depends.

c. LG Mobile and Player Devices with Smart Share

i. '952 Patent – Claim 9

The first step of method claim 9, step '952-9a, has two requirements: first, a playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device; and second, that the electronic device receive a playlist assigned to the electronic device. JX-0007 ('952 patent) at col. 35, lns. 24-27. BHM has not adduced evidence to show that LG Smart Share satisfies '952-9a under any proposed construction.

For the first requirement, BHM alleges that [

]. CX-1067C (Zatkovich DWS) Q/A 281-82, 301. [

].

RX-0670C (Jeffay RWS) Q/A 292; *see also id.* Q/A 413-18. BHM nevertheless contends that [

]. Zatkovich Tr. 187-188. With respect to the Ninja Jukebox prior art reference, Mr. Zatkovich argued that "[a] catalog of songs is not a playlist." CX-1400C (Zatkovich RWS) Q/A 48; *see also* Zatkovich Tr. 1562. If, as Mr. Zatkovich contends, a catalog of songs is not a playlist, [

].

BHM 's citations to Wireshark traces do not prove that [

]. *See* CX-1067C (Zatkovich DWS) Q/A 281-82, 301. That the response may include [ ]. RX-0670C (Jeffay RWS) Q/A 289, 292. Furthermore, the traces do not indicate that [ ]

[

]. *Id.* BHM contends that [

]. *Id.* at Q/A 290; CX-1067C (Zatkovich DWS) Q/A 281-82, 301.

BHM's reliance on photographs does not cure the deficiencies in the cited evidence. *See* CX-1067C (Zatkovich DWS) Q/A 281-82, 301; RX-0670C (Jeffay RWS) Q/A 289. BHM, for example, cites to a picture of a single mobile phone showing folders on a personal computer (that is not made by LG) and a picture of a single mobile phone showing songs presumably in one of those folders to support its infringement argument. CX-1067C (Zatkovich DWS) Q/A 281-82. None of these photographs provides additional support, nor do they (or the traces) identify which "ones of the plurality of songs are not stored on the electronic device," as required by claim 9. RX-0670C (Jeffay RWS) Q/A 289.

The portion of limitation '952-9a that recites "receiving, at an electronic device, a playlist assigned to the electronic device" includes two separate requirements: 1) that the device "receiv[e] a playlist," and 2) that the playlist is "assigned to the electronic device." RX-0670C (Jeffay RWS) Q/A 293.

BHM contends that the "assigned to the electronic device" portion is satisfied by the accused products because [

].

CX-1067C (Zatkovich DWS) Q/A 283; *see also* RX-0670C (Jeffay RWS) Q/A 296-97. The evidence, however, does not support this contention. [

]. RX-0670C

(Jeffay RWS) Q/A 297. The evidence also does not show [ ]

[ ]. CX-1067C (Zatkovich DWS) Q/A 280-84, 301; RX-0670C (Jeffay RWS) Q/A 296.

The evidence BHM offers shows that the device [

]. CX-1067C (Zatkovich DWS) Q/A 282, 301; RX-0670C (Jeffay RWS) Q/A 293-94. Yet BHM's expert Mr. Zatkovich testified that "receiving" is different than "assigning," and that more is required for assigning in claim 9 than sending the playlist. Zatkovich Tr. 114, 115. Despite this testimony, BHM does not provide evidence of an alleged assignment and conflates the separate "assigned" and "receiving" requirements. RX-0670C (Jeffay RWS) Q/A 293, 296.

The evidence adduced at the hearing also fails to show that LG devices with Smart Share satisfy limitation '952-9b and '952-9c, which recite "receiving, at the electronic device, information enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source; and obtaining the ones of the plurality of songs from the at least one remote source." To show satisfaction of these limitations by LG Mobile Devices, BHM relies on a picture of a mobile phone purportedly playing a song from a personal computer (that is not made by LG), and to show satisfaction of these limitations by LG Player Devices, BHM relies on a picture of a Player Device purportedly playing a song from a remote device. *See* CX-1067C (Zatkovich DWS) Q/A 286-87, 303-05; RX-0670C (Jeffay RWS) Q/A 305. BHM also relies on Wireshark packet traces. *Id.* Nevertheless, none of these materials shows that LG Accused Products with LG Smart Share practice these limitations. RX-0670C (Jeffay RWS) Q/A 305-09.

BHM contends that because there is a picture of a device with LG Smart Share playing a song and a Wireshark trace that allegedly shows [ ], then the LG device must have necessarily performed this claim step. CX-1067C (Zatkovich DWS) Q/A 286-87, 303-05. The pictures and traces do not establish what BHM contends. RX-0670C (Jeffay RWS) Q/A 305,

307. It is not clear from the pictures or traces what the devices obtained, or what provided the information to the devices. *Id.*

With respect to the Wireshark traces, BHM fails to show that [ ] is "enabling the electronic device to obtain" the song. RX-0670C (Jeffay RWS) Q/A 305, 307. BHM also fails to provide evidence correlating the photographs to the Wireshark traces, and nothing suggests these different types of tests were done on the same devices or at the same time. *Id.* Thus, there is no evidence that [ ] as "information" actually enabled the devices to obtain the song, or were even [ ]. *Id.*

Claim 9 also requires that the information enable the device to obtain "the ones" of the plurality of songs, *i.e.*, more than one song. RX-0670C (Jeffay RWS) Q/A 305, 307. BHM, however, only shows [ ]. CX-1067C (Zatkovich DWS) Q/A 286-87, 303-05; RX-0670C (Jeffay RWS) Q/A 305, 307. This conflicts with the claim's plain meaning and with BHM's construction of playlist, which requires playing the songs in sequence. RX-0670C (Jeffay RWS) Q/A 305, 307. In addition, [

]. RX-0670C (RWS Jeffay) Q/A 307-08; *see also* Zatkovich Tr. 1546-1547 (explaining [

]).

ii. '952 Patent – Claim 14

It is determined that LG Mobile and Player Devices with Smart Share do not infringe '952 patent claim 14 because, as discussed above, they do not infringe claim 9 from which claim 14 depends. The adduced evidence also does not demonstrate satisfaction of the additional claim 14 limitations by the accused devices. Specifically, the evidence does not show satisfaction of

the following limitations: "receiving the playlist from the personal audio network, wherein the personal audio network server enables a user to assign the playlist to the electronic device" and "receiving information from the personal audio network server enabling the electronic device to obtain the ones of the plurality of songs from the at least one remote source."

BHM's expert Mr. Zatkovich testified that these limitations are met. RX-0463C (Jeffay DWS) Q/A 311; *see* CX-1067C (Zatkovich DWS) Q/A 288, 306. As evidence, BHM provides a LG Smart Share screen describing its features. *See id.* [

]

"receiv[es] the playlist . . . from the personal audio network," "the personal audio network server enables a user to assign the playlist to the electronic device," or "receiv[es] information from the personal audio network server enabling the electronic device to obtain the ones of the plurality of songs from the at least one remote source," as recited in claim 14. *Id.*

iii. '652 Patent – Claim 1

Independent claim 1 of the '652 patent is similar to claim 9 of the '952 patent, but recites several additional limitations. *Compare* JX-0007 ('952 patent) at col. 35, lns. 23-32 *with* JX-0009 ('652 patent) at col. 34, lns. 6-35. BHM relies on the combination of Smart Share with either vTuner or a web browser (for accessing Shoutcast) on Player Devices and Smart Share with Slacker on Mobile Devices to demonstrate infringement of these additional limitations. CX-1067C (Zatkovich DWS) Q/A 372-74, 382-84, 390-92; RX-0670C (Jeffay RWS) Q/A 313-14.

BHM relies on its analysis of '952 patent claim 9 as showing that what it calls the "playlist related elements" are met with respect to '652 patent claim 1. *See id.* LG Player and

Mobile Devices do not meet '652 patent claim 1 for the same reasons, discussed above, that they do not meet '952 patent claim 9. *See* RX-0670C (Jeffay RWS) Q/A 288-309.

Claim 1 of the '652 patent has several additional limitations not recited by '952 patent claim 9 including, among others, a "central system" with certain requirements, selecting a "desired mode of operation from a plurality of modes of operation" including "playlist mode of operation," and playing the audio content indicated by the playlist. CX-1067C (Zatkovich DWS) Q/A 374, 384, 392; RX-0670C (Jeffay RWS) Q/A 314. BHM, however, does not provide evidence that any of these elements are met by LG's Accused Products with Smart Share. *Id.*

In addition, LG's Accused Products with Smart Share do not infringe '652 patent claim 1 with respect to vTuner, a web browser/Shoutcast, and Slacker for the reasons addressed below in the sections addressing vTuner, Shoutcast, and Slacker. *See* RX-0670C (RWS Jeffay) Q/A 313, 348-60, 372-94.

iv. '652 Patent – Claim 11

It is determined that LG Devices with Smart Share do not infringe '652 patent claim 11 because, as discussed above, they do not infringe claim 1 from which claim 11 depends. *See* RX-0670C (Jeffay RWS) Q/A 315-321; *see also* RX-0670C (Jeffay RWS) Q/A 288-309, 313-14. BHM accuses only LG Player Devices of infringing '652 patent claim 11 and, as for claim 1, BHM relies on the combination of Smart Share with either vTuner or a web browser to show infringement of this claim. CX-1067C (Zatkovich DWS) Q/A 375-76, 385; RX-0670C (Jeffay RWS) Q/A 315.

As evidence, BHM cites Wireshark traces and a photograph of an LG Player Device purportedly displaying the album cover image during playback of a song. CX-1067C (Zatkovich DWS) Q/A 375-76, 385; RX-0670C (Jeffay RWS) Q/A 316. This evidence is insufficient to

show infringement because 1) BHM fails to correlate the timing of the display of the album art with Wireshark traces, 2) nothing suggests that the request was made while song was playing, and 3) nothing suggests [

]. RX-0670C (Jeffay RWS) Q/A 316.

In particular, the portion of the Wireshark trace that BHM claims is [

]. RX-0670C (Jeffay RWS) Q/A 319; RX-0728C (Wireshark frame 1422); RDX-1045C (RX-0670C (Jeffay RWS) Q/A 319); CPX-0187C (Wireshark data); *see* CX-1067C (Zatkovich DWS) Q/A 376. Claim 11, however, requires the supplemental information request be "in real-time while the song is playing." JX-0009 ('652 patent) at col. 34, lns. 65-67. As Dr. Jeffay testified, [

]. *See, e.g.*, RX-0670C (Jeffay RWS) Q/A 321.

Moreover, the evidence shows that the information BHM contends comprises [

]. RX-0670C (Jeffay RWS) Q/A 319, 320 ([ ] at CX-1067C (Zatkovich DWS) Q/A 301, [ ]); CPX-0187C (Wireshark trace data); RX-0729C (Wireshark frame 1424); RDX-1046C (RX-0670C (RWS Jeffay) Q/A 319). In addition, even if the information did [

].

Id.; RX-0728C (Wireshark frame 1422); RDX-1047C (RX-0670C (Jeffay RWS) Q/A 319). Therefore, [

].

RX-0670C (Jeffay RWS) Q/A 319.

d. LG Mobile Devices with Slacker

i. The Representative Product

BHM relies on [ ] as its representative product with respect to the infringement analysis, but admits that [ ]. *See* Zatkovich Tr. 161-162; RX-0632C (LG App. A), (2); RX-0670C (Jeffay RWS) Q/A 325-26. Before doing any analysis of the Slacker application [ ]. *See id.*

ii. '952 Patent – Claim 9

Claim limitation '952-9a has two requirements: first, a playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device; and second, that the electronic device received a playlist assigned to the electronic device. RX-0670C (Jeffay RWS) Q/A 293. The evidence shows that LG Mobile Devices associated with Slacker do not satisfy either requirement. *Id.* at Q/A 327-40.

For the first requirement, BHM relies on photos of the modified LG E970 and packet traces to show the modified device communicating with Slacker servers. RX-0670C (Jeffay RWS) Q/A 328; *see* CX-1067C (Zatkovich DWS) Q/A 331. BHM argues that the photo shows [ ], and also contends that the Wireshark traces show that [ ]. RX-0670C (Jeffay RWS) Q/A 329; CX-1067C (Zatkovich DWS) Q/A 331. Nevertheless, BHM did not identify which "ones of the plurality of songs are not stored on the device" as required by '952-9a. RX-0670C (Jeffay RWS) Q/A 329; *see* CX-1067C (Zatkovich DWS) Q/A 331.

Neither the photos nor the packet traces show [ ]. RX-0670C (Jeffay RWS) Q/A 329; CX-1067C (Zatkovich DWS) Q/A 331. Accordingly, this evidence is insufficient to show satisfaction of the claim limitation.

The evidence also does not show that [ ]. RX-0670C (Jeffay RWS) Q/A 329; *cf.* CX-1067C (Zatkovich DWS) Q/A 331. The evidence shows that [ ]. Zatkovich Tr. 108; RX-0670C (Jeffay RWS) Q/A 338. The evidence does not show whether or not [ ]. *Id.*

The second requirement of '952-9a is receiving a playlist assigned to the electronic device. BHM contends that LG Mobile Devices associated with Slacker [ ]. CX-1067C (Zatkovich DWS) Q/A 331. In particular, BHM alleges that the Wireshark traces show that [ ]. CX-1067C (Zatkovich DWS) Q/A 331. This action, however, [ ]. *See* Zatkovich Tr. 150-151. The evidence shows that [ ]. RX-0670C (Jeffay RWS) Q/A 335-36.

LG Mobile Devices associated with Slacker also do not satisfy limitation '952-9b, "receiving, at the electronic device, information enabling the electronic device to obtain the ones

of the plurality of songs from at least one remote source," or limitation '952-9c, "obtaining the ones of the plurality of songs from the at least one remote source." *See* RX-0670C (Jeffay RWS) Q/A 342-47.

BHM's reliance on photographs and packet traces is insufficient to show satisfaction of these two limitations. A photograph of [

]. RX-0670C (Jeffay RWS) Q/A 343, 346; CX-1067C (Zatkovich DWS) Q/A 332, 336. Likewise, Wireshark traces do not show that [

]. RX-0670C (Jeffay RWS) Q/A 343, 346. No evidence correlates the photos with the packet traces, and nothing suggests that these different types of tests were recorded using the same devices or at the same time. *Id.*

iii. '652 Patent – Claim 1

The evidence does not support BHM's contentions that LG Mobile Devices with Slacker infringe '652 patent claim 1. With respect to what BHM calls "playlist functionality" and "playlist related elements," BHM relies on the same reasons underlying its contention that LG Mobile Devices associated with Slacker infringe '952 patent claim 9. *See* CX-1067C (Zatkovich DWS) Q/A 392; RX-0670C (Jeffay RWS) Q/A 348-60. The analysis set forth above with respect to claim 9 of the '952 patent vis-à-vis LG Mobile Devices with Slacker apply equally to claim 1 of the '652 patent.

Claim 1 of the '652 patent has several additional limitations not recited in '952 patent claim 9, including a "central system" with certain requirements, selecting a "desired mode of operation from a plurality of modes of operation," a "playlist mode of operation," and playing

audio content indicated by the playlist. RX-0670C (Jeffay RWS) Q/A 350, 352; CX-1067C (Zatkovich DWS) Q/A 392.

For the requirement in '652 patent claim 1 that the electronic device is enabled to "receive an Internet radio broadcast," BHM fails to show that [

]. Zatkovich Tr. 106-107; RX-0670C (Jeffay RWS) Q/A 352. There is no evidence showing that LG Mobile Devices include [ ]. Thus, BHM has not shown that LG Mobile Devices associated with Slacker are "enabled . . . to receive an Internet radio broadcast" [ ]. RX-0670C (Jeffay RWS) Q/A 352.

Further, inasmuch as BHM uses [

]. RX-0670C (Jeffay RWS) Q/A 355. Accordingly, it is determined that LG Mobile Devices associated with Slacker do not infringe '652 patent claim 1.

iv. '652 Patent – Claim 11

It is determined that LG Mobile Devices associated with Slacker (alone or with Google Play Music) do not infringe claim 11 of the '652 patent because they do not infringe claim 1, from which claim 11 depends.

Moreover, BHM fails to establish that LG Mobile Devices associated with Slacker satisfy the additional limitations of claim 11. RX-0670C (Jeffay RWS) Q/A 362, 368. In particular, the Wireshark traces and photographs BHM relies on fail to show that LG Mobile Devices associated with Slacker satisfy the limitations of claim 11. *Id.* at Q/A 362. For example, BHM

does not correlate the timing of the display of the album art shown in the photograph with the packet traces. *Id.* at Q/A 363. The evidence does not show that [

], as required by claim 11. *Id.* The evidence also does not show that [

]. *Id.*

v. '652 Patent – Claim 13

Inasmuch as claim 13 depends from claim 1, for the same reasons it was determined that LG Mobile Devices associated with Slacker (alone or in combination with another application) do not infringe claim 1, it is determined that they do not infringe claim 13.

e. LG Player Devices with vTuner

BHM concedes that vTuner alone does not infringe any asserted '652 patent claim, and instead relies on vTuner in combination with either LG Smart Share, Spotify, or Pandora to show infringement. CX-1067C (Zatkovich DWS) Q/A 372-74; RX-0670C (Jeffay RWS) Q/A 376-80. The evidence adduced by BHM is insufficient to show that LG Player Devices associated with vTuner infringe the asserted '652 patent claims.

i. '652 Patent – Claim 1

BHM's infringement allegations for '652 patent claim 1 rely on its allegations, discussed above, for '952 patent claim 9 for LG Smart Share, Spotify, and Pandora. CX-1067C (Zatkovich DWS) Q/A 374. It is determined that LG Devices with vTuner do not infringe '652 patent claim 1 for the same reasons discussed above with respect to LG Smart Share, Spotify, and Pandora vis-à-vis claim 9 of the '952 patent.

In addition, '652 patent claim 1 requires that the electronic device is "adapted to," or "configured to" perform a series of tasks. JX-0009 ('652 patent) at col. 34, lns. 6-35. Inasmuch

as [

]. *Id.*; RX-0632 (LG App. A), (11-32). The LG Player Devices associated with vTuner therefore do not infringe claim 1 of the '652 patent.

ii. '652 Patent – Claim 11

Asserted claim 11 of the '652 patent depends from claim 1, discussed above. For the same reasons discussed above with respect to claim 1, it is determined that the LG Player Devices with vTuner do not infringe claim 11 of the '652 patent.

iii. '652 Patent – Claim 13

Asserted claim 13 of the '652 patent depends from claim 1, discussed above. For the same reasons discussed above with respect to claim 1, it is determined that the LG Player Devices with vTuner do not infringe claim 13 of the '652 patent.

f. LG Player Devices with Shoutcast

BHM concedes that LG Player Devices with a web browser alone do not infringe any asserted '652 patent claims, and relies on a web browser "for Receipt of Internet Radio Broadcasts" in combination with either LG Smart Share, Spotify, or Pandora. CX-1067C (Zatkovich DWS) Q/A 382-86; RX-0670C (RWS Jeffay) Q/A 388-89. The evidence shows that LG Player Devices with a web browser do not infringe the asserted '652 patent claims.

i. '652 Patent – Claim 1

BHM's infringement allegations for '652 patent claim 1 rely on its allegations for '952 patent claim 9 for LG Smart Share, Spotify, and Pandora. CX-1067C (Zatkovich DWS) Q/A 384. It is determined that LG Player Devices with Shoutcast do not infringe '652 patent claim 1

for the same reasons discussed above with respect to LG Smart Share, Spotify, and Pandora vis-à-vis claim 9 of the '952 patent.

In addition, '652 patent claim 1 requires that the electronic device is "adapted to" or "configured to" perform a series of tasks. JX-0009 ('652 patent) at col. 34, lns. 6-35. Inasmuch as [

]. *See* RX-0632 (LG App. A), (11-32). Moreover, BHM fails to show that [

]. CX-1067C (Zatkovich DWS) Q/A 380-86; RX-0670C (Jeffay RWS) Q/A 392. It is therefore determined that LG Player Devices associated with a web browser do not infringe claim 1 of the '652 patent. RX-0670C (Jeffay RWS) Q/A 388-92.

ii. '652 Patent – Claim 11

It is determined that LG Player Devices with a web browser do not infringe '652 patent claim 11 because they do not infringe claim 1 from which claim 11 depends.

iii. '652 Patent – Claim 13

It is determined that LG Player Devices with a web browser do not infringe '652 patent claim 13 because they do not infringe claim 1 from which claim 13 depends.

5. Indirect Infringement

a. Proof of Direct Infringement

To prove indirect infringement of the asserted claims, BHM must point to specific instances of direct infringement by third parties or show that the accused LG products necessarily infringe. *Electronic Digital Media Devices*, Inv. No. 337-TA-796, Comm'n Op. at

32, 36. If evidence of specific instances of direct infringement is not provided, circumstantial evidence may be used to prove indirect infringement, but only "when the evidence shows that the accused products were intended to be used only to practice the infringing method and that method was explicitly taught, for example, by product manuals." *Id.* at 33, 36. But "excerpts from user manuals as evidence of underlying direct infringement by third parties of products that can be used in a non-infringing manner are by themselves insufficient to show the predicate acts necessary for inducement of infringement." *Mirror Worlds*, 692 F.3d at 1360-62.

BHM's expert Mr. Zatkovich takes the position that the asserted patents are directly infringed by BHM's own experts, LG's employees and agents, and end users. *See, e.g.*, CX-1067C (Zatkovich DWS) Q/A 292-93, 310-11, 325, 356, 367-69; RX-0670C (Jeffay RWS) Q/A 398. As explained above, BHM cannot establish direct infringement based on the activities of its experts or LG's employees and agents. Regarding end users of the accused LG products, BHM has not adduced evidence showing any specific instance of one or more end users performing each element of the asserted claims. *See, e.g.*, CX-1067C (Zatkovich DWS) Q/A 293, 311, 325, 356, 367-69; *see also* RX-0670C (Jeffay RWS) Q/A 397, 399-400.

For example, BHM contends that [

]. CX-1067C (Zatkovich DWS) Q/A 293; CX-1349C ([ ]), (LG-ITC882-00010534). [

]. CX-1349C ([ ]), (LG-ITC882-00010534). BHM makes similar accusations for the other accused applications. *See, e.g.*, CX-1067C (Zatkovich DWS) Q/A 293, 311, 325, 356, 367-69. For example, BHM contends that "[

]." CX-1067C (Zatkovich DWS) Q/A 369. [ ]

[

]. Thus, BHM fails to show that any end users have directly infringed the asserted claims of the '952 or '652 patents with LG devices.

The record evidence also fails to show that the accused LG products necessarily infringe the asserted patents. BHM alleges that the accused functionality is "integral and essential" and that the accused applications necessarily use this functionality, but the evidence does not support BHM's position. *See, e.g.*, CX-1067C (Zatkovich DWS) Q/A 325, 339, 356, 367, 379; RX-0670C (Jeffay RWS) Q/A 399-400. The evidence does show, however, that the accused LG products (and applications) have substantial noninfringing uses and therefore cannot necessarily infringe. *See Certain Gaming & Entm't Consoles*, Inv. No. 337-TA-752, Initial Remand Determination at 32-33 (Mar. 22, 2013) (finding no contributory infringement because the accused products had substantial noninfringing uses. Inasmuch as BHM failed to establish direct infringement of any of the asserted claims, BHM also failed to prove indirect infringement by LG.

b. Induced Infringement

Induced infringement requires a showing that the accused inducer act with knowledge that the induced acts constitute patent infringement. *See Global-Tech Appliances*, 131 S. Ct. at 2068. The record evidence fails to establish that LG had knowledge that use of the accused applications on the accused LG products was both patented and infringing. It is determined that,

[

]

[ ]. *See Lucent Techs. Inc. v. Gateway, Inc.*, 509 F. Supp. 2d 912, 930-31 (S.D. Cal. 2007) (finding insufficient evidence to demonstrate that defendant knew or should have known that accused software infringed because the software was provided in binary code (machine code) from a third party); RX-0680C (H. Park DWS) Q/A 27-35; JX-0073C (J. Kim Dep.) at 143; RX-0670C (Jeffay RWS) Q/A 404. Thus, [

].

The evidence also fails to establish that LG possessed specific intent to encourage another's infringement. *See* RX-0670C (Jeffay RWS) Q/A 404, 426. BHM points to [

]. For example, BHM cites CX-0742 claiming [

]. CX-1067C (Zatkovich DWS) Q/A 291. This document, however, is a website printout that lists SmartShare as an entertainment feature, noting it can "Share media wirelessly"; it does not address any accused functionality or provide instructions for any of the asserted claim elements of the '952 or '652 patents. BHM also claims that [ ]. CX-1067C (Zatkovich DWS) Q/A 339 (citing CX-0331 ([ ])). The "detailed instructions" BHM refers to, however, explain that [

]. CX-0331 ([ ]) (64).

c. Contributory Infringement

To prevail on a claim of contributory infringement, BHM must show: (1) there is an act of direct infringement; (2) the accused device has no substantial noninfringing uses; (3) the

accused infringer imported, sold for importation, or sold after importation within the United States, the accused components that contributed to another's direct infringement; and (4) the alleged infringer knew "that the combination for which his component was especially designed was both patented and infringing." *Certain Elec. Digital Media Devices*, Inv. No. 337-TA-796, Comm'n Op. at 41; *Spansion, Inc. v. Int'l Trade Comm'n*, 629 F.3d 1331, 1353 (Fed. Cir. 2010).

As discussed above, BHM has not proven direct infringement or that LG has the requisite knowledge for induced infringement. The evidence also fails to establish that LG knew that the accused LG products and/or the accused applications were especially designed for use in an infringement of any of the asserted patents. *See, e.g.*, RX-0670C (Jeffay RWS) Q/A 405-07. Rather, the evidence cited by BHM shows substantial noninfringing uses of the accused LG products. Moreover, [

]. *See* RX-0670C (Jeffay RWS) Q/A 406.

LG's Accused Products as a whole have a many substantial noninfringing uses. LG Mobile Devices can be used as phones, LG's Player Devices can be used to watch television, and both can be used to access non-accused applications. *See, e.g.*, RX-0670C (Jeffay RWS) Q/A 425, 428-29.

In addition, the accused applications associated with LG Mobile Devices and Player Devices have substantial noninfringing uses. RX-0670C (Jeffay RWS) Q/A 408. For example, [

]. *Id.* [ ]

[

]. *Id.* [

]. *See id.* [

]. RX-0670C (Jeffay RWS) Q/A 408; CX-0650C ([

]), (SPOT-BHM 000594). [

]. RX-0670C (Jeffay RWS) Q/A 408; CX-0650C ([ ]), (SPOT-BHM 000605). Inasmuch as these activities are substantial noninfringing uses, LG is not liable for contributory infringement based on Spotify.

LG Smart Share associated with LG Mobile Devices and Player Devices also has substantial noninfringing uses, such as use for viewing and/or sharing photos and viewing and/or sharing videos. RX-0670C (Jeffay RWS) Q/A 409. [

]. RX-0670C (Jeffay RWS) Q/A 420. Browsers on LG devices also have substantial noninfringing uses, including use for browsing the Internet. *Id.* at Q/A 421. In addition to browsing other, non-accused websites, a user can browse for information on www.shoutcast.com, including viewing blog posts, contacting Shoutcast, and viewing social media posts from Shoutcast. *Id.*

The playlist functionality applications also have additional substantial noninfringing uses. RX-0670C (Jeffay RWS) Q/A 422. For example, [

]. *Id.* [

]. *Id.* These

functionalities [ ] without practicing the limitations of the '952 and '652 patents. *Id.*

Inasmuch as the accused products and functionalities all have substantial noninfringing uses, LG is not liable for contributory infringement vis-à-vis the asserted claims of the '952 and '652 patents.

E. Infringement Analysis of Toshiba Accused Products

1. The '952 Patent

BHM accuses Toshiba televisions and Blu-ray players with the Toshiba Media Share and Pandora applications, and Toshiba tablets with the Toshiba Media Player, Google Play Music and iHeartRadio applications of infringing certain claims of the '952 patent, both directly and indirectly. *See* Joint Outline of Issues at 21-23. For the reasons detailed below, BHM has failed to show that any accused Toshiba "Player Device" or "Mobile Device" infringes any asserted claim, either directly or indirectly.

a. Direct Infringement at the Time of Importation

BHM asserts method claims 9 and 14 of the '952 patent in this investigation. In order for these method claims to be infringed, each and every step recited therein must be performed. *See Certain Electronic Digital Media Devices and Components Thereof* ("*Electronic Digital Media Devices*"), Inv. No. 337-TA-796, Comm'n Op. at 40 (Aug. 9, 2013). For the reasons explained below, BHM has not shown that any asserted claim of the '952 patent is directly infringed at the time of importation.

The record evidence demonstrates that the Toshiba products are imported alone, without connection to any other device, and depowered. RX-684C (Okumura RWS) Q/A 15-16; RX-685C (Ramirez RWS) Q/A 51, 102. Additionally, the accused Toshiba products cannot be

used with any of the Content Service Provider ("CSP") services, *e.g.*, Pandora, iHeartRadio, Google Play Music or YouTube, at the time of their importation. RX-684C (Okumura RWS) Q/A 30-31, 33; RX-685C (Ramirez RWS) Q/A 50-51, 98-99, 102. The same is the case for DLNA-related operation of the accused Toshiba Media Player and Toshiba Media Share applications. RX-684C (Okumura RWS) Q/A 32, 137; RX-685C (Ramirez RWS) Q/A 52, 54, 77-81, 100. Thus, the devices cannot practice the asserted method claims as they cross the border (even if they were powered on), and their importation alone cannot be a basis for finding a violation of section 337. *Electronic Devices*, Inv. No. 337-TA-724, Comm'n Op. at 17.

Accordingly, it is determined that BHM has not shown that Toshiba has directly infringed any asserted method claim of the '952 patent (*i.e.*, claims 9 or 14) at the time of importation, and there can be no violation of Section 337 based on such alleged infringement.

Furthermore, the evidence indicates that the Pandora application must download additional code from Pandora's servers after the Pandora application is launched from an accused Toshiba television or Blu-ray disc player on which it is pre-installed at the time of importation. Zatkovich Tr. 149; RX-0667C (Goldberg RWS) Q/A 45-61. The user interface ("UI") for the Pandora application is required for performance of the actions alleged to meet the "receiving. . . a playlist assigned to the electronic device . . . ," "receiving, at the electronic device, information enabling the electronic device to obtain the ones of the plurality of songs," and "obtaining the ones of the plurality of songs from the at least one remote source" limitations of the asserted '952 claims. *See* RX-0667C (RWS Goldberg) Q/A 191-193.

The evidence also shows that the Pandora and iHeartRadio applications, as well as the Google Play Music application, must also obtain authentication tokens from Pandora and iHeartRadio servers in order to operate. These applications cannot operate without these tokens,

which are not on the accused Toshiba products at the time of importation. Zatkovich Tr. 121, 149 (the authorization token required by Pandora is not on the accused devices when imported); Zatkovich Tr. 132-1337 (the iHeartRadio service will not work until the user creates and logs in with an iHeartRadio account on the accused device); CX-0243C.0013 ("[

]."); CX-383C (describing "Device Activation" and "Authentication"); RX-0667C (Goldberg RWS) Q/A 50-61.

Inasmuch as the accused Toshiba televisions and Blu-ray players with Pandora and accused Toshiba tablets with iHeartRadio do not have the software necessary for performing all the accused functionality on the devices at the time of importation (*i.e.*, either additional code or authentication tokens), it is determined that there can be no violation of section 337 as to the '952 patent. *See Electronic Devices*, Inv. No. 337-TA-724, Comm'n Op. at 14; *see also Certain Products Containing Interactive Program Guide and Parental Control Technology* ("*Products Containing Interactive Program Guide*"), Inv. No. 337-TA-845, Comm'n Op. at 15 (Dec. 11, 2013) ("Therefore, based on the record evidence, it is unclear what portions of the Netflix SDK are in fact imported into the United States on Netflix Ready Devices. Thus, we are unable to conclude that the imported portions of the SDK perform the actions that purportedly induce infringement of the asserted patents. Accordingly, we conclude that Complainants have failed to show that Netflix made a 'sale for importation' of an infringing SDK.").

Nevertheless, in the event the Commission determines that the evidence summarized above does allow a finding of violation of section 337 based on the accused Toshiba products vis-à-vis the asserted '952 patent, a technical infringement analysis is included below.

b. Direct Infringement by Toshiba Mobile Devices

As discussed above, BHM alleges that Toshiba tablets, *i.e.*, "Mobile Devices" with Google Play Music infringe claims 9 and 14 of the '952 patent; that Toshiba tablets with the Toshiba Media Player application infringe claims 9 and 14 of the '952 patent; and that Toshiba tablets with the iHeartRadio application infringe claim 9 of the '952 patent.

i. Google Play Music

The technical infringement analysis of Toshiba Mobile Devices associated with Google Play Music is set forth in a separate section below.

ii. Toshiba Media Player

The record evidence fails to show that Toshiba Mobile Devices associated with Toshiba Media Player satisfy all limitations of asserted claims 9 and 14 of the '952 patent.[70] The following section describes the specific limitations that are not satisfied by these accused devices.

- **"receiving, at an electronic device, a playlist assigned to the electronic device, the playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device" (claim 9)**

Accused Toshiba tablets with Toshiba Media Player fail to meet the "receiving, at an electronic device, a playlist assigned to the electronic device, the playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device" limitation of claim 9 for a number of reasons. Specifically, there is no "playlist assigned to the electronic device," and the alleged playlist does not "identify[] a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device."

[70] Inasmuch as claim 14 depends from claim 9, the accused Toshiba tables with Toshiba Media Player fail to satisfy all limitations of claim 14 for the same reasons set forth for claim 9.

First, BHM has not adduced evidence showing that there is a "playlist assigned to the electronic device." The evidence shows that, in the a user properly configures a server to share media on a network, any properly configured DLNA compatible device connected to that network, including Toshiba Media Player, can connect to the server and browse the contents of the server for media. Zatkovich Tr. 187-188; RX-0684C (Okumura RWS) Q/A 124 ("Media Player will display all the media that it can recognize that is stored in the location it accesses…"); RX-0684C (Okumura RWS) Q/A 139. Any media on the server is available to any user and any properly configured device on the network. RX-0684C (Okumura RWS) Q/A 53. BHM points to no evidence that the server specifically assigns a list to one device on the network versus another such that the assignment would be "to the electronic device."

Second, accused Toshiba tablets with Toshiba Media Player do not "receiv[e] . . . a playlist . . . identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device." The plain language of the claims requires the "playlist" identify "ones of the plurality of songs" not stored on the electronic device. In order for there to be a "playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device," what is stored on the electronic device (*e.g.*, the accused Toshiba tablets) must be known. If not, it is impossible to determine whether the claimed requirement that "ones of the plurality of songs" are not stored on that device is met. *See* Zatkovich Tr. 214 ("Q. Going back to claims 1 and 9, we were just talking about streaming audio and how it could be a type of file. Do you agree that there has to be some parity between what is identified as not stored and what is provided? A. Yes."); Schonfeld Tr. 1290-1291; Houh Tr. 1214. The Content Directory Browse request (*i.e.*, "ContentDirectory:1#Browse"), which is relied on by BHM to allege that this "receiving . . ." step can be met, does not return the "playlist" claimed in the '952 patent.

The response to this "Browse" request has no relationship to whether or not the songs identified are stored on the device (in addition to being independent of the device making the request). Specifically, the Browse request returns all songs within a given directory regardless of whether or not those songs are stored locally on the device. Schonfeld Tr. 1286 ([

]). There is no functionality that examines local storage of the accused electronic device; there is no need for it to do so inasmuch as the server streams all data to the electronic device regardless of whether the songs are stored locally. RX-1067C (Goldberg RWS) Q/A 97-98; Schonfeld Tr. 1286; RX-0684C (Okumura RWS) at Q/A 53. Thus, there is no evidence of the accused Toshiba products receiving a "playlist" "wherein ones of the plurality of songs are not stored on [the accused Toshiba tablet]."

- **"receiving, at the electronic device, information enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source" (claim 9)**

The accused Toshiba tablets with Toshiba Media Player are not capable of "receiving, at the electronic device, information enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source." Specifically, the plain language of the claim requires the received "information" to be directed to "the ones of the plurality of songs," *i.e.*, the songs not stored on the electronic device, and not the entirety of the "plurality of songs" identified in the claimed "playlist." The evidence shows that this is not how the accused DLNA functionality is implemented in the accused Toshiba tablets with Toshiba Media Player. In particular, the information provided to the Toshiba Media Player application in response to the "Browse" request is directed to all songs identified in the returned catalog. This response does

not provide information specific to songs not stored locally on the electronic device as called for by the claim language. Schonfeld Tr. 1286.

- **"obtaining the ones of the plurality of songs from the at least one remote source" (claim 9)**

The accused Toshiba tablets with Toshiba Media Player are not capable of "obtaining the ones of the plurality of songs from the at least one remote source" as required by claim 9 of the '952 patent. This limitation specifies that only the songs identified in the playlist that are not already stored on the device, *i.e.*, "the ones of the plurality of songs," are obtained. *See, e.g.*, JX-0007 ('952 patent) at col. 34, lns. 24-27, 31-32; *see also* Schonfeld Tr. 1291 ("What needs to be obtained are the ones of the plurality of songs, and that refers back to the ones of the plurality of songs that are not stored on the electronic device."), 1292. When operating as a DLNA Digital Media Player ("DMP"), the Toshiba Media Player application streams all songs identified in response to a "ContentDirectory:1#Browse" request regardless of whether or not these songs are already stored on the accused Toshiba tablet. RX-0684C (Okumura RWS) Q/A 53; RX-0667C (Goldberg RWS) Q/A 97-98. Thus, the accused Toshiba tablets with the Toshiba Media Player application do not perform the step of "obtaining the ones of the plurality of songs from the at least one remote source."

iii. iHeartRadio

The record evidence fails to show that Toshiba Mobile Devices associated with iHeartRadio satisfy all limitations of asserted claims 9 and 14 of the '952 patent.[71] The following section describes the specific limitations that are not satisfied by these accused devices.

[71] Inasmuch as claim 14 depends from claim 9, the accused Toshiba tables with iHeartRadio fail to satisfy all limitations of claim 14 for the same reasons set forth for claim 9.

- **"receiving, at an electronic device, a playlist assigned to the electronic device, the playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device" (claim 9)**

As discussed above, claim 9 of the '952 patent discloses the step "receiving, at an electronic device, a playlist assigned to the electronic device, the playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device." This assigned "playlist" must consist of "a plurality of songs, wherein ones of the plurality of songs are not stored in the electronic device," and be "assigned to the electronic device." The evidence shows that the accused Toshiba tablets with the identified iHeartRadio application installed do not meet these requirements for a number of reasons.

As imported, an accused Toshiba tablet with the identified iHeartRadio application installed is not capable of receiving a "playlist." Mr. Zatkovich, BHM's expert, testified that a playlist cannot be provided by the iHeartRadio service until a user has created a user account and a device has been registered with the *iHeartRadio Music Service*. Zatkovich Tr. 130, 133-134. Mr. Zatkovich's testimony is consistent with the *iHeartRadio Web Services* API Reference, which states that "[

]." CX-243C.0013.

Additionally, the [ ] function that Mr. Zatkovich identifies as initiating the assignment of a "playlist" requires as an input a "[ ]." RX-0667C (Goldberg RWS) Q/A 95, 79, 199-200; JX-0014 (Hamre Decl.) at ¶ 7(ii) ("As shown in the iHeartRadio API Reference (CC-BH0000258), the input for [ ] includes the [ ] and the [ ]"); CX-0243.0085 (iHeartRadio API Reference); RDX-713C. This "[ ]" is not provided to a given user unless and until they have logged into the *iHeartRadio* service. CX-0243C.0020

(identifying "output" of Login procedure as including "[ ]"). Thus, until the accused Toshiba tablet is registered with the *iHeartRadio Music Service* and the iHeartRadio server issues a "[ ]" to the accused Toshiba tablet (via a user having logged in), the list of five track titles provided in JSON format (JX-0014C (Hamre Decl.) at ¶ 7(iii)) in response to a [ ] request cannot be received by an accused Toshiba tablet. That is, until this registration and log-in process is performed, the iHeartRadio application on the accused Toshiba tablets is not capable of "receiving . . . a playlist." *See* RX-0667C (Goldberg RWS) Q/A 59-60.

Claim 9 of the '952 patent requires that the claimed playlist be assigned "to the electronic device. The evidence shows, however, that the *iHeartRadio* service associates a playlist with a particular user, rather than a particular "electronic device." According to Lasse Hamre, the Executive Vice President of Technology at Clear Channel Broadcasting, Inc., a "Profile" is "a unique identifier, [ ], provided by the iHeartRadio Music Service to a user account after a user device has successfully logged onto the iHeartRadio Service." JX-0014C (Hamre Decl.) at ¶ 5. It is this "[ ]" variable, along with an "[ ]" variable, that is input to the [ ] function that is called in order to obtain the list of songs that BHM identifies as an alleged "playlist." JX-0014C (Hamre Decl.) at ¶ 7(ii). This is set forth in the iHeartRadio Music Service API Reference:

[ILLUSTRATION REDACTED]

CX-0243C.0085-86 (highlighting original to demonstrative slide). Thus, the selection of songs returned in response to a [ ] request is not made based on the device from which the request is made, but rather the "[ ]" of the specific user that makes the request. Therefore, when using the *iHeartRadio* service, the response to a [ ] request may be "provided" to the accused Toshiba tablet but it is "assigned" to the user whose "[ ]" makes the request. This does not satisfy the claim 9 limitation requiring that the playlist be assigned to the electronic device.

The accused Toshiba tablets with iHeartRadio also do not "receiv[e] . . . a playlist . . . identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device." As discussed above, Mr. Zatkovich identifies the list of tracks returned as a result of the [ ] method call as the alleged "playlist" of claim 9 for purposes of his

infringement analysis. The evidence shows that this list of tracks has no relationship to the songs stored locally on any accused Toshiba tablet. Specifically, there is no determination made within the context of the iHeartRadio service as to whether tracks returned in response to a [ ] request are stored locally on the device to which the list of tracks is provided. JX-0014C (Hamre Decl.) at ¶ 7(viii) ("[

]."). The selection of the tracks for the "playlist" is independent of the device from which the [ ] request is made (by a user), and therefore the "playlist" is not related in any way to the songs stored locally on that device. Thus, there is no evidence that any list of tracks provided in response to a getTracks request meets the requirements of the claimed "playlist" of which "ones of the plurality of songs" are "not stored on the electronic device."

- **"obtaining the ones of the plurality of songs from the at least one remote source" (claim 9)**

The record evidence shows that the accused Toshiba tablets with iHeartRadio are not capable of "obtaining the ones of the plurality of songs from the at least one remote source" as required by claim 9 of the '952 patent. When the accused Toshiba tablets are provided with a list of five tracks from the iHeartRadio service in response to a [ ] request, the iHeartRadio application seeks to obtain the tracks in the list regardless of whether any of these tracks are stored locally on the accused Toshiba tablet. CX-1067C.0239-40 (Zatkovich DWS) Q/A 511-512; JX-0014C (Hamre Decl.) at ¶ 7(viii) ("[

]

[

].”). This was described by Toshiba’s expert, Dr. Goldberg:

> When using the iHeartRadio or Toshiba Media Player on the accused Toshiba tablets to play music from a remote source, all the songs on a playlist are streamed–whether [] they are stored on the tablet or not. Thus, it is not just the songs that are not already stored that are streamed, but all songs including those that are already stored on the device. This operation is not what the claim language is directed to, and therefore I do not believe that it is met by [the iHeartRadio] service[].

RX-0667C (RWS Goldberg) Q/A 98. This is consistent with the testimony of other Respondents’ experts. *See, e.g.*, Jeffay Tr. 985; RX-0669C (Houh RWS) Q/A 270, 277.

Additionally, the Toshiba tablets with iHeartRadio are not capable of obtaining the ones of the plurality of songs under the claim construction adopted above because the iHeartRadio application never downloads and stores the songs. JX-0014C (Hamre Decl.) at ¶ 7(v) (“[

].”).

c. Direct Infringement by Toshiba Player Devices

i. Toshiba Media Share

BHM alleges that Toshiba Player Devices with the Toshiba Media Share application, *i.e.*, televisions and Blu-ray players, infringe claims 9 and 14 of the ’952 patent. For many of the same reasons described above with respect to “Mobile Devices,” the accused Toshiba Player Devices as imported do not meet several limitations of independent claim 9 of the ’952 patent.

- **“receiving, at an electronic device, a playlist assigned to the electronic device, the playlist identifying a plurality of songs, wherein ones of the plurality of sons are not stored on the electronic device” (claim 9)**

The evidence shows that Accused Toshiba televisions and Blu-ray players with Media Share fail to meet the “receiving, at an electronic device, a playlist assigned to the electronic device, the playlist identifying a plurality of songs, wherein ones of the plurality of songs are not

stored on the electronic device" limitation for a number of reasons. Specifically, there is no "playlist assigned to the electronic device" and the alleged playlist does not "identify[] a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device."

For the same reasons disclosed above with respect to the Toshiba Media Player application, the list of songs Mr. Zatkovich accuses of being the claimed playlist is not assigned to the accused electronic device, *i.e.*, a Player Device with Toshiba Media Share. As is the case with Toshiba Media Player, if a user properly configures a server to share media on a network, any properly configured DLNA-compatible device connected to that network can connect to the server, make the same "ContentDirectory:1#Browse" request identified by Mr. Zatkovich, and receive the same catalog of contents regardless of the device from which the request is made. Zatkovich Tr. 187-188; RX-0685C (Ramirez RWS) Q/A 52-54, 100-101. The server may "provide" a list to the requesting Player Device in response to a "browse" request, but this is different from "assigning a playlist to [the Player Device]."

Accused Toshiba televisions and Blu-ray players with Media Share also do not "receiv[e] . . . a playlist . . . identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device" for the same reasons discussed above in relation to Toshiba Media Player. Mr. Zatkovich is accusing the Content Directory Browse request that the accused electronic device sends to the server as the "playlist request" that returns a "playlist" as claimed in the '952 patent (for all Respondents). CX-1067C (Zatkovich DWS) Q/A 448, 407 (referencing Panasonic DLNA client application). For all Respondents' accused products, the list returned as a result of the Browse request contains no information regarding whether (and which) songs listed therein are stored on the accused Toshiba Player Device. Specifically, the Browse request returns all songs within a given directory, and does so regardless of whether

those songs are stored locally on the device. Zatkovich Tr. 187; RX-0667C (Goldberg RWS) Q/A 97; *see also* Schonfeld Tr. (Schonfeld) 1286.

- **"receiving, at the electronic device, information enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source" (claim 9)**

The evidence shows that the accused Toshiba televisions and Blu-ray players with Media Share are not capable of "receiving, at the electronic device, information enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source" for the same reasons described in relation to Toshiba Media Player. In particular, the Toshiba Media Share application does not receive information in response to a "Browse" request that specifically allows the accused Toshiba Player Devices to stream only those songs that are not already stored on the applicable device as required by asserted claim 9. Schonfeld Tr. 1291.

- **"obtaining the ones of the plurality of songs from the at least one remote source" (claim 9)**

The evidence shows that the accused Toshiba televisions and Blu-ray players with Media Share are not capable of "obtaining the ones of the plurality of songs from the at least one remote source" as required by claim 9 of the '952 patent for the same reasons discussed above in relation to Toshiba Media Player (on the accused Toshiba tablets). The language of claim 9 specifies that the electronic device obtains only the songs identified in the playlist that are not already stored on the device, *i.e.*, the claimed "the ones of the plurality of songs" identified in the "playlist." Schonfeld Tr. 1291, 1292. As set forth above, when operating as a DLNA Digital Media Player ("DMP"), the Toshiba Media Share application does not and cannot stream from a Digital Media Server only those songs identified in response to a "ContentDirectory:1#Browse" request that are not already stored on the accused Toshiba tablet.

ii. Pandora

BHM also alleges that Toshiba televisions and Blu-ray players with the Pandora application installed infringe claim 9 of the '952 patent. For many of the same reasons described above with respect to iHeartRadio on Mobile Devices, the evidence does not show that Player Devices with Pandora satisfy all limitations of claim 9.

As an initial matter, BHM has not demonstrated actual use of any of the currently imported Toshiba televisions or Blu-ray disc player products. The evidence adduced of alleged use of Pandora on Toshiba products is a Pandora usage report (CX-0350C.002) that references: (1) Toshiba Blu-ray disc players that are no longer imported into the United States (RX-0667C at 21-22 (Goldberg RWS) Q/A 63; RX-0685C (Ramirez RWS) Q/A 18) and (2) a "Toshiba TV" without indication that this reference is to a currently imported Toshiba television (CX-0350C.002).[72] This report fails to support a finding that a Pandora application has been used on any currently imported accused Toshiba television or Blu-ray disc product.

The evidence further shows that the accused Toshiba televisions and Blu-ray players with Pandora do not satisfy the following limitations of claim 9.

- **"receiving, at an electronic device, a playlist assigned to the electronic device, the playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device"**

As discussed above, with respect to Google Play Music and iHeartRadio, the "playlist" of claim 9 must (a) be assigned to the device, and (b) identify "a plurality of songs, wherein ones of the plurality of songs are not stored in the electronic device." The accused Toshiba televisions

[72] This report mentions one additional Toshiba television, the SL417 TV, that has not been imported in years. RX-0685C (Ramirez RWS) Q/A 18.

and Blu-ray players with the identified Pandora application installed do not meet these requirements for a number of reasons.

As imported, the accused Toshiba televisions and Blu-ray players with the identified Pandora application installed are not capable of receiving a "playlist" at the time of importation. BHM's expert Mr. Zatkovich argued that the "playlist" in the Pandora service is the map array returned in response to a [ ] call. CX-1067C (Zatkovich DWS) Q/A 498. Yet Mr. Zatkovich also testified that this map array cannot be provided by the Pandora service until a user has created a user account and a device has been authenticated with the Pandora service, which itself cannot occur until after the user has logged into the Pandora service on the accused device. Zatkovich Tr. 149. Mr. Zatkovich also testified that the user authentication token required for this "playlist" to be received is not on the accused devices at the time of importation. Zatkovich Tr. 148-149.

Mr. Zatkovich's testimony is consistent with the Pandora API Reference, which sets forth the requirements for operation with the Pandora service and states that "[b]efore a user can use the Pandora service on a device, the user needs associate [sic] their Pandora account with their device." CX-0383.0004; *see also* RX-0667C (Goldberg RWS) Q/A 50-57. Specifically, the [ ] call that Mr. Zatkovich identifies as supporting his "playlist" analysis requires a user authentication token, referred to as "[ ]," as an input parameter. RX-0667C (Goldberg RWS) Q/A 50-57; CX-0383C.0079 (identifying "[ ]" as a "parameter"). This [ ] function cannot be properly called without this "[ ]," which is only provided to the device after a two-stage authentication process. CX-0383.0004 (Pandora API Reference). This authentication process only occurs when the application is launched after the accused device is imported into the United States.

The Pandora API generally describes the two-stage authentication process as follows:

> The authentication sequence consists of two stages. First, the calling device provides its own credential, verifying that it is an device from an authorized partner. This call returns an authentication token for the partner. The second stage is authenticating the end user. The calling device provides its authentication token, along with the credential for the end user.

CX-0383.0004; *see also* RX-0667C (Goldberg RWS) Q/A 51. The "[ ]" method is called as part of the first stage. CX-0383.0004, .0049-.0050 (Pandora API Reference). This method returns a "[ ]." CX-0383.0004, .0049-.0050 (Pandora API Reference); *see also* RX-0667C (Goldberg RWS) Q/A 51-52. During the second phase of the authorization process, the "[ ]" is passed as an input to the "[ ]" method. RX-0667C (Goldberg RWS) Q/A 53; RDX-0709C. The "[ ]" method then returns a "[ ]" parameter. RDX-0710C; *see* CX-383C.0051-.0052 (Pandora API Reference). As discussed above, this "[ ]" is a required input for the [ ] method; the [ ] function cannot be properly run without it. CX-383C.0079, .0081 (describing one error of the [ ] function as "[ ]"); RX-0667C (Goldberg RWS) Q/A 55. Thus, without the "[ ]" on the device, the [ ] method cannot return the map array that Mr. Zatkovich argues is the claimed "playlist" of claim 9 of the '952 patent. *See* RX-0667C (Goldberg RWS) Q/A 55-56.

Further, the "[ ]" is not on the accused Toshiba televisions and Blu-ray players as imported. Zatkovich Tr. 149; *see also* RX-0667C (Goldberg RWS) Q/A 57. Until a user has logged into the Pandora application on the accused Toshiba television or Blu-ray player after importation, the Pandora server cannot provide the device with a "[ ]" (which itself requires the Player Device to be connected to the Internet). Therefore, at the time of

importation, the accused Toshiba televisions and Blu-ray disc players are incapable of making a proper [ ] request, and cannot receive an alleged "[ ]," which comprises a map array of four or more elements relating to tracks or advertisements. *See* JX-0015C (Edwards Decl.) at ¶ 7(i)).

In addition, claim 9 of the '952 patent requires that a playlist be assigned "to the electronic device" rather than to a user. Similar to Google Play Music and iHeartRadio, the evidence shows that the Pandora service associates a playlist with a particular user rather than a particular "electronic device." Neither the "[ ]" nor any other input into the [ ] method is device-specific, and BHM has adduced no evidence to show that it is. According to Carl Edwards, Director of Device Engineering at Pandora, Inc., the map array provided as the result of the [ ] function (*i.e.*, the alleged "playlist") is device-independent:

> The map array that is returned is based on **the preferences of the user**, the user authentication token and the station token. **No identifier of the device itself that is requesting the map array is considered** by the Pandora server when determining what to include in the map array that is returned.

JX-0015 at ¶ 7(i) (emphasis added). The parameters that are supplied with a [ ] request include a user authentication token ("userAuthToken") but no device identifier. Mr. Edwards' explanation is confirmed by the Pandora API's description of the two-step authentication process described above.

With respect to the "[ ]" portion of this two-step process, the Pandora API document describes that the "[ ]" method can be called with different inputs, one that is based on user log-in information and one that appears tied to a "[ ]." CX-0383C.0051. Mr. Zatkovich, however, has offered no evidence that the accused Toshiba Devices with Pandora

use the second, "[ ]" "[ ]" method as opposed to the username/password login method (which is listed first in the API documentation); this username/password method does not include a device-specific parameter. RX-0667C (Goldberg RWS) Q/A 53; RDX-0709C. Even if the "[ ]" method were used, it is the "[ ]" and not a "[ ]" that is passed as an input parameter to the identified [ ] method. CX-383C.0079 (Pandora API Reference). Therefore, the evidence shows that the selection of songs returned in response to a [ ] request is not made based on the device from which the request is made, but rather based on the user associated with the "[ ]" that makes the request.

Moreover, as discussed above in relation to the other accused applications, the plain language of the claims requires that "ones of the plurality of songs" identified in the playlist are not stored on the electronic device. There can be no determination of whether the "playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device" limitation is met without first making a determination of the songs stored on an accused device. Schonfeld Tr. 1290-1291; Houh Tr. 1214; Zatkovich Tr. 214 ("Q. Going back to claims 1 and 9, we were just talking about streaming audio and how it could be a type of file. Do you agree that there has to be some parity between what is identified as not stored and what is provided? A. Yes."). The adduced evidence does not show that the accused device makes a determination of the songs stored on it. *See* CX-1067C (Zatkovich DWS) Q/A 494-506. The selection of the tracks in the "map array" returned in response to a [ ] request for the "playlist" is independent of the device from which the [ ] request is made," and the returned map array is not related in any way to the device's local storage. This is corroborated by Carl Edwards of Pandora, who states in his declaration that "[

]

[

]." JX-0015C (Edwards Decl.) at ¶ 7 (vii).

- **"receiving, at the electronic device, information enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source"**

The accused Toshiba televisions and Blu-ray players with Pandora are not capable of "receiving, at the electronic device, information enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source." The evidence shows that the map array returned in response to a [ ] request contains information about all songs listed therein, regardless of the local storage of the electronic device. JX-0015C (Edwards Decl.) at ¶ 7(vii). Thus, the information received is not for obtaining "the ones of the plurality of songs," but rather for all songs in the alleged "playlist" regardless of whether or not they are stored in the electronic device (here, the accused Toshiba television or Blu-ray disc player).

- **"obtaining the ones of the plurality of songs from the at least one remote source"**

The evidence shows that the accused Toshiba televisions and Blu-ray players with Pandora are not capable of "obtaining the ones of the plurality of songs from the at least one remote source" as required by claim 9 of the '952 patent. As discussed above in relation to the iHeartRadio application, the method disclosed by claim 9 is designed to obtain only the songs identified in the playlist that are not already stored on the device, *i.e.*, "the ones of the plurality of songs" identified in the "playlist." Schonfeld Tr. 1291, 1292. When the accused Toshiba televisions and Blu-ray players are provided with the map array from the Pandora service in response to a [ ] function call, the Pandora application will stream all tracks in the map

array that the user listens to, regardless of whether any of these tracks are stored locally on the accused Toshiba tablet. JX-0015C (Edwards Decl.) at ¶ 7 (vii) ("[

]."); *see also* RX-0667C (Goldberg RWS) Q/A 98.

Additionally, the Toshiba tablets with Pandora are not capable of "obtaining the ones of the plurality of songs" under the claim construction adopted above because the Pandora application never downloads and stores the songs. JX-0015C (Edwards Decl.) at ¶ 7(v) ("[

].").

For these reasons, the "obtaining . . ." step of claim 9 is not performed on the accused Toshiba television and Blu-ray disc players with the Pandora application installed.

d. Indirect Infringement

Toshiba argues that BHM "has failed to identify the type of indirect infringement allegedly engaged in by Toshiba." *See* Toshiba Br. at 40-42. In particular, Toshiba argues that "BHM's prehearing brief fails to analyze the individual elements of either induced infringement or contributory infringement, instead making the generic statement that use of the accused Toshiba devices with the accused applications 'results in both direct and infringe infringement' of the '952 patent." *Id.* at 41 (citing Compl. Pre-Hearing Br. at 140-42, 144-45, 148-50, 155-56). It is further argued that "[b]oth BHM's prehearing brief and the witness statement of its expert,

Mr. Zatkovich, use verbiage traditionally associated with induced infringement and contributory infringement interchangeably." *Id.*

BHM's post-hearing brief does argue that Toshiba is liable for contributory infringement of the '952 patent. *See* Compl. Br. at 389-421. BHM's post-hearing brief also alleges that Respondents should be found liable for induced infringement of the '952 patent should the *Suprema* opinion be "clarified." *See id.* at 422.

Inasmuch as BHM appears to acknowledge that the *Suprema* decision forestalls a finding of induced infringement of the '952 patent in this investigation (*see* Compl. Br. at 422), the administrative law judge will only make a determination as to the alleged contributory infringement of the '952 patent by Toshiba.

i. Direct Infringement by an End User

The record evidence fails to show that a single person or entity has performed each and every step of any asserted claim of the '952 patent, which is required for a finding of indirect infringement. For instance, BHM and its expert Mr. Zatkovich refer to Toshiba user guides, marketing materials and tutorials as evidence to show direct infringement, but these materials fail to show that all steps of the claimed inventions were practiced in the United States. Mr. Zatkovich references "on-screen menus, prompts, and instructions . . . that highlight and instruct, for example, through prominent placement of playlist-related and custom or personalized radio options, end users to utilize the playlist." CX-1067C (Zatkovich DWS) Q/A 475. Mr. Zatkovich also references descriptions of Toshiba's website, its user manuals and specification sheets, as well as "premium placement of DLNA functionality" through its "home screen music players" to support his assertion of direct infringement. *See id.* Mr. Zatkovich cites to Toshiba's own use of "DLNA functionality on Toshiba Mobile Devices" during testing as further proof. *Id.* The same

allegations regarding alleged use are made with respect to DLNA on Toshiba Player Devices as well as the remaining accused applications. *See, e.g.*, CX1067C (Zatkovich DWS) Q/A 455-59, 488-93, 501-06, 513-18. The cited evidence does not demonstrate actual use of the infringing Toshiba products, which required for a predicate finding of direct infringement before a finding of indirect infringement can be made.

BHM also identifies "customer call lists" (also referred to as "Customer Service Logs") regarding "DLNA/Toshiba Media Player" as evidence that end users actually use the Toshiba Player Devices with DLNA.[73] CX-1067C (Zatkovich DWS) Q/A 459. Nevertheless, the evidence shows that there are several functionalities associated with "DLNA," and BHM has not demonstrated that the DLNA-related calls in the Customer Service Logs are, in fact, related to the DLNA functionality accused in this investigation. *See* RX-0667C (Goldberg RWS) Q/A 223-224; CX-0695.0157-.0167 (6200 Series TV User Guide) (describing playback of videos and photos or other media stored locally on a USB. Mr. Zatkovich's reliance of iHeartRadio and Pandora support center records fail for similar reasons, inasmuch as the records do not show that the call center records relate to actual use of the accused functionalities in an infringing manner. *See, e.g.*, CX-1067C (Zatkovich DWS) Q/A 517, 116.

BHM identifies two additional instances of alleged actual use to support its infringement contention: (1) Toshiba and its agents' use in testing the accused products, and (2) Mr. Zatkovich's testing of the products in performing an infringement analysis in the present investigation. The evidence shows that Toshiba does test its products, but the protocols used in this testing fail to establish that each and every step of any asserted claim is performed. For

[73] Mr. Zatkovich cites to a 103-page document, CX-0667C, as identifying "multiple calls for DLNA/Toshiba Media Player" on a customer call list. Yet, Mr. Zatkovich fails to identify a specific entry in this document that reflects these calls.

example, Toshiba's test protocol for the accused Google Play Music application indicates that Toshiba performs a simple "sanity test." CX-0690C.002. There is no disclosure that "playlists" are be used, let alone assigned or received at the accused Toshiba tablet. *Id.* The same is the case for the testing protocols for Toshiba Media Player and iHeartRadio. CX-0690C.0005; CX-0691C. Accordingly, these testing protocols fail to show actual use of the accused products in an infringing manner.

As for Mr. Zatkovich's own testing of the accused products, even if these activities could be relied upon to show direct infringement as a predicate to a finding of indirect infringement, they still cannot be relied upon to establish that every accused Toshiba product has been used. For example, Mr. Zatkovich's testing can support a finding that only the Toshiba products he actually tested, the 39L4300KU television and Excite Pure tablet, were used in an allegedly infringing manner. CX-1067C (Zatkovich DWS) Q/A 440, 525. Mr. Zatkovich's testing of a single Toshiba television, for example, cannot establish that every accused model of television or Blu-ray disc player has actually been used to practice a claimed method within the United States.

ii. Substantial Non-Infringing Uses

As described above, the accused Toshiba devices are not capable of performing each and every step of the asserted claims of the '952 patent at the time of importation. Even if BHM could make that showing, its allegations of contributory infringement cannot succeed because the evidence demonstrates that the accused products have substantial non-infringing uses. *See Electronic Digital Media Devices*, Inv. No. 337-TA-796, Comm'n Op. at 37.

For example, the accused televisions can be used to watch television, the accused Blu-ray disc players can be used to play movies and music stored on optical discs, and the accused tablets can be used for a multiple of general purpose computing functions, including Internet web

browsing. RX-0684C (Okumura RWS) Q/A 53, 87, 122, 125, 138-39; RX-0685C (Ramirez RWS) Q/A 29, 32, 53, 65, 101; RX-0667C (Goldberg RWS) Q/A 151-155; CX-0694C (Excite 7.7 User Guide); CX-0695 (6200 Series TV User Guide); CX-0700 (BDX5400 User Guide). None of these functions, if used, involves the practice of each and every limitation of any asserted '952 claim.

Even if the accused Toshiba "products" were further specified as a particular accused device/application combination, BHM has failed to adduce evidence showing that these combinations necessarily infringe any asserted claim inasmuch as each of the accused applications has substantial non-infringing uses. For example, the accused Toshiba Media Share application, which is installed on accused Toshiba televisions and Blu-ray disc players, and the accused Toshiba Media Player application, which is installed on the accused Toshiba tablets, can be used to stream media other than songs from a server (the only media claimed in the '952 patent are songs), such as photos and videos, or to stream single songs rather than playlists. RX-0684C (Okumura RWS) Q/A 53, 87, 122, 125, 138-39; RX-0685C (Ramirez RWS) Q/A 32, 53, 65, 101; RX-0667C (Goldberg RWS) Q/A 151-155; CX-0694C (Excite 7.7 User Guide); CX-0695 (6200 Series TV User Guide); CX-0700 (BDX5400 User Guide). Additionally, these applications can be used to play media stored in local memory (or locally attached memory, such as microSD or USB devices, or optical disc media). RX-0684C (Okumura RWS) Q/A 53, 87, 122, 125, 138-39; RX-0685C (Ramirez RWS) Q/A 29, 32, 53, 65, 101; RX-0667C (Goldberg RWS) Q/A 151-155; CX-0694C (Excite 7.7 User Guide); CX-0695 (6200 Series TV User Guide); CX-0700 (BDX5400 User Guide).

As for iHeartRadio, the evidence shows that the iHeartRadio application supports playing both Internet radio broadcasts and alleged "playlists." *See* CX-1067C.0243 (Zatkovich DWS)

Q/A 520. If the iHeartRadio application is used to receive and play solely Internet radio broadcasts (rather than from "playlists"), it would not infringe any asserted claim of the '952 patent. RX-0667C (Goldberg RWS) Q/A 154.

These uses and configurations of the accused products and functionalities establish that the accused Toshiba products do not necessarily infringe any asserted claim of the '952 patent, thereby precluding a finding that Toshiba is liable for contributory infringement of the asserted claims of the '952 patent.

iii. Knowledge and Intent

BHM's indirect infringement argument also fails because BHM has not established that Toshiba had the requisite knowledge "that the combination for which this component was especially designed was both patented and infringing." *See Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S.Ct. 2060, 2067 (2011), quoting *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 488, 84, S.Ct. 1526, 12 L.Ed.2d 457 (1964). As evidence to support its contentions, BHM identifies: (1) instructions or tutorials created by non-Toshiba actors and over which Toshiba has no control and (2) documents that reference, by name, accused applications in Toshiba marketing materials and/or user guides. *See* RX-0684C (Okumura RWS) Q/A 23, 80-87, 89-90, 92-93, 127-133; RX-0685C (Ramirez RWS) Q/A 35-44, 95, 116; RX-0667C (Goldberg RWS) Q/A 110-150; CX-1067C (Zatkovich DWS) Q/A 455-62, 473-77, 488-93, 501-6, 513-18. Nothing in these examples establishes the intent necessary to support a finding of inducement, *i.e.*, intent to cause someone to infringe a claim of the patent, rather than merely to perform certain acts that ultimately result in infringement. *DSU Medical Corp. v. JMS Co., Ltd.*, 471 F.3d 1293, 1304 (Fed. Cir. 2006).

2. The '652 Patent

BHM accuses Toshiba tablets having the iHeartRadio application alone or in combination with Toshiba Media Player or Google Play Music[74] of directly infringing certain claims of the '652 patent. For the reasons detailed below, BHM has failed to show that any accused Toshiba tablet infringes any asserted claim.

a. Mobile Devices with iHeartRadio

BHM alleges that Toshiba tablets, *i.e.*, "Mobile Devices" with the iHeartRadio Android application installed infringe claims 1, 11 and 13 of the '652 patent. The evidence adduced at the hearing fails to show that the accused Mobile Devices satisfy certain limitations of independent claim 1 of the '652 patent.

i. "a network interface enabling the electronic device to receive an Internet radio broadcast and being further adapted to communicatively couple the electronic device to a central system" (claim 1)

The evidence shows that the accused Toshiba tablets with the iHeartRadio application installed do not include "a network interface . . . further adapted to communicatively couple the electronic device to a central system" as they are imported into the United States. The accused Toshiba tablets with iHeartRadio installed cannot themselves communicate with, and are therefore not "adapted to communicatively couple" to, any iHeartRadio server at the time of their importation. Instead, the iHeartRadio application must be adapted by a user by registration with an iHeartRadio server before the application is coupled to communicate with the iHeartRadio web services.

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[74] The infringement analysis relating to Google Play Music is set forth in a separate section below.

For example, the iHeartRadio Web Services API Reference, which "describes the current application programming interface for interacting with iHeartRadio's backend infrastructure" states that "a device must register with the *iHeartRadio Music Service* before it can use the *iHeartRadio* web services." *See* RX-0667C (Goldberg RWS) Q/A 58 *citing* CX-0243C at CC-BH000000185 (emphasis added); JX-0014C (Hamre Decl.) at ¶ 4. Before an accused Toshiba tablet undergoes the registration process with the *iHeartRadio Music Service*, the network interface of the accused Toshiba tablets is not adapted to "communicatively couple" to the iHeartRadio web services in the manner required by claim 1 of the '652 patent. RX-0667C (Goldberg RWS) Q/A 170, 187-88. BHM has provided no evidence showing that any accused Toshiba tablet, as imported, is adapted (or otherwise configured) to communicate with the *iHeartRadio* web service. Indeed, Mr. Zatkovich testified that to the contrary. *See* Zatkovich Tr. at 129-130 ("Q. And you don't see that in the Hamre declaration, do you? A. Hamre neglects to mention that, but a device must register with iHeart music services before it can use the API services.").

In order for the accused Toshiba tablets to be "adapted to" communicatively couple to the iHeartRadio service, the user must at least (1) configure the device to set up an active internet connection and (2) register the device with the iHeartRadio service. RX-0684C (Okumura DWS) at Q/A 33; CX-0243C (iHeartRadio API) at CX-0243C.0013. Only after this operation is performed and additions (or changes) are made to the iHeartRadio application via registration, can a connection be made to the iHeartRadio service. CX-0243C.0013-.0014. If this configuration is never performed, then the Toshiba tablet is never "adapted to . . . communicatively couple" to the iHeartRadio web service and there can be no infringement.

ii. "a control system . . . adapted to: i) enable a user of the electronic device to select a desired mode of operation from a plurality of modes of operation comprising an Internet radio mode of operation and a playlist mode of operation"

Claim 1 of the '652 patent recites a "control system" that is "adapted to" "enable a user of the electronic device to select a desired mode of operation from a plurality of modes of operation comprising an Internet radio mode of operation and a playlist mode of operation." BHM has introduced no evidence that the accused Toshiba tablets with the iHeartRadio application installed include a "control system" that is "adapted to" perform this function at the time of their importation.

Although the evidence does demonstrate that a quantity iHeartRadio software is installed on the accused Toshiba tablets at the time of their importation, BHM has failed to introduce evidence that the code that installed on these tablets at the time of importation is "adapted to" provide the functionality of the "control system" recited in claim 1. *See* RX-0667C (Goldberg RWS) Q/A 187.

iii. "a control system associated with the network interface . . . and adapted to: when the desired mode of operation is the playlist mode of operation: receive the playlist assigned to the electronic device from the central system, the playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device" (claim 1)

Claim 1 of the '652 patent recites a "control system" that is "adapted to" "receive the playlist assigned to the electronic device from the central system." This assigned "playlist" must identify "a plurality of songs, wherein ones of the plurality of songs are not stored in the electronic device." The accused Toshiba tablets with the identified iHeartRadio application

installed do not meet these requirements for a number of reasons, including those discussed above in relation to claim 9 of the '952 patent.

As imported, accused Toshiba tablets with the identified iHeartRadio application installed are not adapted to receive a "playlist." Indeed, BHM's expert Mr. Zatkovich testified that a playlist cannot be provided by the iHeartRadio service until a user has created a user account and a device has been registered with the *iHeartRadio Music Service*. Zatkovich Tr. 130, 133-134. This is consistent with the *iHeartRadio Web Services* API Reference, which states that "[a] device must register with the *iHeartRadio Music Service* before it can use the *iHeartRadio* web services." CX-243C.0013. Additionally, as discussed above in relation to the '952 patent, the [ ] function that Mr. Zatkovich and BHM identify as initiating the assignment of a "playlist" requires, as an input, a "[ ]." *See* RX-0667C (Goldberg RWS) Q/A 95, 199-200; JX-0014 (Hamre Decl.) at ¶ 7(ii) ("[

]."). As discussed above in relation to the '952 patent this "[ ]" is not provided to a given user unless and until they have logged into the *iHeartRadio* service and the accused Toshiba tablet cannot received the response to a [ ] request until after this [ ] is received by the device. *See* CX-0243C.0020; JX-0014C (Hamre Decl.) at ¶ 7(iii).

As discussed in relation to claim 9 of the '952 patent, claim 1 of the '652 patent requires that a playlist be assigned "to the electronic device" rather than to a user. The evidence shows that the *iHeartRadio* service associates a playlist with a particular user, rather than a particular "electronic device." Thus, the "playlist assigned to the electronic device from the central system" limitations of claim 1 the '652 patent is not met for the same reasons this limitation is not met with respect to claim 9 of the '952 patent. RX-0667C (Goldberg RWS) Q/A 200-201.

Claim 1 of the '652 patent requires that the device be "adapted to . . . receive the playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device." As discussed in relation to claim 9 of the '952 patent, the accused Toshiba tablets with iHeartRadio do not "receiv[e] . . . a playlist . . . identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device." Thus, BHM has not shown that the accused Toshiba tablets include a "control system . . . adapted to . . . receive . . . the playlist identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device" for the same reasons that the corresponding limitation of claim 9 of the '952 patent is not met. RX-0667C (Goldberg RWS) Q/A 98, 200-202.

b. Mobile Devices with iHeartRadio in Combination with Toshiba Media Player

BHM alleges that claim 1 of the '652 patent is infringed by accused Toshiba tablets having the combination of iHeartRadio and Toshiba Media Player applications installed. The accused Toshiba tablets with these applications do not meet each and every limitation of claim 1 for the same reasons, discussed above, that the accused tablets with the iHeartRadio application installed do not meet each and every limitation of this claim. Furthermore, the Toshiba Media Player application itself does not meet certain limitations of claim 1.

The Toshiba Media Player application is not adapted to receive and play Internet radio broadcasts as required by claim 1 of the '652 patent. The Toshiba Media Player application cannot be used to receive and play Internet radio. Instead, the Toshiba Media Player is able to play and/or display audio, video or digital image files that are stored locally, on attached memory (*e.g.*, USB drive or microSD card) or on a remote server. RX-0684C (Okumura RWS) Q/A 53, 122; RX-0685C (Ramirez RWS) Q/A 32, 53-54, 101; RX-0667C (Goldberg RWS) Q/A 153.

The accused Toshiba tablets with Toshiba Media Player application are not "adapted to" "obtain the ones of the plurality of songs from the at least one remote source" as required by claim 1 of the '652 patent. As discussed above in relation to the '952 patent, the Toshiba Media Player application does not and cannot stream from a Digital Media Server only those songs identified in response to a "ContentDirectory:1#Browse" request that are not already stored on the accused Toshiba tablet. Thus, the accused Toshiba tablets with the Toshiba Media Player application do not meet the "a control system . . . adapted to . . . obtain the ones of the plurality of songs from the at least one remote source" limitation of claim 1 for the same reasons that the "obtaining the ones of the plurality of songs from the at least one remote source" limitation of '952 claim 9 is not met. *See* RX-0667C (Goldberg RWS) Q/A 203.

F. Infringement Analysis of Products Associated with Google Play Music

BHM alleges that certain Samsung, LG, Toshiba, and [ ] devices associated with the DIAL-enabled YouTube mobile application, Google Play Music, Google Locations+, or Google Latitude practice certain claims of the asserted patents. The record evidence shows that Google's products operate in the same manner across Respondents' and [ ] devices. *See* RX-0666C (Bishop RWS) Q/A 69, 125, 129, 179; Zatkovich Tr. 63, 83.

The following demonstrative, which was finalized before BHM filed its motion to terminate claims 17 and 19-20 of the '593 patent and claims 1-4 of the '952 patent, summarizes BHM's allegations of infringement regarding Google applications associated with Respondents' accused products.

Patents	Accused Google Apps	Accused Respondent Devices		
		Samsung	LG	Toshiba
'873	YouTube + Dial-enabled YouTube Application	1, 5, 8, 16, 23, 27, 30, 34, 37, 45	1, 5, 16, 23, 27, 30, 34, 45	1, 16, 23, 30, 45
'952 / '652	+ Google Play Music	'952: 1-4, 9, 14 '652: 1, 11, 13	'952 (mobile): 1-4, 9, 14 '952 (player): 9, 14 '652 (mobile): 1, 11, 13	'952: 1-4, 9, 14 '652: 1, 11, 13
'593	g+ + Google Locations+	7, 17-20	7, 17-20	

RDX-0635 (Summary of infringement allegations from CX-1067C and CX-1068C).

1. Overview of Google Play Music

Google Play Music is a cloud-based music service that is part of Google Play. RX-0567C (Ghosh RWS) Q/A 14. Google Play is a digital content store from which users can download applications, music, magazines, books, and movies. *Id.* at Q/A 15. Google Play Music allows users to upload their own music or purchase music from the Play Store. *Id.* at Q/A 14. Paying subscribers can also browse and play music from Google's subscription catalog. *Id.* Users can stream music from the cloud or listen to locally-stored music. *Id.*

After Google Play Music is installed on a device, users can open Google Play Music by tapping on a "Play Music" icon. *Id.* at Q/A 20. Users can then select a Google account for use with Google Play Music. *Id.* If they do not have a Google account, then they must create one.

Id. Upon successfully logging into a valid Google account, the user's device [

]. *Id.* at Q/A 21. [

]. *Id.* [

]. *Id.* at Q/A 21, 32, 34. [

]. RX-0666C (Bishop RWS) Q/A 142.

For Android-based devices, Google compiles the human-readable source code for Google Play Music into an application package known as a "binary" and provides it to Android partners. RX-0567C (Ghosh RWS) Q/A 17, 18. The binary is in a form that is understandable by a computer. *Id.* at Q/A 18. Partners do not have access to the source code, and it is not possible for partners to alter the binary. *Id.* at Q/A 19. Users can also download the Google Play Music application from the Google Play store for installation on their devices. *Id.* at Q/A 17.

2. "a playlist assigned to the electronic device" ('652 / '952 Patents)

For the reasons discussed below, it is determined that BHM has not shown that Respondents' accused products associated with Google Play Music infringe any asserted claim of the '952 or '652 patent. In particular, the record evidence shows that the accused products do not assign a playlist to an electronic device, as required by asserted claim 1 of the '652 patent and asserted claim 9 of the '952 patent. The evidence does show that the playlists at issue are associated with user accounts.

For instance, BHM's expert Mr. Zatkovich testified that playlists are associated with user accounts [ ]:

[

]

Zatkovich Tr. 85; *see also* Zatkovich Tr. 67 ("[

].").

a. Google Play Music Source Code

In addition, the Google Play Music source code demonstrates that [

]. RX-0666C (Bishop RWS) Q/A 139. Google Play Music source code contains [

]. *Id.* For example, [

]. RX-0666C (Bishop RWS) Q/A 142; RPX-0061C ([ ]). [

]. RX-0666C (Bishop RWS) Q/A 142. As demonstrated below in the source code file [

]. *Id.*; RPX-0055C ([ ]). [

]. *Id.*

[ILLUSTRATION REDACTED]

RDX-0640C (RPX-0056C [ ]); RX-0666C (Bishop RWS) Q/A 143. [

]. RX-0666C (Bishop RWS) Q/A 139; RPX-0061C ([ ]).

The method by which Google Play Music [

]. RX-0666C (Bishop RWS) Q/A 144; RPX-0068C ([ ]).

Moreover, all playlists are available on all devices into which the user has logged in via automatic synchronization, [

]. RX-0666C (Bishop RWS) Q/A 144. The evidence shows that [ ]. *Id.*; RX-0567C (Ghosh RWS) Q/A 27 ("[

]."); RX-0567C (Ghosh RWS) Q/A 36 ("[

]."); Ghosh Tr.

1348 ("[

]."). Further, as Mr. Zatkovich testified, [

]. Zatkovich Tr. 115 ("[

].").

The operation of Google Play Music when a second account is selected on a device is additional evidence showing that playlists are associated with user accounts, not devices. As Mr. Zatkovich testified, if a second user account logs into the same device as a first user account, the device displays only those playlists associated with the second user account, and not any playlists associated with the first user account. Zatkovich Tr. 93 ("Q: So when you logged in to your account on the same device, did you see the playlist associated with your own personal account? A: That's correct. Q: Okay. And when you're logged in with the BHM Mintz account, you see the playlist associated with the BHM Mintz account, correct? A: That's correct. Q: So when you're logged in as your own personal -- to your own personal account, you don't see the BHM Mintz playlist, right? A: That's correct."); RX-0666C (Bishop RWS) Q/A 147; RX-0567C (Ghosh RWS) Q/A 48 ("Users can only use one account at a time with Google Play Music. When a different account is selected, the previous account's locally-stored music is deleted, and the device then synchronizes the metadata for the newly selected account. The user will only see the metadata for that newly selected account."); *id.* at Q/A 49 ("The user only sees

the playlists associated with the account that is newly selected and not the playlists associated with the previous account.").

The evidence used by BHM and its expert to support their contention that the Google Play devices assign playlists to devices is not persuasive. For instance, [

]. *See* CX-1067C (Zatkovich DWS) Q/A 132.

- [

  ]. RX-0666C (Bishop RWS) Q/A 152; RPX-0061C ([ ]).
- [

  ]. RX-0666C (Bishop RWS) Q/A 152; RPX-0063C ([ ]).
- [

  ]. RX-0666C (Bishop RWS) Q/A 152; RPX-0064C ([ ]). [

]. RX-0666C (RWS Bishop) Q/A 152; RPX-0064C ([ ]).

- [ ]. RX-0666C (Bishop RWS) Q/A 152; RPX-0058C ([ ]). [ ]. RX-0666C (Bishop RWS) Q/A 152; RPX-0058C ([ ]).
- [ ]. RX-0666C (Bishop RWS) Q/A 157; RPX-0057C ([ ]).

b. Packet Sniffing Evidence

As for the packet sniffing evidence relied on by Mr. Zatkovich, this evidence also contains references to user accounts [ ]. RX-0666C (Bishop RWS) Q/A 153. Mr. Zatkovich testified that [ ]. *See* CX-1067C (Zatkovich DWS) Q/A 132, 133.

First, as Mr. Zatkovich testified, [

]. Zatkovich Tr. 89, 91 ("[

].").

Furthermore, Mr. Zatkovich failed to account for the clear association of a playlist with a user account in his own packet sniffing evidence. As demonstrated below, [

]. *See* CX-1067C (Zatkovich DWS) Q/A 133; RX-0666C (Bishop RWS) Q/A 153. As Mr. Zatkovich testified, [

]. Zatkovich Tr. 92 ("[

].").

[ILLUSTRATION REDACTED]

RDX-0641C (CX-0247C excerpt); RX-0666C (Bishop RWS) Q/A 154.

Turning now to [ ], the evidence demonstrates that, [

]. RX-0666C (Bishop RWS) Q/A 155; RX-0567C (Ghosh RWS) Q/A 34 ("[

]."). As illustrated below, [

].

[ILLUSTRATION REDACTED]

RX-0666C (Bishop RWS) Q/A 155, 156; CX-1067C (Zatkovich DWS) Q/A 132; RDX-0642C (CX-0247C excerpt); CX-0247C (Samsung packet sniffing evidence).[75]

The record evidence shows that [

]. RX-0666C (Bishop RWS) Q/A 145; RX-0469 (Android API). As Google Play Music's Tech Lead Manager explained:

[

].

---

[75] [

]. *See* RX-0666C (Bishop RWS) Q/A 155; CX-1067C (Zatkovich DWS) Q/A 132; CX-0248C (LG packet sniffing evidence); CX-0249C (Toshiba packet sniffing evidence); CX-0250C ([ ] packet sniffing evidence). However, [

]. RX-0666C (Bishop RWS) Q/A 155.

RX-0567C (Ghosh RWS) Q/A 21. Google source code further [

]. RX-0666C (Bishop RWS) Q/A 145; RX-0469 (Android API).

c. Additional Evidence

Mr. Zatkovich also relies on the "unique IP address associated with the [] device" serving as a device identifier, but this theory fails because IP addresses are not unique across the internet and are not unique enough to identify a device. *See* CX-1067C (Zatkovich DWS) Q/A 132; Zatkovich Tr. 94 ("Q: An IP address at any given time is not unique across the Internet, right? A: No. And I'm not purporting that it is. I'm just indicating that's another piece of information that's associated with this particular session."). Moreover, Mr. Zatkovich testified at hearing that he did not rely on IP addresses as proof for assigning playlists. Zatkovich Tr. 218-219.

In his testimony, Mr. Zatkovich also refers to a cropped screenshot of a Google Play Music settings web page containing a "My Devices" section to support his infringement theory. *See* CX-1067C (Zatkovich DWS) Q/A 132; CX-0540 (My Devices Screenshot). However, as confirmed by Debajit Ghosh, Google's Tech Lead Manager for Google Play Music, [

]. RX-0567C (Ghosh RWS) Q/A 41.

[ ]. *See id.*

[

]. *See id.*

[ ]

[ ]. *See id.* at Q/A 41, 48; RX-0666C (RWS Bishop) Q/A 147. [

]. *See* RX-0567C (Ghosh RWS) Q/A 41. [

]. *Id.* [

]. *Id.* at Q/A 38. [

]. *See id.*

Furthermore, as seen in an uncropped version of the screenshot described above, the My Devices section of the Settings page only allows users to deauthorize devices. RX-0567C (Ghosh RWS) Q/A 38; CX-0540 (My Devices Screenshot). Users can neither authorize devices nor manage which devices receive playlists from the Settings page. RX-0567C (Ghosh RWS) Q/A 39, 40. [

]. *Id.* at Q/A 41. [

]. *See* CX-0540 (My Devices Screenshot) ([ ]).

Accordingly, BHM has not met its burden of establishing that devices associated with Google Play Music assign playlists to devices as required by the asserted claims of the '952 and '652 patents.

3. "receiv[e/ing] . . . information . . . enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source" ('652 / '952 Patents)

The asserted claims require distinct steps of "receiving . . . a playlist" and "receiving . . . information." *See* JX-0007 ('952 patent) at claim 9; JX-0009 ('652 patent) at claim 1. The record evidence shows that, with respect to Google Play Music, [

]. As Google's Tech Lead Manager explains: "[

]." CX-0567C (Ghosh RWS) Q/A 32. [

].

BHM's expert Mr. Zatkovich cites to SandroProxy packet traces to show devices [ ]. CX-1067C (Zatkovich DWS) Q/A 138. He then concludes that, [

]. *Id.* [

]. "Where a claim lists elements separately, 'the clear implication of the claim language' is that those elements are 'distinct component[s]' of the patented invention . . . . There can be no literal infringement where a claim requires two separate structures and one such structure is missing from an accused device." *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LC*, 616 F.3d 1249, 1254-56 (Fed. Cir. 2010) (finding no infringement where the accused product had a hinged arm that contained a spring means, whereas the asserted claim required a hinged arm and a separate spring means) (citing *Engel Indus. v. Lockformer*

Co., 96 F.3d 1398, 1404-05 (Fed. Cir. 1996) (finding no literal infringement of method claims where patentee accused same feature of infringing distinct elements)).

Mr. Zatkovich also testified [

], but the evidence he relies upon demonstrates the opposite. *See* CX-1067C (Zatkovich DWS) Q/A 138. In support of his argument, Mr. Zatkovich cites to packet sniffing evidence to show [

]. *Id.*; CX-0247C (Samsung packet sniffing evidence) at line 4929. Yet, the same packet sniffing evidence shows that [

]. *See* CX-0247C (Samsung packet sniffing evidence) at lines 4899-4900. [

].

Accordingly, BHM has not met its burden to show that devices associated with Google Play Music receive information at an electronic device to obtain the ones of the plurality of songs that are not stored on the device from at least one remote source as required by the asserted claims of the '952 and '652 patents.

4. "Internet radio broadcast" / "control system" / "central system" ('652 Patent)

All asserted claims of the '652 patent require, in part, that there be "an Internet radio broadcast," "a control system," and "a central system." Although BHM has only alleged that Google Play Music practices the "playlist related elements" of claims 1, 11, and 13 of the '652 patent, *see, e.g.*, CX-1067 (Zatkovich DWS) Q/A 256, evidence that the other limitations are satisfied is nevertheless still required to prove infringement. The record evidence demonstrates

that [

]. *See* Ghosh Tr. 1346 ("[

].").

BHM has also failed to meet its burden of proof to establish how devices associated with Google Play Music fulfill the "control system" and "central system" limitations of the asserted claims. Mr. Zatkovich, for example, testified that "it is also my opinion that [mobile devices] with Google Play Music practice the playlist related elements," but provided no explanation of how Google Play Music fulfills the control system or central system limitations, aside from citing to his analysis relating to claim 9 of the '952 patent, which does not contain those elements. *See* CX-1067C (Zatkovich DWS) Q/A 256.

Accordingly, BHM has not met its burden to establish that devices associated with Google Play Music meet the limitations of an internet radio broadcast, control system, or central system as required by the asserted claims of the '652 patent.

5. Direct Infringement at the Time of Importation

As explained above, accused devices associated with Google Play Music do not meet every limitation of the asserted claims at the time of importation. RX-0666C (Bishop RWS) Q/A 163. Furthermore, as Mr. Zatkovich testified, there is significant setup required post-importation for Google Play Music to be operable on the accused devices. *See* Zatkovich Tr. 104 (testifying that software was updated after importation), 83 (testifying that a user must have a Google account and be logged in), 102 (testifying that infringement testing included activating the devices and acquiring accounts); *see also* Ghosh Tr. 1335 (explaining playlists are available only

if the user has selected a Google account), 1348 (explaining there are no user-defined playlists already available on brand new Google Play Music account).

As to the limitations of the asserted claims of the '652 patent, devices associated with Google Play Music are not "adapted to" practice these limitations at the time of importation, at least because [

]. RX-0666C (Bishop RWS) Q/A 155; CX-0567C (RWS Ghosh) Q/A 21. [

]. *See* RX-0666C (Bishop RWS) Q/A 163.

Additionally, all of the asserted claims of the '952 patent are method claims, which cannot be directly infringed by Respondents at the time of importation.

Accordingly, BHM has not met its burden of establishing that devices associated with Google Play Music directly infringe the claims of the '952 and '652 patents at the time of importation as required by section 337.

6. Indirect Infringement at the Time of Importation

BHM alleges that Samsung, LG, and Toshiba contributorily infringe device claims 1, 11, and 13 of the '652 patent and induce and contribute to infringement of method claims 9 and 14 of the '952 patent. BHM's allegations fail with respect to at least four critical elements required for a finding of indirect infringement at the time of importation.

First, BHM has failed to show a required underlying act of direct infringement. As discussed above, BHM must either point to specific instances of direct infringement or show that the accused devices necessarily infringe. Yet, BHM has not presented evidence of any

third-party direct infringer performing every limitation of the asserted claims after importation. *See* RX-0666C (Bishop RWS) Q/A 164. BHM also has not alleged that any end user *necessarily* infringes. Accordingly, BHM has not met its burden of establishing an underlying act of direct infringement as to the indirect infringement allegedly performed by Respondents with regard to devices associated with Google Play Music.

Second, Mr. Zatkovich and BHM have not put forward sufficient evidence of knowledge and intent required for a finding of indirect infringement where there is no record evidence of whether, when, or how Respondents became aware of BHM's infringement allegations prior to the ITC complaint.

Third, as to inducement, BHM has not proven that Respondents took affirmative steps to induce infringement as required by *Global-Tech* where Mr. Zatkovich does not opine on induced infringement of the '952 and '652 patents in his witness statement. *See Global-Tech Appliances*, 131 S. Ct. at 2065, 2068. In a separate discussion, Mr. Zatkovich cites to "instructional videos," websites, manuals, device packaging, [ ] as encouraging end users to use Google Play Music in Q/A 155 of his witness statement. RX-0666C (Bishop RWS) Q/A 168. Mr. Zatkovich does not explain how these manuals support his position that Respondents had any specific intent or took any affirmative steps to induce infringement. *Id.* These documents show that Respondents and have manuals that explain the general benefits of Google Play Music, but no cited portions of the documents demonstrate or teach using Google Play Music to infringe the '952 or '652 patents. *Id.*

Finally, as to contributory infringement, and as detailed below, BHM has not put forward evidence of accused products that constitute a material part of the inventions that are not staple articles of commerce suitable for substantial noninfringing use.

BHM's expert, for purposes of substantial noninfringing uses, focuses on the "accused functionality of the electronic devices." *See, e.g.*, CX-1067C (Zatkovich DWS) Q/A 154, 326, 493. To allege infringement, however, Mr. Zatkovich relies more broadly on the devices themselves. Nonetheless, at both the functionality level and at the device level, the evidence shows that all components have substantial noninfringing uses.

For example, devices associated with Google Play Music have substantial noninfringing uses. RX-0666C (Bishop RWS) Q/A 166. These include communications, entertainment, connectivity, directions, maps, business, web searching, and other functions. *Id.* Google Play Music is also a part of Google Play. *See* RX-0567C (Ghosh RWS) Q/A 14. Google Play has substantial noninfringing uses that are not related to music, including purchasing and downloading applications, magazines, books, and movies. *See id.* at Q/A 15.

Google Play Music itself also has substantial noninfringing uses. RX-0666C (Bishop RWS) Q/A 167. For example, playing only music that has been locally stored on the device or listening to streaming music without using a playlist are both substantial noninfringing uses. *Id.*; *see also* Zatkovich Tr. 96 (testifying that a user could use Google Play Music to listen to only local music). Another example of a substantial noninfringing use is Google Play Music operated strictly in airplane mode or otherwise without a network connection, as Google Play Music would not be able to obtain music from a remote source. RX-0666C (Bishop RWS) Q/A 167; *see also* CX-0567C (Ghosh RWS) Q/A 50 ("There are many uses of Google Play Music that do not involve playing remotely-stored music from a playlist, or that even require the use of playlists. For example, one such feature is playing only music that has been sideloaded onto a device. Using a device in airplane mode or in 'on device' mode as I described earlier would also not involve playing remotely-stored music since only locally stored music would be played.").

Documents produced by Google including, for example, RX-0473 (Google Play Music web page), further demonstrate substantial noninfringing uses. RX-0666C (Bishop RWS) Q/A 167. Source code similarly demonstrates substantial noninfringing uses. *Id.* Publicly available documents, such as RPX-0347 (Google Play Music Offline Video), also demonstrate substantial noninfringing uses. *Id.* In addition, some of Respondents' documents cited by Mr. Zatkovich in Q/A 155 of his witness statement reflect noninfringing uses. RX-0666C (Bishop RWS) Q/A 167. For example, CX-0487 is a Samsung user manual indicating that "[w]hile offline, you can listen to music you have copied from your PC." Another example is CX-0480, which is another Samsung user manual noting one can "[p]lay music files from an optional, installed memory card." Accordingly, BHM does not and cannot meet its burden of establishing that devices associated with Google Play Music lack substantial noninfringing uses, and has not prevailed in demonstrating contributory infringement.

G. Technical Prong of the Domestic Industry Requirement

BHM alleges that certain [ ] products practice certain claims of the '952 and '652 patents in combination with specified applications, as follows:

Product/Functionality	Claims of '952 patent	Claims of '652 patent
[ ] (Mobile/Player)	9	none
DLNA (Mobile/ Player)	9, 14	none
Google Play Music (Mobile)	9, 14	1, 11, 13
Slacker (Mobile) with [ ], DLNA, Google Play Music playlist functionality	none	1, 11, 13
vTuner (Player) with [ ], DLNA playlist functionality	none	1, 11

See Resps. Br. at 263-64.

For the reasons set forth below, BHM has not satisfied the technical prong of the domestic industry requirement with respect to the '952 and '652 patents for any of these products and applications.

1. [ ] Mobile and Player Devices with [ ] – Claim 9 of the '952 Patent

BHM alleges that [ ] mobile and player devices with [ ][76] ("SMU") practice claim 9 of the '952 patent. BHM has not shown, however, that the [ ] devices practice the "playlist assigned to the electronic device," "playlist," "identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device," and "receiving, at the electronic device, information enabling the electronic device to obtain the ones of the plurality of songs from at least remote source" limitations as required by claim 9 of the '952 patent.

BHM's expert, Mr. Zatkovich, relies on photographs of a [ ] device displaying a list of media items to show that [ ] devices with SMU practice various limitations of the '952 patent. CX-1067C (Zatkovich DWS) Q/A 539-40; CX-0458 (Photograph of [ ] mobile phone); CX-0455 (Photograph of [ ] Television). These photographs are not sufficient to show that the [ ] devices practice the limitations at issue. For example, the photographs do not show that a playlist is assigned to the electronic device; there is no way to tell whether the media items are assigned to the electronic device or assigned to the user of the electronic device. *See* RX-0669C (Houh RWS) Q/A 447. Moreover, the photographs do not show that [ ] devices

[76] [ ] is a subscription-based music service that offers access to songs over a 3G or Wi-Fi connection. After a user has signed in on a compatible device, the user can manage and edit their personal library of music in the cloud from a variety of devices, or synchronize his or her playlists and music using a PC that runs the Windows operating system. Without the creation of a user account on [ ], a user is unable to utilize the features of [ ] on any device and is thus unable to stream any audio.

with SMU practice the "playlist" limitation because these photographs do not show an electronic device "receiving" a playlist, nor do they reveal whether any playlist is arranged in sequence. *Id.* at Q/A 453-54. One of the photographs on which BHM relies, CX-0458, shows a button that says "Shuffle All Songs" on the screen beside the list of media items. The presence of this shuffle button indicates that the songs are not arranged in sequence. *Id.* Likewise, the photographs do not demonstrate that the [ ] devices practice "receiving . . . information enabling the electronic device to obtain . . . songs from at least one remote source" limitation because nothing in the photographs indicates that any information is received enabling the electronic device to obtain songs from a remote source. RX-0669C (Houh RWS) Q/A 456-58.

BHM's expert also cites to packet trace evidence to show that [ ] devices with SMU practice various limitations of the '952 patent. CX-1067C (Zatkovich DWS) Q/A 539-40. The packet trace evidence does not show, however, that the playlist was assigned to the device. RX-0669C (Houh RWS) Q/A 449; CX-0252C (Packet Trace, [ ] Phone). Login and authentication of SMU shows only that data is provided to an electronic device based upon the user account that was used to log into the SMU application on that device. RX-0669C (Houh RWS) Q/A 448.

The packet trace evidence cited by BHM's expert also does not show "receiving . . . information enabling the electronic device to obtain . . . songs from at least one remote source. RX-0669C (Houh RWS) Q/A 457; CX-0252C (Packet Trace, [ ] Phone). For example, BHM's expert testified that packet trace evidence shows a [ ] device receiving a song ID and a URL for each of the songs in a playlist. CX-1067C (Zatkovich DWS) Q/A 540. Nevertheless, neither the song IDs nor the URLs received provides information sufficient for the electronic device to obtain ones of the plurality of songs. RX-0669C (Houh RWS) Q/A 457.

Specifically, the linked reference in the packet trace shows a request for URL, with a parameter "kind=low-quality," implying that there may be additional information needed in order to obtain the URL for an audio file. *Id.* Moreover, the packet trace used to support BHM's arguments, CX-0252C, does not show that any of the "URLs from which the songs can be obtained from at least one remote source" are used to obtain anything in the trace. *Id.* The URLs returned as BHM's expert described are not used at all in the rest of the packet trace. *Id.* Accordingly, therefore, the supplied trace does not show that the reply URLs are used to obtain songs as required by the claim limitation.

BHM also failed to prove that [ ] devices with SMU practice the "identifying a plurality of songs, wherein ones of the plurality of songs are not stored on the electronic device" because it failed to provide any evidence relating to that limitation.

2. [ ] Mobile and Player Devices with DLNA – Claims 9 and 14 of the '952 Patent

BHM has alleged that [ ] mobile and player devices with "DLNA" practice claims 9 and 14 of the '952 patent.[77] BHM failed to establish [ ] devices with DLNA practice the "playlist assigned to the electronic device," "playlist . . . wherein ones of the plurality of songs are not stored on the electronic device," "playlist," "receiving, at the electronic device, information enabling the electronic device to obtain the ones of the plurality of songs from at least remote source," or "receiving information . . . enabling the electronic device to obtain the ones of the plurality of songs from the at least one remote source" limitations as required by the

[77] With respect to the technical prong of the domestic industry, BHM defines DLNA to include "[ ] DLNA" and "[ ]." BHM concluded that [ ] mobile and player devices with "DLNA" practice certain claims of the '952 and '652 patents without identifying exactly which applications it believed practice which claims. Inasmuch as it is unclear which functionality BHM is referring to, DLNA as used herein refers generally to BHM's allegations regarding "[ ] DLNA" and "[ ]."

asserted claims of the '952 patent. Among other reasons, because BHM has failed to present sufficient evidence related to the [ ] products and DLNA, BHM has failed to meet its burden of proof on the technical prong of the domestic industry.

BHM's expert relied on the same photographs of a [ ] device with DLNA displaying a list of media items to prove that [ ] devices practice various limitations of the '952 patent. CX-1067C (Zatkovich DWS) Q/A 561, 565, 573, 577; CX-0459 (Photograph of [ ] Phone); CX-0453 (Photograph of [ ] Television). For example, the photographs of [ ] devices with DLNA do not show that a playlist is assigned to the electronic device because nothing indicates that the media items are assigned to the electronic device instead of the user. RX-0669C (Houh RWS) Q/A 463. Likewise, the photographs do not show a "playlist . . . wherein ones of the plurality of songs are not stored on the electronic device" because nothing in the photographs indicate that the list of media items includes any items that are not stored on the electronic device. *Id.* Moreover, the photographs cannot show [ ] devices practice "receiving . . . information enabling the electronic device to obtain . . . songs from at least one remote source" limitation because nothing in the photographs indicate that information is received enabling the electronic device to obtain songs from a remote source. *Id.* at Q/A 469.

BHM's expert also relied on packet trace evidence to prove that [ ] devices practice various limitations of the '952 patent. CX-1067C (Zatkovich DWS) Q/A 561, 565, 573, 577. Packet trace evidence cited by BHM's expert does not show that a playlist is assigned to an electronic device nor that a playlist identifies a plurality of songs that are not stored on the electronic device. RX-0669C (Houh RWS) Q/A 464. The packet trace evidence shows that a browse request has been made, not that any playlist has been assigned to the electronic device. *Id.*; *see* CX-0217C (Frame 6843) (Wireshark Packet Trace of [ ] Phone);

CX-0215C (Frame 650) (Wireshark Packet Trace of [ ] Television). At most, the Wireshark trace shows that a device may receive a list of songs, but provides no evidence that the list of songs was in fact assigned to that device or that the list of songs identifies songs not stored on the electronic device. RX-0669C (Houh RWS) Q/A 464.

Similarly, packet trace evidence cited by BHM's expert does not show "receiving . . . information enabling the electronic device to obtain . . . songs from at least one remote source." BHM's expert testified that the packet trace evidence shows [ ] devices with DLNA receiving a response to a playlist request that includes a URL for each song of a playlist. RX-0669C (Houh RWS) Q/A 468. BHM's expert further testified that the same packet traces show representative [ ] devices issuing a GET request to obtain a song utilizing the corresponding URL. *Id.* However, BHM's expert failed to describe the internal processes that the DLNA application executes to decide whether to use the URL. The fact that the application eventually issued a GET request during BHM's expert's testing does not mean that the DLNA application uses all the URLs to obtain songs or that a single URL is provided for each song. *Id.* From the documents provided by BHM, it is not possible to determine the internal processes the DLNA application executes to decide whether to use the URLs. *Id.*

Further, [ ] Devices with DLNA only stream content; they do not download and store audio files. RX-0669C (Houh RWS) Q/A 470; RX-0586 ([ ] advertisement describing DLNA functionality as streaming media). Under the adopted construction of "playlist," the audio files in a playlist are "for playback," which requires that the content be stored on the electronic device. RX-0669C (Houh RWS) Q/A 470. Similarly, under the adopted construction of "obtaining the ones of the plurality of songs from the at least one remote source," the songs must be downloaded and stored. *Id.* Inasmuch as songs are never downloaded or stored, but rather

only streamed when using the DLNA functionality, [ ] Devices with DLNA functionality do not meet the requirements of "playlist" or "obtaining the ones of the plurality of songs from the at least one remote source" as required by claims 9 and 14 of the '952 patent. *Id.*

3. [ ] Mobile Devices with Google Play Music – Claims 9 and 14 of the '952 Patent and Claims 1, 11 and 13 of the '652 Patent

BHM has alleged that [ ] mobile devices with Google Play Music ("GPM") practice claims 9 and 14 of the '952 patent and claims 1, 11, and 13 of the '652 patent. [ ] devices with GPM do not practice the claims of the '952 and '652 patents for the reasons described above with respect to accused Respondents' products incorporating Google Play Music. In addition, BHM has provided no evidence of an end user ever actually using a [ ] device in the manner alleged to read on the claims.

4. [ ] Mobile Devices with Slacker and vTuner – Claims 1, 11 and 13 of the '652 Patent

BHM failed to prove that [ ] mobile devices with Slacker practice claims 1, 11, and 13 of the '652 patent. As evidence in support of its position, BHM referred to photographs that show a [ ] mobile device displaying a home screen with application icons and a screen with ESPN Radio activated. CX-1067C (Zatkovich DWS) Q/A 583; CX-0399 (Photograph of [ ] phone). These photographs are insufficient to show that [ ] mobile devices with vTuner practice the asserted claims of the '652 patent. RX-0669C (Houh RWS) Q/A 479.

Likewise, BHM failed to prove that [ ] player devices with vTuner practice claims 1 and 11 of the '652 patent. As evidence in support of its position, BHM referred to a printout of [ ] website that identifies a number of applications available for all [ ] devices, including devices not asserted by BHM as practicing the '652 patent. CX-1067C (Zatkovich DWS) Q/A 591; CX-0780 (Website Printout - [ ] US Store - Entertainment Network). There is no

indication which applications are available on the [ ] player devices. RX-0669C (Houh RWS) Q/A 480. This printout is insufficient to show that vTuner is available on the [ ] player devices, or that the [ ] player devices with vTuner practice the '652 patent. *Id.*

Moreover, BHM has relied on SMU, DLNA, and GPM to show the playlist limitations of claim 1 for Slacker and vTuner, citing to the same evidence that it relies on for claim 9 of the '952 patent. RX-0669C (Houh RWS) Q/A 479-80. Thus, the reasons as to why the [ ] mobile devices with SMU, DLNA, and GPM do not meet the limitations of claim 9 of the '952 patent apply equally here. *Id.* In addition, BHM has not addressed the "network interface . . ." or the "a control system associated with the network interface . . ." limitations as required by claim 1 of the '652 patent. Thus, BHM has not established that [ ] mobile devices with Slacker or vTuner practice these limitations. *Id.* at Q/A 459, 472.

BHM has also relied on [ ] devices with DLNA in combination with Slacker and vTuner to show that a control system requests and receives "supplemental information related to a song in real-time while the song is playing" limitation as required by claim 11 of the '652 patent. RX-0669C (Houh RWS) Q/A 479-80. The cited photographs and packet trace evidence do not show when the song is playing and how the timing relates to requesting and receiving supplemental information. *Id.* For example, the cited evidence does not explain whether the electronic device sends a "request to the remote server for supplemental information related to a song in real-time while the song is playing." *Id. at* Q/A 473-78; RPX-0093 (Houh documentation: 55755-50-1712-Cinema-mp3.mp3); RPX-0094 (Houh documentation: 55755-50-1712-Cinema-mp3.raw).

BHM has also relied on GPM functionality to satisfy the limitations of claims 11 and 13 for Slacker. As discussed above, [ ] devices with GPM do not practice claims 11 and 13 of

the '652 patent. Thus, devices with Slacker do not practice the asserted claims of the '652 patent.

Moreover, in light of evidence provided by BHM, the non-infringement analysis set forth above with respect to Slacker and vTuner applies equally to BHM's domestic industry allegations with respect to the [ ] mobile devices with Slacker and vTuner.

H. Validity

1. Prior Art

Respondents allege that the asserted claims of the '952 and '652 patents are invalid as anticipated by, or are rendered obvious by, certain prior art references. It is determined, however, that Respondents have not adduced clear and convincing evidence to show that the asserted '952 and '652 patent claims are invalid over the prior art. Each specific reference is discussed in more detail below.[78]

a. Priority Date

The '952 and '652 patents were filed November 27, 2006, share a common specification, and are continuations of U.S. Patent Application No. 09/805,470, which was filed on March 12, 2001. Each claims priority to U.S. Provisional Application No. 60/246,842, which was filed on November 8, 2000.

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[78] BHM contends that Respondents' obviousness arguments should not be addressed in this initial determination because they were not raised previously in any expert witness statement. *See* Joint Outline of Issues at 25-27 n.23, n.24, n.25, n.26, n.27, n.28. BHM also argues that Respondents' obviousness contentions are unsupported by expert testimony and consist largely of attorney argument. *See, e.g.*, Compl. Br. at 177-79. Setting aside the issue of whether or not Respondents' obviousness contentions are properly addressed in this initial determination, the record evidence does not clearly and convincingly demonstrate that the asserted '952 and '652 patent claims would have been rendered obvious by the asserted prior art references for the same reasons discussed below in the anticipation analysis.

b. Lipscomb - U.S. Patent No. 7,020,704

i. "receiving a playlist assigned to the electronic device, the playlist identifying a plurality of songs"

U.S. Patent No. 7,020,704 to Lipscomb ("Lipscomb") does not disclose an electronic device that "receiv[es] . . . a playlist assigned to the electronic device . . . the playlist identifying a plurality of songs" as recited in'952 patent claim 9 and '652 patent claim 1. Lipscomb also does not disclose "assigning a playlist to an electronic device, the playlist identifying a plurality of songs . . . providing the playlist to the electronic device" as recited in '952 patent claim 1.

Lipscomb refers to a system wherein each media asset can be accessed across one or more media player devices. Lipscomb performs rights management on a per-"media asset" basis, wherein each media asset has its own permissions or restrictions set such that it can be accessed "on one or more media players" with "different levels of access." RX-0065 (Lipscomb) at col. 3, lns. 1-10; col. 9, lns. 40-43; col. 11, lns. 11-15. Lipscomb does not disclose or suggest applying rights management to playlists of media assets or sharing playlists of media assets across multiple devices. *See* CX1400C (Zatkovitch RWS) Q/A 20.

Respondents' expert Dr. Jeffay testified that the data synchronization process described in Lipscomb at column 10, lines 15-43 discloses these limitations, but the cited section refers to a process for media player devices to synchronize an asset or its metadata with the portal, and does not teach playlist sharing or synchronization. *See* RX-0463C (Jeffay DWS) Q/A 98; RX-0065 (Lipscomb) at col. 10, lns. 25-27 (referencing synchronization "[w]hen an asset or its metadata is added, modified or deleted"); col. 10, lns. 6-9; col. 4, lns. 2-6. The assets synchronized in Lipscomb are actual content, not playlists, and the asset metadata, for example information

regarding the artist or genre, also do not comprise playlists. RX-0065 (Lipscomb) at col. 4, lns. 36-39.

Dr. Jeffay also refers to column 4, lns. 33-36 and column 9, lns. 46-61 of Lipscomb to show satisfaction of these claim elements, but these sections do not disclose that the user's device receives a playlist assigned to the device. *See* RX-0463C (Jeffay DWS) Q/A 94. Column 9 refers to a user utilizing a local player device to "create a playlist manually from a master database or generate playlists randomly based on database searches." That is, the playlist is created on the local device and was not assigned to the device as required by the language of asserted claim 9.

c. Logan - U.S. Patent No. 6,199,076

i. "receiving a playlist assigned to the electronic device, the playlist identifying a plurality of songs"

U.S. Patent No. 6,199,076 to Logan ("Logan") does not disclose an electronic device that "receiv[es] . . . a playlist assigned to the electronic device . . . the playlist identifying a plurality of songs" as recited in'952 patent claim 9 and '652 patent claim 1. Logan also does not disclose "assigning a playlist to an electronic device, the playlist identifying a plurality of songs . . . providing the playlist to the electronic device" as recited in '952 patent claim 1.

For instance, Respondents' expert Dr. Jeffay testified that column 2, lines 47-50 and column 6, lines 51-55 of Logan discloses the "receiving" claim limitation. Logan, however, refers to providing a player device with a session schedule or compilation that includes a plurality of "ProgramIDs" for program segments. In particular, the program segments in Logan are "compressed audio files and/or text" on subjects including "world news, national news, local news, computer trade news, email and voice mail messages, country music, classical music . . . ."

RX-0024 (Logan) at col. 4, lns. 46-47; col. 30, lns. 31-35. Logan does not disclose that the program segments are songs—when Logan refers to program segments that correspond to "country music" and "classical music," Logan states that the music selections or files correspond to "topics." *Id.* at col. 31, lns. 43-45. Moreover, Logan states that a music program segment is "an audio recording of a broadcast radio program . . . ." *Id.* at col. 40, lns. 20-22. A recording of a broadcast radio program, which contains talk radio, DJ intros, advertisements, and music, is not a song. *See* CX-1400C (Zatkovitch RWS) Q/A 33.

Logan also does not disclose the claimed "playlist." Logan teaches that the ProgramIDs provided to the player device are just a list of "numbers" or "key value[s]." RX-0024 (Logan) at col. 12, lns. 5-7; col. 17, ln. 54. They correspond to items in the compilation, but do not identify what those items are or identify them as songs. Therefore, even assuming that the "ProgramIDs" of Logan correspond to program segments whose underlying contents are songs, the ProgramIDs are not a "playlist identifying a plurality of songs" as claimed in the '952 and '652 patents.

ii. "receiving information enabling the electronic device to obtain the ones of the plurality of songs from at least one remote source"

Logan also does not disclose an electronic device that receives "information . . . enabling the electronic device to obtain the ones of the plurality of songs . . . from at least one remote source" as recited in claim 9 of the '952 patent and claim 1 of the '652 patent.

Respondents' expert Dr. Jeffay testified that the "download compilation file 145" received from the host server comprises the information that enables the player device to obtain the audio files. *See* RX-0463C (Jeffay DWS) Q/A 188. However, download compilation file 145 only includes the ProgramIDs corresponding to the program segments of a program schedule. RX-0024 (Logan) at col. 6, lns. 51-66. These ProgramIDs are what enable the device

to play the program segments in a predefined sequence. *See, e.g.*, *id.* at Fig. 5. The download compilation file 145 or ProgramIDs do not enable the player device to obtain the songs. Rather, the Logan player device obtains the program segments by accessing "a predetermined FTP download file directory and assigned a filename known to the player 103." RX-0024 (Logan) at col. 6, lns. 53-55. In other words, even before the player device receives the download compilation file with the ProgramIDs, it already knows the predetermined location for downloading program segments and has all of the information it needs to obtain them. The Logan player device always accesses the same predetermined location to obtain the download compilation file 145 and the program segments. RX-0024 (Logan) at col. 6, lns. 51-66; col. 8, lns. 29-33; col. 6, lns. 53-55. CX1400C (Zatkovitch RWS) Q/A 36-37.

Accordingly, it has not been shown that Logan satisfies this claim limitation.

d. Ninja Jukebox

It has not been shown that Ninja Jukebox (RX-0109) discloses or suggests an electronic device that "receiv[es] . . . a playlist assigned to the electronic device . . . the playlist identifying a plurality of songs" as claimed in '952 patent claim 9 and '652 patent claim 1. It has also not been shown that Ninja Jukebox discloses "assigning a playlist to an electronic device, the playlist identifying a plurality of songs . . . providing the playlist to the electronic device" as claimed in '952 patent claim 1. According to the Abstract, Ninja Jukebox is a paper that "describes the implementation of the Ninja Jukebox server and client, and their evolution through three stages of functionality" referenced as versions 1.0, 2.0 and 3.0." CX1400C (Zatkovitch RWS) Q/A 42. In his Rebuttal Witness Statement, Mr. Zatkovitch generally explains the three versions of the Ninja Jukebox. CX1400C (Zatkovitch RWS) Q/A 43-45.

Respondents allege that "Ninja Jukebox . . . discloses a method for sharing audio content and playlists stored on different devices among those devices." RX-0463C (Jeffay DWS) Q/A 142. Ninja Jukebox, however, refers to a graphical user interface ("GUI") on the user's device that "provides the user with controls for constructing playlists." RX-0109 (Ninja Jukebox) at 882PRIOR00013642. Ninja Jukebox refers to a playlist that is manually created by the user locally on the user's device, and not assigned to or received by the device as claimed in the '952 and '652 patents.

It is therefore determined that Respondents have not adduced clear and convincing evidence demonstrative that the asserted claims of the '952 and '652 patents are anticipated by Ninja Jukebox.

e. RealPlayer

Respondents rely on several "RealPlayer" references (RPX-0001, RPX-0002, RPX-0003, RX-0114, RX-0115, RX-0116) to support their contention that the asserted '952 and '652 claims are invalid in view of the prior art. *See, e.g.*, Compl. Br. at 437. The parties dispute whether or not these multiple references qualify as prior art under the relevant statutes, and whether or not certain references were sufficiently available to the public. *See id.* at 437-44. Regardless, even if the multiple RealPlayer references qualify as prior art, and even if they were sufficiently available to the public, they do not show by clear and convincing evidence that the asserted claims of the '952 and '652 patents are anticipated or rendered obvious.

i. "playlist identifying a plurality of songs"

It has not been shown by clear and convincing evidence that the RealPlayer references disclose an electronic device that "receiv[es] . . . a playlist . . . the playlist identifying a plurality of songs" as claimed in claim 9 of the '952 patent and claim 1 of the '652 patent, or a "playlist

identifying a plurality of songs . . . providing the playlist to the electronic device" as claimed in claim 1 of the '952 patent. CX1400C (Zatkovitch RWS) Q/A 72.

Respondents' rely on the ability for RealPlayer to read a metafile or RAM file, also known as a multiclip, as allegedly showing these claimed features. *See, e.g.*, Resps. Br. at 149. A RAM file, however, identifies only the locations of media clips. Receiving the location of a file does not identify the contents of the file, much less "identif[y] a plurality of songs" as claimed. The underlying content that can be accessed by the user's computer via the locations referenced in the RAM file "can be video, audio, video with audio, RealFlash™ animation, RealText™, RealPix™, any combination of these or something completely different," depending on how the creator of the RAM file chose to construct the file. RX-0114 (G2 manual) at REAL8820000018; RX-0115 (7 manual) at REAL8820000108; RX-0116 (8 manual) at REAL8820000214. The RAM file does not include the name or title of each media file. The name or title of each file is not received by or identified to the user's device running RealPlayer until, and if, the file is actually played. Therefore, even though the RealPlayer manuals refer to the underlying collection of content as a "Playlist," the user's computer never receives a list of media items that "identif[ies] a plurality of songs" as claimed in the '952 and '652 patent. This is confirmed by the RealPlayer user manuals, which state that RealPlayer can only display the "title of current clip." RX-0114 (G2 manual) at REAL8820000017, REAL8820000073, REAL8820000081; RX-0115 (7 manual) at REAL8820000105, REAL8820000189; RX-0116 (8 manual) at REAL8820000209, REAL8820000294.

ii. "receiving a playlist assigned to the electronic device"

It has not been shown by clear and convincing evidence that the RealPlayer references disclose an electronic device that "receiv[es] . . . a playlist assigned to the electronic device" as

claimed in claim 9 of the '952 patent and claim 1 of the '652 patent, "assigning a playlist to an electronic device . . . providing the playlist to the electronic device" as claimed in claim 1 of the '952 patent.

Even if a multi-clip RAM file in RealPlayer could be constructed in a way that it could be considered a "playlist identifying a plurality of songs" as claimed in the asserted patents, the RAM file is not assigned to the user's device as required by the asserted claims. The RealPlayer software and documents do not disclose accessing, with a user device running RealPlayer, a RAM file corresponding to a plurality of songs in response to a user clicking on a link for the RAM file on the Internet. *See* RX-0463C (Jeffay DWS) Q/A 321. The RealPlayer manuals state that a RAM file can be accessed by a user double-clicking on a link. RX-0114 (G2 manual) at REAL8820000057 ("[D]ouble-clicking on a .ram file should launch RealPlayer Plus and begin to play a clip."); RX-0114 at REAL8820000019; RX-0115 (7 manual) at REAL8820000152; RX-0116 (8 manual) at REAL8820000261. They do not disclose constructing a particular type of RAM file that corresponds to a plurality of songs and then posting that RAM file on a website on the Internet for access by users from personal computers with RealPlayer.

Moreover, the action of one person emailing a RAM file to another person does not constitute "assigning" the RAM file as that term is used in the claims of the asserted patents. *See* RX-0463C (Jeffay DWS) Q/A 321; RX-0461 (Black DWS) Q/A 14-15. There is nothing in the RealPlayer application that shares RAM files, a fact specifically stated in the RealPlayer documents. RX-0114 (G2 manual) at REAL8820000031-32 (stating that RealPlayer only provides a file having an .RNX extension that the user would separately need to email); RX-0115 (7 manual) at REAL8820000114-115; RX-0116 (8 manual) at REAL8820000157-58. Further, if a person receives an .RNX file via email, the user must manually select to locate the file and

import it to RealPlayer. The user must "Browse as you would with your Windows Explorer to where your mail program downloads files and select the Presets file to be imported (it will have an .RNX extension)." RX-0114 (G2 manual) at REAL8820000031-32; *see also* RX-0115 (7 manual) at REAL8820000114-115; RX-0116 (8 manual) at REAL8820000157-58. Therefore, from the perspective of the RealPlayer, this is no different than the user manually creating the file locally. *See* CX1400C (Zatkovitch RWS) Q/A 79.

In addition, it has not been shown that the alleged "Take5" or "channel" functionality of RealPlayer was associated with the RAM file functionality of RealPlayer and the "assigning" of RAM files to devices. *See* RX-0463C (Jeffay DWS) Q/A 321. The RealPlayer 7 manual describes that the Take5 functionality related to "SMIL" files, which are different than the RAM files relied upon by Dr. Jeffay to show invalidity. RX-0115 (7 manual) at REAL8820000121, REAL8820000169; RX-0116 (8 manual) at REAL8820000218, REAL8820000284.

There evidence also does not show clearly and convincingly that the alleged Take5 functionality caused a "playlist identifying a plurality of songs" to be assigned to a user's device. For example, the RealPlayer 7 manual simply states that "Take 5 has a dedicated team in RealNetworks working to bring you stories from around the Web making Take5 one of the best places to be on the Web every day." RX-0115 (7 manual) at REAL8820000121. Stories are not songs.

In view of the adopted constructions of "obtaining" and "obtain" discussed above, RealPlayer version G2 also does not practice the asserted claims because it did not have the ability to locally cache RealPlayer content. *See* RX-0463C (Jeffay DWS) Q/A 319.

f. White - U.S. Patent No. 7,187,947

i. "receiving a playlist assigned to the electronic device, the playlist identifying a plurality of songs"

U.S. Patent No. 7,187,947 to White ("White") was previously considered by the examiner during prosecution before the PTO, and does not disclose an electronic device that "receiv[es] . . . a playlist assigned to the electronic device . . . the playlist identifying a plurality of songs" as recited in '952 patent claim 9 and '652 patent claim 1. *See* JX-0008 ('952 file history); JX-0010 ('652 file history). White also does not disclose "assigning a playlist to an electronic device, the playlist identifying a plurality of songs . . . providing the playlist to the electronic device" as recited in '952 patent claim 1.

Respondents' expert Dr. Jeffay testified that Figure 8 of White and corresponding text at column 16, lines 1-11 and column 17, lines 7-13 show satisfaction of the "receiving" limitation. RX-0463C (Jeffay DWS) Q/A 394. However, these portions of the reference only refer to a server that assembles desired audio content, called "audio information," that was selected by the user. White refers to this assembled collection of audio content as a "playlist," but once assembled the server transmits only the actual content to a user's device. RX-0070 (White) at col. 16, lns. 6-9; col. 16, lns. 35-37; col. 16 lns. 52-54. The portions of White relied on by Respondents to show satisfaction of this claim limitation conflate the requirement for the receipt of a playlist, which identifies content, with the receipt of the content itself. White does not disclose that the server sends the playlist itself to the user's device, including the titles corresponding to the selected audio content that "identif[y] the plurality of songs" as claimed in the '952 and '652 patents. CX1400C (Zatkovitch RWS) Q/A88.

ii. "receiving information . . . enabling the electronic device to obtain the ones of the plurality of songs . . . from at least one remote source"

White does not disclose an electronic device that receives "information . . . enabling the electronic device to obtain the ones of the plurality of songs . . . from at least one remote source" as recited in claims 1 and 9 of the '952 patent and claim 1 of the '652 patent.

Respondents' expert Dr. Jeffay relies Figure 8 of White and the corresponding description at column 16, lines 1-19 to show satisfaction of this limitation. RX-0463C (Jeffay DWS) Q/A 400. However, as described above, White describes only a server that transmits actual audio content selected by the user to the user's device. White does not disclose that the server sends to the user's device information that enables the device to obtain the songs from at least one remote source, *e.g.*, URLs to the audio content, as claimed in the '952 and '652 patents.

iii. "identifying ones of the plurality of songs in the playlist that are not stored on the electronic device"

White also does not satisfy the limitation "identifying ones of the plurality of songs in the playlist that are not stored on the electronic device" as recited in claim 1 of the '952 patent. Respondents' expert Dr. Jeffay relies Figure 8 of White and the corresponding description at column 16, lines 1-19 to show satisfaction of this limitation. RX-0463C (Jeffay DWS) Q/A 400. However, the portion of the specification relates only to operations performed by the server to access and assemble audio content from remote sources, and does not relate to determining what is, or is not, stored on the user's device. CX1400C (Zatkovitch RWS) Q/A 91.

2. Inventorship

LG previously filed a motion for summary determination that the '952 and '652 patents were invalid because Wasi Qureshey, the brother of one of the named inventors, should also have been listed as a named inventor. That motion was denied on grounds that the evidence

adduced by LG in support of the motion did not "demonstrate clearly and convincingly that Wasi Qureshey contributed significantly to the claimed inventions and should be a named inventor of the '952 and '652 patents." Order No. 36 (Jan. 14, 2014).

Since the denial of the motion for summary determination, Respondents have not provided additional evidence in support of the allegation that the '952 and '652 patents are invalid for improper inventorship. Therefore, for the same reasons set forth in Order No. 36, it is determined that Respondents have not met the burden to show, by clear and convincing evidence, that Wasi Qureshey should be named as an inventor to the '952 and '652 patents.

For example, the evidence does show that Wasi Qureshey did have discussions with named inventors Daniel Sheppard and Safi Qureshey regarding the general business goal of allowing immigrants to listen to radio stations from their homeland. *See* JX-0092C (D. Sheppard Dep.); JX-0089C (S. Qureshey Dep.). The named inventors and Wasi Qureshey were employees of the same company, Audio Ramp, and the evidence demonstrates that Wasi Qureshey worked on the initial business concept that led to the formation of Audio Ramp. *See* RX-0298 (AudioRamp). Yet, Wasi Qureshey was not deposed and did not testify at the hearing, and it has not been established that he was involved in the conception of the technical work that led to the claimed inventions.

As for BHM's alleged admission that Wasi Qureshey is an inventor of the '952 and '652 patents, the interrogatory response in question identifies Wasi Qureshey as a person with knowledge of the inventors of the '952 and '652 patents, but does not specifically state that Wasi Qureshey is himself an inventor. *See* CX-1087C (BHM Interrogatory Responses) at 17-18.

Therefore, it has not been demonstrated, clearly and convincingly, that Wasi Qureshey contributed significantly to the claimed inventions and should be a named inventor of the '952 and '652 patents.

VII. The '593 Patent

A. Overview of the Technology

U.S. Patent No. 6,618,593 ("the '593 patent") generally discloses a location-dependent user matching system for users of mobile communications devices. *See* RX-0462C (Heppe DWS) Q/A 15. Two mobile devices communicate with a "central unit" via wireless communications links. *Id.*; *see also* JX-0011 ('593 patent) at col. 8, lns. 39-45; Fig. 1.

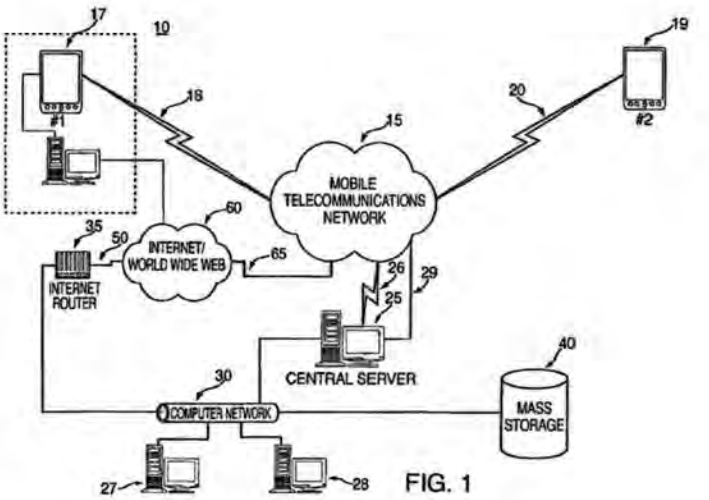


FIG. 1

"Information defining a location" of each mobile communications device, along with a user receiving or sending status, is transmitted from one or both of the mobile devices to the central unit, which includes a processor and memory. RX-0462C (Heppe DWS) Q/A 15; *see also* JX-0011 ('593 patent) at col. 8, lns. 39-53. The memory of the central unit stores the users' profiles. RX-0462C (Heppe DWS) Q/A 15; *see also* JX-0011 ('593 patent) at col. 7, lns. 32-34; col. 8, lns. 51-53. During operation of the system, the central unit receives the information defining the location of the mobile devices and the user receiving and/or sending status(es). RX-0462C (Heppe DWS) Q/A 15; *see also* JX-0011 ('593 patent) at col. 8, lns. 39-53. The processor attempts to match information of the users based on the stored user profiles.

RX-0462C (Heppe DWS) Q/A 15; *see also* JX-0011 ('593 patent) at col. 8, lns. 54-60. If there is a match and the user status(es) is/are appropriately set, the central unit transmits "locating information" to at least one of the mobile devices. RX-0462C (Heppe DWS) Q/A 15; *see also* JX-0011 ('593 patent) at col. 8, ln. 60 – col. 9, ln. 14. The transmitted locating information is based upon the information defining the locations of both mobile devices. RX-0462C (Heppe DWS) Q/A 15; *see also* JX-0011 ('593 patent) at col. 8, ln. 64 – col. 9, ln. 14.

B. Claim Construction

1. Level of Ordinary Skill in the Art

Respondents' expert, Dr. Heppe, testified that a person of ordinary skill in the art at the time of the alleged '593 invention would have at least a Bachelor of Science degree in electrical engineering, computer engineering, computer science, or the equivalent, and one to two years of experience in the field of computer communications, telecommunications, and/or communications networking. RX-0462C (Heppe DWS) Q/A 19. According to Dr. Heppe, more education could substitute for experience, and experience, especially when combined with training, could substitute for formal college education.[79] *Id.*

Mr. Zatkovich, BHM's expert, testified that the parties' proposals as to "the levels of [opined] skill are similar," and testified that "the knowledge of a person or [sic] ordinary skill is the same whether or not the conception date is September 8, 2000 or up to four months earlier." *See* CX-1400C (Zatkovich RWS) Q/A 97. Mr. Zatkovich testified the relevant field of the invention is GPS systems, and not the computer communications, telecommunications, and/or

[79] Dr. Heppe also testified that BHM's earlier-alleged priority dates of May 3, 2000, or alternatively June 4, 2000, do not alter his opinions regarding the knowledge, ability, understanding, or characteristics of one of skill in the art. RX-0462C (Heppe DWS) Q/A 23.

communications networking suggested by Dr. Heppe. *See, e.g.*, CX-1067C (Zatkovich DWS) Q/A 31; CX-1400C (Zatkovich RWS) Q/A 96.

It is determined that a person having ordinary skill in the art at the time of the '593 patent would have at least a Bachelor of Science degree in electrical engineering, computer engineering, computer science, or the equivalent, and one to two years of experience in the field of computer communications, telecommunications, and/or communications networking. In addition, more education could substitute for experience, and experience, especially when combined with training, could substitute for formal college education. This definition of the level of ordinary skill, which was proposed by Respondents' expert Dr. Heppe, takes into account the relevant field of the '593 patent. The definition of a person of ordinary skill in the art proposed by Mr. Zatkovich and Black Hills is too narrow, inasmuch as the '593 patent is not primarily directed to using a specific technique, such as GPS, for determining a location. *See* RX-0462C (Heppe DWS) Q/A 20. The '593 patent is not even limited to technologies for determining a location, but instead is directed to systems that use location information in a larger context for matching user profiles. *Id.*

2. Disputed Claim Terms

a. "user sending status" (claim 7)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction	Staff's Proposed Construction
"user sending status"	"information indicating whether the user has selected, or the device is configured, to send data to or respond to requests from other mobile communication devices or the server"	"information indicating whether the device is currently able to send data or requests to other mobile communications devices or the central server"	Plain and ordinary meaning

The disputed claim term "user sending status" appears in asserted independent claim 7 of the '593 patent.

Respondents and Intervenor propose that the claim term "user sending status" should be construed to mean "information indicating whether the device is currently able to send data or requests to other mobile communications devices or the central server." *See* Resps. Br. at 199-202. The Staff takes the position that the plain and ordinary meaning of the term should apply. *See* Joint List of Proposed Constructions at 16. Black Hills had originally proposed that the term should be construed to mean "information indicating whether the user has selected, or the device is configured, to send data to or respond to requests from other mobile communication devices or the server," but "[i]n the interests of streamlining the issues before the ALJ", now adopts the construction proposed by Respondents and Intervenor. *See* Compl. Br. at 462.

The phrase "user sending status" does not appear in the specification of the '593 patent except in the summary of the invention, which is primarily a recitation of the claims. Instead, the specification describes "receive/transmit statuses." The '593 patent first describes the transmit status, which corresponds to the claimed "sending status," as "a toggle bit within the wireless data stream transmitted over the wireless communications links that indicates whether . . . requests or data should be sent to other mobile communications devices or to the central server." *See* JX-0011 ('593 patent) at col. 6, ln. 60 – col. 7, ln. 3.

The specification further discloses a sending status that may be a transmitted data element stored at the central server indicating when information sharing is allowed. JX-0011 ('593 patent) at col. 7, lns. 49-52 ("Further, the above-mentioned receive/transmit status 212 and 222 may actually be a data element within the preference/profile data 213 and 223. For example,

the user may only wish to receive a matching notification from the central server after 5:00 P.M. on weekdays and sets his communications device availability accordingly."). Consistent with the specification, first-named inventor Charles Drutman described the claimed statuses as similar to a do-not-disturb bit. *See* JX-0062C (C. Drutman Dep.) at 151:2-22. Also, as Mr. Zatkovich testified, the sending status "has to be sent from the local device to the server" and "checked at the server" to determine whether to send locating information. Zatkovich Tr. 1586-1587.

In other words, the purpose of the "user sending status" is to control the flow of "locating information" to the mobile devices "if there is a match." The sending status's control of the flow of "locating information" to mobile devices is described in further detail with respect to the preferred embodiment and Figure 3 as follows:

> If a match is made, central server 25 continues with step 305 and examines either one or both of the transmit/receive status data 212 and 222 associated with first and second mobile communications devices 17 and 19. If both devices are sending transmit/receive status data that permits them to notify one another of their physical proximity, then central server 25 determines in step 310 whether the first mobile communications device 17 is within a distance 240 of the second mobile communications device 19, as shown in FIG. 2. After step 310, central server 25 continues with step 315 and causes locating information to be transmitted to either or both of the first and second mobile communications devices 17 and 19 indicating that a "matching" and "available" mobile communications device is in proximate relation to another.

JX-0011 ('593 patent) at col. 8, ln. 60 – col. 9, ln. 8; Fig. 3; col. 10, lns. 43-46; col. 11, lns. 57-62.

Therefore, the claim term "user sending status" is construed to mean "information indicating whether the device is currently able to send data or requests to other mobile communications devices or the central server."

b. "locating information" (claims 7, 18)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction	Staff's Proposed Construction
"location information"	"information usable to arrive at a location"	"information that enables a user to contact or find another device or location"	"information usable to arrive at a location"

The disputed claim term "locating information" appears in asserted independent claim 7 and asserted dependent claim 18 of the '593 patent.

Black Hills and the Staff propose that the term "locating information" should be construed to mean "information usable to arrive at a location." *See* Compl. Br. at 462-65; Joint List of Proposed Constructions at 16. Respondents take the position that the term should be construed to mean "information that enables a user to contact or find another device or location." *See* Resps. Br. at 197-99.

As proposed by Respondents, the term "locating information" is construed to mean "information that enables a user to contact or find another device or location." This construction is consistent with the intrinsic evidence, and comports with the understanding of a person of ordinary skill in the art. *See* RX-0462C (Heppe DWS) Q/A 30.

The '593 patent discloses "locating information" as information "indicating that a 'matching' and 'available' mobile communications device is in proximate relation to another." JX-0011 ('593 patent) at col. 9, lns. 3-8. When describing another instance of a preferred embodiment, the specification teaches that "locating information" is a notification of a proximity match coupled with a location or other personal information. *See id.* at col. 10, lns. 37-59 ("Upon finding an available, proximate match, the central server then transmits data to the

requesting male teenager indicating a matching female teenager has been found. In this regard, the seeking male teenager may receive the location and/*or the personal information* for the matching female teenager . . . .") (emphasis added).

The adopted construction is also consistent with the other embodiments described in the '593 patent. For instance, the '593 specification discloses an embodiment where a cell phone number of a proximate traveler is the locating information:

> As another example of a matchmaking service, business travelers may wish to locate a particular business service on a nearest available basis when traveling in an unknown area. For example, to determine the nearest available hairdresser, a business traveler may input his or her preferences for a particular type of hair dresser, *e.g.* salon or barber, from which services are desired. All hairdressers that have indicated that they have available appointments within five miles of the business traveler, for example, may be sent the cell phone number of the traveler so that he may be contacted to set up an appointment.

JX-0011 ('593 patent) at col. 10, ln. 60 – col. 11, ln. 3; *see also*, *e.g.*, *id.* at col. 12, ln. 65 – col. 13, ln. 20 (contacting nearby blood donors that match a patient needing a transfusion); col. 12, lns. 21-25 (teaching use of a warning indicator when the physical distance between the goods and the carrier becomes greater than a maximum set threshold).

In addition, the adopted construction is consistent with testimony provided by the first-named inventor, Charles Drutman, who testified that when there is a match, a telephone number could be sent to the users so they could contact or find each other. JX-0062C (C. Drutman Dep.) at 101-102, 103-104.

By contrast, BHM's proposed construction is in conflict with dependent claim 14, which recites that "information defining a location" can be "a telephone number." JX-0011 ('593 patent) at claim 14. Inasmuch as "locating information" is derived from "information defining a location," it follows that "locating information" can also be a telephone number.

c. "the memory storing a first[/second] user profile" (claim 7)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction
"the memory storing a first[/second] user profile"	"the memory storing profile data about a first[/second] user"	Invalid under 35 U.S.C. § 112 ¶ 2 Or, in the alternative: "the memory storing profile data about a first[/second] user"

The claim term "the memory storing a first[/second] user profile" appears in asserted independent claim 7 of the '593 patent.

BHM argues that this claim term should be construed to mean "the memory storing profile data about a first[/second] user," a construction with which the Respondents agree. *See* Compl. Br. at 184-85; Resps. Br. at 202-03. The Staff did not argue the construction of this claim term in its posthearing brief. *See* Staff Br. at 165-71.

As proposed by BHM and the Respondents, the claim term "the memory storing a first[/second] user profile" is construed to mean "the memory storing profile data about a first[/second] user." Upon examination of the '593 specification, it is determined that profile data includes not only "data related to the characteristics of the user or the device," such as the identity of the associated mobile communications device, but also "preference data for the user or device to be used by the central server in making the match." JX-0011 ('593 patent) at col. 7, lns. 31-41. "Thus the profiles may contain both specific information related to the users/device and the preference data for the user/device that is being sought." *Id.* at col. 7, lns. 44-46. Moreover, the user profile can also contain the user sending status and location proximity preferences of the user. *Id.* at col. 7, lns. 41-52.

d. "if there is a match and depending upon the user sending status effects the transmission" (claim 7)

Claim Term/Phrase	Complainants' Proposed Construction	Respondents and Intervenor's Proposed Construction
"if there is a match and depending upon the user sending status effects the transmission"	"if there is a match and the user sending status indicates the sending of data or the responding to requests, causes to be transmitted"	Invalid under 35 U.S.C. § 112 ¶ 2 Or, in the alternative: "only if there is a match and only if the user sending status indicates that the second device is currently able to send data or requests from other mobile communications devices or the central server then causes to be transmitted"

The claim limitation "if there is a match and depending upon the user sending status effects the transmission" appears in asserted independent claim 7 of the '593 patent. BHM takes the position that the claim term should be construed to mean "if there is a match and the user sending status indicates the sending of data or the responding to requests, causes to be transmitted." *See* Compl. Br. at 185-86. Respondents argue that the claim term should be construed to mean "only if there is a match and only if the user sending status indicates that the second device is currently able to send data or requests from other mobile communications devices or the central server then causes to be transmitted." *See* Resps. Br. at 203-04. The Staff did not argue the construction of this claim term in its posthearing brief. *See* Staff Br. at 165-71.

As proposed by Respondents, the claim term "if there is a match and depending upon the user sending status effects the transmission" is construed to mean "only if there is a match and only if the user sending status indicates that the second device is currently able to send data or requests from other mobile communications devices or the central server then causes to be transmitted." This construction is consistent with the disclosure at column 8, line 54 to column

9, line 8 of the '593 patent, as well as with Figure 3 of the '593 patent. *See* JX-0011 ('593 patent). Furthermore, the adopted construction is consistent with the testimony of the first-named inventor Charles Drutman regarding his understanding of the invention. *See* Exhibit JX-0062C (C. Drutman Dep.) at 104.

3. Undisputed Claim Terms

a. "based upon the information defining the locations of the first and second mobile communications devices" (claim 7)

The parties agree that the claim 7 term "based upon the information defining the locations of the first and second mobile communications devices" should be construed to mean "derived from the information defining the locations of both mobile communications devices." *See* Joint List of Proposed Constructions at 22. Nevertheless, Black Hills and Respondents disagree as to the proper application of this claim term. *See* Compl. Br. at 458-61; Resps. Br. at 195-97.

Respondents take the position that "nothing—not even the agreed upon construction—limits 'locating information' to a map with the locations of both devices." *See* Resps. Br. at 195-97 (citing CX-1400C (Zatkovich RWS) Q/A 139 (opining a prior art reference is not invalidating because "it is not clear that the 'map' would show the locations of both users"), 111 (opining "a map showing one location is not 'derived' from the locations of 'both' mobile communications device.")) (parentheticals in original citations).

BHM contends:

> Respondents, however, now advance an overbroad interpretation of this agreed-upon term in an attempt to cure known defects in their alleged prior art. For example, Respondents baldly assert that a "proximity match" that ***is performed*** by the central unit constitutes "locating information" transmitted by the central unit. Respondents' Joint PoHB at 195-197. A "proximity match" is not "locating information" for multiple reasons.

See Compl. Br. at 187-90 (emphasis original).

An examination of the '593 specification reveals several embodiments where the locating information is derived from the locations of both devices and transmitted in a variety of formats, and is not limited to a map with the locations of both devices. For example, one embodiment teaches that the "locating information" provided as a result of a successful proximity match "may include either graphic or textual information and may be in any known format" including "raw GPS determined data." JX-0011 ('593 patent) at col. 9, lns. 3-14. There is no indication that this embodiment, in which "locating information" is determined based on the users being within a particular distance of each other, requires a map displaying the location of both devices. *Id.*

Other portions of the '593 specification also support Respondents' interpretation of the "based upon" limitation because this limitation does not necessarily require that the locating information include the location of either user. For example, in one embodiment, the system provides the location of a convenient meeting place relative to the current locations of both devices. JX-0011 ('593 patent) at col. 11, lns. 40-63 (disclosing in the context of delivery trucks that "[i]f the central server determines that one or more of the packages on the first driver's truck are more efficiently delivered if placed on the second driver's truck, then the central server transmits a message to the two drivers indicating a convenient meeting place"); *see also id.* at col. 11, lns. 10-39. Indeed, dependent claim 22, which depends from claim 7, covers this embodiment. *See* JX-0011 ('593 patent) at claim 22 (reciting "wherein the locating information is locating information for a location other than the location of either the first mobile communications device or the second mobile communications device").

Therefore, BHM's interpretation of the parties' agreed-upon construction is unduly narrow and excludes embodiments disclosed in the '593 specification that fall within the scope

of asserted claim 7. Accordingly, the analysis of the accused products and prior art will be made according to Respondents' interpretation of the parties' agreed-upon construction.

C. The Accused Products and Functionalities

1. Google Locations+

The evidence shows that Google+ Locations, or "Locations+," is a location sharing feature of Google+. RX-0468C (Oplinger RWS) Q/A 11. Google+ is a social networking service owned and operated by Google. *Id.* Google+ includes a wide variety of features, including "Circles" to enable users to organize people into groups, "Streams" for viewing updates and content from users in certain circles, "Hangouts" for group video chatting, "Messenger" for sending instant messages, and "Location Sharing" for sharing a user's location. *Id.* at Q/A 11, 13; RX-0470 (Webpage, Google+ Android Apps on Google Play); RX-0472 (Webpage, Google+ Mobile).

The Locations+ feature, launched on March 25, 2013, allows a user to share his location with other Google+ users in his Circles who have been given permission to see that particular user's location information. RX-0468C (Oplinger RWS) Q/A 12, 18, 34. After establishing a Google+ account, a user is able to elect to report his location to Google servers and set preferences for sharing his location with other Google+ users that are in his Circles. *Id.* at Q/A 14, 21, 34. For each person with whom the user wants to share his location, the user can choose to share either his pinpoint location or his city-level location. *Id.* at Q/A 14, 21. For example, a user could share pinpoint location with family members, but only provide city-level location to co-workers. *Id.* at Q/A 22. Those users with whom the location is shared may then go to the Locations+ portion of the Google+ mobile application or visit the sharing user's Google+ page on any internet browser to see the last reported location. *Id.* at Q/A 23. Locations+ uses maps

provided by Google Maps to show the users' locations, but Locations+ does not provide directions from one user to another. *Id.* at Q/A 36, 37.

Locations+ is [

]. RX-0468C (Oplinger RWS) Q/A 19. The human-readable source code for the Google+ application is compiled into a binary that cannot be altered and that is only machine-readable for distribution to Android partners. *Id.* at Q/A 15-17. Users can also download Google+ from the Google Play store for installation on their Android devices. *Id.* at Q/A 15.

2. Google Latitude

The evidence shows that Google Latitude was a feature of Google Maps for Mobile that allowed users to report their locations and share them with other users. RX-0468C (Oplinger RWS) Q/A 44. Latitude was deprecated on August 9, 2013; Google has stopped accepting signals from Latitude end points, and the Latitude feature no longer works. *Id.* at Q/A 46. Deprecating Latitude made way for the new Locations+ feature integrated with the Google+ ecosystem. *Id.* at Q/A 47. While Latitude's features and functionalities were similar to those offered by Locations+, each is a distinct product [

]. *Id.* at Q/A 45.

When Latitude was still active, users who had Google accounts could allow other users to see their locations and could also see the locations of other users who were sharing with them. RX-0468C (Oplinger RWS) Q/A 44, 52. If users then accessed the "Latitude" layer of the Google Maps for Mobile application, they would be able to see sharing users' locations on a map provided by Google Maps. *Id.* at Q/A 51, 53, 61. The accuracy of the returned locations depended upon the sharing users' settings because Latitude enabled users to control the accuracy

and details that permitted users could see. *Id.* at Q/A 44. Latitude could be turned off completely, or it could be customized to allow only a city-level view of a user's location. *Id.* The location shared was either a location reported to the server automatically or one that the user entered manually. *Id.* at Q/A 56.

[

]. RX-0468C (Oplinger RWS) Q/A 49. The human-readable source code for Latitude was compiled into an unalterable binary that was only machine-readable before distribution to Android partners. *Id. at* Q/A 50. Users were also able to download Google Maps for Mobile with the Latitude feature from the Google Play Store. *Id.*

3. The Samsung and LG Devices

Black Hills accuses certain Samsung and LG devices of infringing the '593 patent. The relevant accused devices are mobile [

]. CX-1067C (Zatkovich DWS) Q/A 595-596. This application contains a "Locations" tab to provide a mobile user with the location of another mobile user. The "Locations" functionality was termed "Locations+" at the hearing. RX-0468C (Oplinger DWS) Q/A 11-12.

The Accused Samsung devices are those with Locations+ preloaded, and with GPS and mobile data capability. They include the following models: the Samsung [

]

[

]. Compl. Br. at 472-73; CX-1067C (Zatkovich DWS) Q/A 596-597.

The accused LG mobile devices are those LG smartphones which include [

]

[

]. Compl. Br. at 473-74; CX-1067C (Zatkovich DWS) Q/A 596, 598.

4. The [ ] Devices

BHM contends that [ ] smartphones that are preloaded with Google+, and that have GPS and mobile data capability practice the '593 patent and thereby satisfy the technical prong of the domestic industry requirement. *See* Compl. Br. at 474. They are (for Locations+) the [

]. CX-1067C (Zatkovich DWS) at Q596, Q599. BHM further contends that the [ ] phones preloaded with Google Maps/Latitude and having GPS and mobile data capability also practice the '593 patent and thereby satisfy the technical prong of the domestic industry requirement. *See* Compl. Br. at 474. These phones include the [

]. CX-1067C (Zatkovich DWS) at Q/A 689-694.

5. Designation of Representative Products

Black Hills contends that, inasmuch as Locations+ functionality [

].

Compl. Br. at 474-78. Black Hills relies on the testimony of Google's corporate designee on Locations+, Andrew Oplinger, as support for this proposition. Specifically, Black Hills cites to

testimony from Mr. Oplinger that Locations+ is [

]:

[ILLUSTRATION REDACTED]

JX-0083 (Oplinger Dep.) at 28.

Black Hills also relies on the activities of its expert, Mr. Zatkovich, to demonstrate that all accused products with Locations+ operate the same. *See* Compl. Br. at 475-76. Specifically, Mr. Zatkovich operated different phones from the Respondents, reviewed relevant documents, reviewed the single version of source code produced by Google (applicable to all phones), and

examined the non-infringement arguments of Respondents, [

]. *See id.* (citing CX-1067C (Zatkovich DWS) Q/A 618). Mr. Zatkovich testified:

[ILLUSTRATION REDACTED]

CX-1067C (Zatkovich DWS) Q/A 618.

According to Mr. Zatkovich, that [

].

CX-1067C (Zatkovich DWS) Q/A 619. Specifically, [

]. *See id.* Mr. Zatkovich also testified that [

]. *See* CX-1067C (Zatkovich DWS) Q/A 620-622.

Google's expert Dr. Bishop analyzed the Google source code, and while he believes there was no infringement, he did not contest the proposition that [

]. *See* RX-0666C (Bishop RWS) at Q/A 178-179. Samsung's expert Dr. Heppe also provided no testimony disagreeing with the conclusion that [ ]

[ ]. *See* RX-0668C (Heppe RWS) (generally). LG's expert Dr. Min did question whether or not the evidence was sufficient to support a determination that [ ], but the record evidence does support such a determination. *See* RX-0672C (Min RWS) Q/A 35-38.

Inasmuch as Google has provided testimony through its corporate designee Mr. Oplinger that [

]. *See* RX-0468C.02 (Oplinger WS) Q/A 15-16; RX-0668C (Heppe RWS) Q/A 27; RX-0672C (Min RWS) Q/A 33-34.

D. Infringement Analysis

1. Direct Infringement

BHM alleges that certain Samsung, LG, and [ ] mobile devices associated with Google's Locations+ and Latitude practice independent claim 7 and dependent claim 18 of the '593 patent. Nevertheless, BHM has not adduced evidence showing that the devices associated with Locations+ and Latitude satisfy all limitations of the asserted claims. The specific limitations not practiced by the accused products are discussed in further detail below.

a. "match information of the users"

The evidence shows that the accused products do not practice asserted independent claim 7 and dependent 18, inasmuch as they do not satisfy the "match information of the users" limitation recited in claim 7.

i. Devices with Locations+

The record evidence demonstrates that accused devices associated with Locations+ do not match information of the users as required by the claims for two reasons: [ ]

[

]. RX-0468C (Oplinger RWS) Q/A 27; RX-0666C (Bishop RWS) Q/A 190; Zatkovich Tr. 226.

First, the asserted claims require that the processor "receive[] the first and second user profiles," but the evidence shows that Locations+ functionality [

]. *See* Zatkovich Tr. 74 ("[

]."). [

]. RX-0666C (Bishop RWS) Q/A 189-190; RX-0468C (Oplinger RWS) Q/A 27, 31-33; RPX-0013C ([ ]). [

]. RX-0666C (Bishop RWS) Q/A 194. [

]. RX-0468C (Oplinger RWS) Q/A 31, 67. Furthermore, Mr. Zatkovich's testimony that [

] is not supported by the evidence. *See* CX-1067C (Zatkovich DWS) Q/A 655. Although Mr. Zatkovich testified [

], Mr. Zatkovich also testified [ ]. CX-1067C (Zatkovich DWS) Q/A 52; Zatkovich Tr. 75. Moreover, the evidence shows that [

]. RX-0666C (Bishop RWS) Q/A 199.

Second, the record evidence does not establish that devices associated with Locations+ "match information of the users" as required by the claims. [

]. RX-0468C (Oplinger RWS) Q/A 33. [

].[80]

BHM argues two separate theories of infringement with respect to this claim limitation. In support of the first theory, Mr. Zatkovich testified that [

]. CX-1067C (Zatkovich DWS) Q/A 658; Zatkovich Tr. 75. The evidence, however, does not support this theory of infringement. First, [

]. *See, e.g.*, RX-0666C (Bishop RWS) Q/A 190 ([

]). Although Mr. Zatkovich testifies about [

], the evidence shows that [

]. *See,*

---

[80] [ ]. RX-0666C (Bishop RWS) Q/A 191; RX-0468C (Oplinger RWS) Q/A 32; RPX-0018C ([ ]); RPX-0019C ([ ]). [ ]. RX-0666C (Bishop RWS) Q/A 192; RX-0468C (Oplinger RWS) Q/A 31-32. [ ]. RX-0666C (Bishop RWS) Q/A 193; RPX-0018C ([ ]); RPX-0020C ([ ]); *see also* RX-0468C (Oplinger RWS) Q/A 32. [ ]. RX-0468C (Oplinger RWS) Q/A 36.

e.g., Zatkovich Tr. 77 ("[

]."); RX-0468C (Oplinger RWS) Q/A 13 ([

]).

[

]. *See* Zatkovich Tr. 229-230; RX-0468C (Oplinger RWS) Q/A 13. Second, [

]. RX-0468C (Oplinger RWS) Q/A 34; RX-0666C (Bishop RWS) Q/A 196. As described above, [

In support of BHM's second theory of infringement, Mr. Zatkovich testified that "[

]." CX-1067C (Zatkovich DWS) Q/A 658. This theory of infringement is also not supported by the evidence. For instance, Mr. Zatkovich testified that [

]. Zatkovich Tr. 74-75. This testimony in fact restates the reason why [

]. RX-0666C (Bishop RWS) Q/A 194, 196; RX-0468C (Oplinger RWS) Q/A 33.

BHM also argues that this claim limitation is satisfied under the doctrine of equivalents, and its expert Mr. Zatkovich testified [ ]. *See* CX-1067C (Zatkovich DWS) Q/A 656. The evidence shows, however, that there is a

fundamental difference between [

]. RX-0666C (Bishop RWS) Q/A 198.

[

]. *Id.* [

]. *Id.* [

]. *Id.* at Q/A 199.

ii. Devices with Latitude

Like Locations+, the evidence shows that the now-deprecated Latitude did not "match . . . information of the users" as required by the claim limitations because Latitude operation did not [ ].

First, Latitude did [

]. RX-0666C (Bishop RWS) Q/A 202-203; RX-0468C (Oplinger RWS) Q/A 58-60; RPX-0025C ([ ]).

[

].

Second, devices associated with Latitude did not "match information of the users." [

]

[

]. RX-0468C (Oplinger RWS) Q/A 59.[81]

b. "locating information"

Asserted claims 7 and 18 of the '593 patent recite the claim limitation "locating information . . . based upon the information defining the locations of the first and the second mobile communications devices." The evidence shows that the accused products do not practice claim 7 and its dependent claim 18 because they do not satisfy the "locating information" limitation.

BHM's expert Mr. Zatkovich testified that for Locations+ and Latitude, "[

]." Zatkovich Tr. 73-74; *see also* CX-1067C (Zatkovich DWS) Q/A 724. As discussed above, the claim term "locating information" is construed to mean "information that enables a user to contact or find another device or location." Indeed, Mr. Zatkovich testified that "locating information" requires that "one user be able to find the second user." Zatkovich Tr. 73.

The accused functionality on the accused products [

]. RX-0666C (Bishop

---

[81] [
]. RX-0666C (Bishop RWS) Q/A 204; RX-0468C (Oplinger RWS) Q/A 59; RPX-0023C ([ ]); RPX-0026C ([ ]); RPX-0028C ([ ]); RPX-0029C ([ ]). [
]. RX-0666C (Bishop RWS) Q/A 204. [
]. *Id.*; RX-0468C (Oplinger RWS) Q/A 57-59, 61; RPX-0024C ([ ]).

RWS) Q/A 216. The claims require that the "locating information," which defines the locations of both users, be transmitted from the "central unit." JX-0011 ('593 patent) at cl. 7 ("a central unit having a processor . . . wherein the processor . . . effects the transmission to the first mobile communications device of locating information defining the locations of the first and second mobile communications devices"). However, Locations+ Tech Lead Andrew Oplinger testified that [ ]. Oplinger Tr. 1389. The evidence does not show that [ ]. *Id.*; CX-1067C (Zatkovich DWS) Q/A 658. Further, Mr. Zatkovich testified [ ]. CX-1400C (Zatkovich RWS) Q/A 111.

Accordingly, devices associated with Locations+ or Latitude do not meet the "locating information" limitation, and BHM has not established that devices associated with Locations+ or Latitude practice the asserted claims of the '593 patent.

c. "user sending status"

Claim 7 of the '593 patent requires the second device to transmit "a user sending status," and that "locating information" be transmitted "depending on the user sending status," limitations that also apply to asserted dependent claim 18. As discussed further below, the evidence shows that devices associated with Locations+ and Latitude do not and did not implement a user sending status that is checked before effecting transmission of locating information.

i. Locations+

The record evidence shows that Locations+ does not implement a "user sending status" for several reasons. First, as Mr. Zatkovich testified, [

].

Zatkovich Tr. 1591. [

]. RX-0468C (Oplinger RWS) Q/A 12 ("[

].").

Second, [

]. *See* CX-1067C (Zatkovich DWS) Q/A 643-645. Indeed, Mr. Zatkovich testified that [

].

Zatkovich Tr. 84. Accordingly, the location sharing settings do not comprise the claimed "user sending status" because [

].

Third, [

]. RX-0468C (Oplinger RWS) Q/A 22, 35.

[

]. *Id.* at Q/A 35. [

]. *Id.* at Q/A 25. [

]. *See, e.g.*, RX-0472 (Webpage, Google+ Mobile) ("[

].").

Finally, [

]. As Mr. Zatkovich testified, [

]. CX-1067C (Zatkovich DWS) Q/A 52. He also testified that "[

]." *Id.* at Q/A 658. However, [

]. *Id.*

The evidence also shows that Locations+ does not practice this limitation under the doctrine of equivalents. Mr. Zatkovich testified [

]. CX-1067C (Zatkovich DWS) Q/A 643, 649. This testimony [

]. *See* RX-0468C (Oplinger RWS) Q/A 22, 25. [

]. *See id.* at Q/A 22, 25, 35; *see also* CX-1400C (Zatkovich RWS) Q/A 105 ("[

]."). [

]. RX-0666C (Bishop RWS) Q/A 321. The way is different; [

]. *Id.* The result is also different; [

]. *Id.*

Accordingly, inasmuch as Locations+ does not satisfy the claim element "user sending status," either literally or under the doctrine of equivalents, BHM has not established that devices associated with Locations+ practice the asserted claims of the '593 patent.

ii. Latitude

As with Locations+, Latitude did not implement a user sending status. The evidence shows that [

]. RX-0468C (Oplinger RWS) Q/A 54. [

]. *Id.* [

]. *See, e.g.*, RX-0666C (Bishop RWS) at Q/A 249.

In addition, under Mr. Zatkovich's own interpretation of the claim term "user sending status," Latitude could not satisfy the limitation because: [

]. RX-0468C (Oplinger RWS) Q/A 44; CX-1067C (Zatkovich DWS) Q/A 712.

Further, as with Locations+, Mr. Zatkovich's doctrine of equivalents opinion relates to [

]. *Id.* However, as discussed above, [

]. *See* RX-0468C (Oplinger RWS) Q/A 54; RX-0666C (Bishop RWS) Q/A 321; *see also* CX-1400C (Zatkovich RWS) Q/A 105.

Accordingly, inasmuch as devices associated with Latitude did not satisfy this limitation, either literally or under the doctrine of equivalents, BHM has not meet its burden of establishing that devices associated with Latitude practiced the asserted claims.

d. "[first/second] mobile communications device for transmitting information defining a location of the [first second] mobile communications device"

Claim 7 of the '593 patent requires both "a first mobile communications device for transmitting information defining a location of the first mobile communications device" and "a second mobile communications device for transmitting information defining a location of the second mobile communications device." The evidence shows that neither Locations+ nor Latitude satisfies this claim limitation.

Mr. Zatkovich testified that "the 'second' mobile communications device is another device running the client software of Google+. The client software runs the same . . . on all devices, and the Google+ application on a second device works the same as that on the first device." CX-1067C (Zatkovich DWS) Q/A 643. Regarding Latitude, Mr. Zatkovich testified that as "stated previously, the client software runs the same . . . on all devices, and the Latitude application on a second device works the same as that on the first device." CX-1067C (Zatkovich DWS) Q/A 712. However, testimony that a hypothetical second device works similarly to the first does not satisfy the limitations of this system claim, which requires both a first and second mobile device operating as part of a single system. The record evidence does not show that Locations+ and Latitude require or permit the use of two devices. Accordingly, BHM has failed to demonstrate two mobile devices as required by the claimed system.

In addition, it has not been shown that the Locations+ feature of the Google+ application transmits information defining its location on a first device or a second device. Mr. Zatkovich

testified that [

]. *See* CX-1067C (Zatkovich DWS) Q/A 623, 628. Indeed, Andrew Oplinger, the Locations+ Tech Lead, stated that [

]. JX-0083C (Oplinger Dep.) at 25; *see also* RX-0468 (Oplinger RWS) Q/A 25; RX-0802C (Bishop Dep.) at 79-80) (stating that [

]).

Accordingly, BHM failed to adduce evidence showing the required first and second devices transmitting information defining their respective locations.

2. Direct Infringement at the Time of Importation

The record evidence shows that the accused devices associated with Locations+ and Latitude do not (in the case of Locations+) and did not (in the case of Latitude) meet every limitation of the asserted '593 claims [ ]. *See* RX-0666C (Bishop RWS) Q/A 238. In particular, the asserted claims require "two mobile communications devices" and "a central unit." Zatkovich Tr. 63-64. BHM's expert Mr. Zatkovich has testified that the claimed "central limitation" is satisfied by "the Google server which runs the server side code produced by Google." Zatkovich Tr. 65. The evidence does not show that a Google server is present with the accused devices at the time of importation, just as it does not show that a second mobile communications device is imported with the first mobile communications device. BHM therefore has failed to demonstrate that the accused products as imported comprise "a second mobile communications device" and "a central unit" as required by all asserted claims of the '593 patent, or that these components are imported by Respondents and [ ]. RX-0666C

(Bishop RWS) Q/A 238. The accused products therefore do not practice the asserted claims of the '593 patent at the time of importation.

3. Indirect Infringement at the Time of Importation

BHM alleges that Samsung and LG indirectly infringe system claims 7 and 18 of the '593 patent, but the evidence shows otherwise. For the reasons stated above, the devices associated with Locations+ and Latitude do not meet every limitation of the asserted claims, as required for indirect infringement. In addition, BHM fails to prove additional elements required for a finding of indirect infringement.

First, BHM has failed to prove a required underlying act of direct infringement. BHM has not provided evidence of specific instances of alleged direct infringement by a third party. RX-0666C (Bishop RWS) Q/A 239. With respect to Latitude, BHM argues only that "it is highly likely that [ ] devices were using Latitude to locate other Licensees while Latitude was operational," which is not enough to support a finding of direct infringement. *See id.* at Q/A 229. BHM also has not presented evidence that the devices associated with Locations+ necessarily practice the claims of the '593 patent. RX-0666C (Bishop RWS) Q/A 240. As discussed above, the products associated with Locations+ and Latitude do not satisfy all claim limitations and, furthermore, they have substantial noninfringing uses described below.

Second, BHM has not adduced evidence sufficient to show the knowledge and intent required for a finding indirect infringement. BHM fails to identify evidence of pre-complaint knowledge of the infringement allegations or the required intent to cause infringement. BHM also does not offer evidence that Samsung and LG willfully blinded themselves to any infringing conduct.

Third, as to inducement, the record evidence does not show that Samsung and LG took affirmative steps to induce infringement. Regarding Locations+, Mr. Zatkovich testified regarding various manuals and marketing materials concerning Google+, but without explaining how these manuals demonstrate that Respondents or [ ] had any specific intent or took any affirmative steps to induce infringement. CX-1067C (Zatkovich DWS) Q/A 678-85. What these materials do show is that Respondents and [ ] have manuals that explain the general benefits of Google+. RX-0666C (Bishop RWS) Q/A 252, 253. None of the cited portions of these documents demonstrates or teaches using Locations+ to infringe the '593 patent. *Id.* With respect to Latitude, Mr. Zatkovich testified regarding documents that explain the benefits of the Latitude, but do not demonstrate or teach using Latitude to infringe the '593 patent. CX-1067C (Zatkovich DWS) Q/A 737-739; RX-0666C (Bishop RWS) Q/A 252, 253.

Fourth, as to contributory infringement (discussed in more detail below), BHM has not shown that the accused products constitute a material part of the inventions and are not staple articles of commerce suitable for substantial noninfringing use. *See Electronic Digital Media Devices*, Comm'n Op. at 44.

4. Substantial Noninfringing Uses

a. Locations+

The record evidence demonstrates that accused devices associated with Locations+ have substantial noninfringing uses. Although BHM identified Locations+ as the alleged material component for purposes of contributory infringement, BHM relies on various features other than the Locations+ feature of the Google+ application in order to establish the allegedly infringing system. *See* CX-1067C (Zatkovich DWS) Q/A 241. Specifically, BHM's infringement allegations rely upon [ ]

[

]. *See, e.g.*, Zatkovich Tr. 72 ("[

].").

Regardless of what specifically comprises the material component for the contributory infringement analysis, the record evidence shows substantial noninfringing uses.

For instance, the evidence shows that devices associated with Locations+ have substantial noninfringing uses not related to sharing locations. In particular, the devices are used for communications, entertainment, connectivity, directions, maps, business, web searching, and other functions. RX-0666C (Bishop RWS) Q/A 242.

The Google+ application and ecosystem also have substantial noninfringing uses, including all social networking functionalities, such as chatting, email, picture sharing, and other uses. RX-0666C (Bishop RWS) Q/A 243. Google+ can be used on a variety of devices, such as laptop and desktop computers, and is not restricted to wireless communications devices. *See, e.g.*, RX-0468C (Oplinger RWS) Q/A 11. Publicly available documents and videos demonstrate these substantial noninfringing uses. For example, RX-0470 (Webpage, Google+ Android Apps on Google Play), RX-0472 (Webpage, Google+ Mobile), and RPX-0346 (YouTube Video "Google+ for Android") all show that Google+ has uses aside from sharing locations. In addition, CX-0488 (Samsung - Samsung Galaxy Rugby Pro Ruggedized 4G LTE Smartphone User Manual), a Samsung manual that Mr. Zatkovich discusses his testimony, states that Google+ facilitates messaging and sharing with other users and permits uploading of videos and photos, attesting to its substantial noninfringing uses. CX-1067C (DWS Zatkovich) Q/A 155.

Indeed, many of the materials that Mr. Zatkovich cites in his direct testimony highlight the noninfringing uses of Google+. *See* CX-1067C (Zatkovich DWS) Q/A 678-684.

The Locations+ feature of Google+ also has substantial noninfringing uses, such as when a user shares his location with others, but others do not reciprocally share their locations with the user, such that the user will never receive the locations of others on his device. RX-0666C (Bishop RWS) at Q/A 244. This is evident both from Andrew Oplinger's deposition and Mr. Zatkovich's own testimony, in which he stated that "[i]n Locations+ it's possible to see another user's location without sharing your own." JX-0083 (Oplinger Dep.) at 17; Zatkovich Tr. 72-73. Locations+ users can also elect to share only the city in which they are located, called "city-level" sharing, rather than their precise location, which does not provide other users with precise location information usable to arrive at a location, a requirement of the claim limitations as construed above. RX-0666C (Bishop RWS) Q/A 244. For example, RX-0577 (Webpage, Google+ Location Settings) shows options that the user sets for enabling or disabling location sharing and for selecting who can see his current city or pinpoint location. *Id.* If a user enables city-level rather than pinpoint sharing, the second user's location will be presented as "a randomized point" in the city from which the user last reported his location. Oplinger Tr. 1385.

b. Latitude

The record evidence shows that devices associated with Latitude had substantial noninfringing uses. Although has identified Latitude as the alleged material part of the overall combination of the allegedly infringing system, the alleged domestic industry is based upon the [ ] device associated with Latitude. *See* RX-0666C (Bishop RWS) Q/A 247.

The evidence shows that devices previously associated with Latitude have substantial noninfringing uses not related to sharing locations. *Id.* RX-0666C (Bishop RWS) at Q/A 248.

The devices are primarily used for communications, entertainment, connectivity, directions, maps, business, web searching, and other functions. *Id.* In addition, the Google Maps application, which provides the map for Latitude, has substantial noninfringing uses including obtaining directions, navigation, accessing consumer reviews, and obtaining local shopping and dining recommendations. *Id.* at Q/A 249. The record contains many [ ] documents that highlight the noninfringing uses of Google Maps. For example, CX-0849 ([ ] - User Guide) and CX-0850 ([ ] - User Guide) both describe using Google Maps to view real-time traffic situations, receive detailed directions, and download and save maps. In addition, CX-0853 ([ ] - User Guide) and CX-0845C ([ ] - User Guide) both discuss these noninfringing uses. RX-0666C (Bishop RWS) at Q/A 249.

E. Technical Prong of the Domestic Industry Requirement

To prove satisfaction of the technical prong of the domestic industry requirement for the asserted '593 patent, BHM relies on [ ] devices installed with Google Locations+ and Google Latitude. As discussed above, however, the record evidence fails to show that [ ] devices (and all accused devices regardless of manufacturer) with Locations+ and Latitude practice claims 7 and 18 of the '593 patent. Accordingly, BHM has failed to demonstrate that the [ ] devices satisfy the technical prong of the domestic industry requirement.

F. Validity

1. Priority Date

The patent application that resulted in the '593 patent was filed on September 8, 2000. *See* JX-0011 ('593 patent). The '593 patent then issued on September 9, 2003. *Id.* BHM had previously alleged the asserted claims were entitled to a priority date of May 3, 2000, or

alternatively June 4, 2000. *See, e.g.,* RX-0462C (Heppe DWS) Q/A 22; CX-1400C (Zatkovich RWS) Q/A 95. Inasmuch as the prior art references discussed below predate May 3, 2000, the priority date of the '873 patent is not at issue in this investigation. *See* RX-0462C (Heppe DWS) Q/A 23.

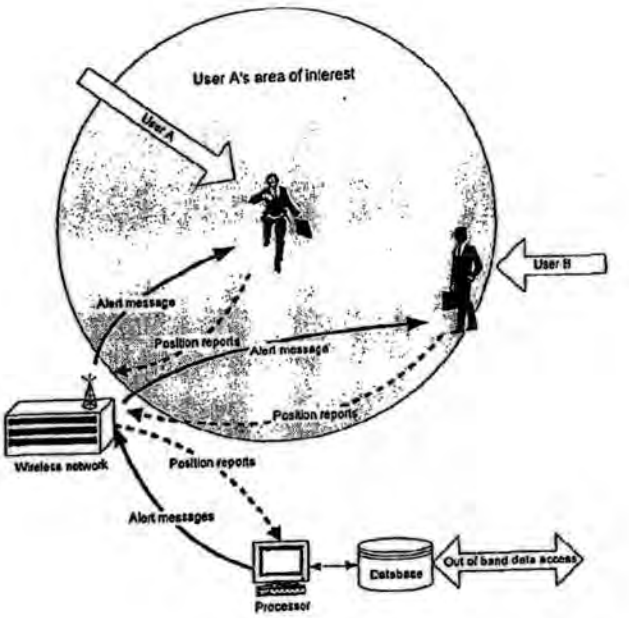
2. Anticipation – Degnbol

The Degnbol reference ("Degnbol") is PCT application PCT/DK99/00548 (International Publication Number WO 00/22860), is titled "A Method and a System for Transmitting Data Between Units," was filed on October 12, 1999, and has a priority date of October 12, 1998. *See* RX-0093 (Degnbol). It was published internationally on April 20, 2000. *Id.* These dates pre-date BHM's earliest alleged '593 priority date of May 3, 2000. Therefore, Degnbol is prior art to the '593 patent under at least 35 U.S.C. § 102(a). *See* CX-1400C (Zatkovich RWS) Q/A 107-115. Degnbol was not cited or considered by the examiner during prosecution of the '593 patent. *See* JX-0012 ('593 file history).

As described in the Abstract, Degnbol "relates to a method and a system for automatic notification of a user 'A' of the entry of pre-selected user 'B' into a pre-determined area (or proximity to a particular location). The notification may further depend on a successful match of user specified parameters. The location of users 'A' and 'B' is determined by reference to the position of their personal wireless communication unit, such as a mobile telephone or a pager." RX-0093 (Degnbol) (Abstract).

In Degnbol, the mobile users are equipped with communications devices such as a data-enabled cellular phone. RX-0093 (Degnbol) at col. 20, lns. 29-30. Degnbol discloses the steps of determining the positions of the mobile units, storing the positions along with unit identifications in the database, and finding the distance between the two units. The methods of

position determination include triangulation, GPS, AOA, TDOA, Radio Signal Mapping, power/signal attenuation or a combination thereof. *Id.* at col. 1, lns. 29-34. As illustrated in Figure 1 (reproduced here), Degnbol teaches position reports flowing outward from two mobile communications devices via a wireless network to a processor coupled to a database. *See id.*; RX-0462C (Heppe DWS) Q/A 42.



When the processor determines "User B" has entered the area of interest for "User A," it checks for profile matches. If a profile match between User A and User B is found, then alerts flow outward from the processor to the two users. *Id.* at col. 1, lns. 29-34.

Degnbol discloses that the outgoing message, called the "alert message," can be text, graphics, a map, or diagram with a pointer showing the location of the user, a video clip, sound, a vibration, or a combination. RX-0093 (Degnbol) at col. 5, lns. 16-20; Heppe Tr. 796-798. Degnbol teaches this alert can also optionally include increasing the intervals between alert signals as a function of proximity (*i.e.*, to let users know they are getting closer to each other). RX-0093 (Degnbol) at col. 5, lns. 22-24. In other words, the outgoing message is based upon the locations of both users. Heppe Tr. 796-798.

Degnbol also teaches that the transmission of alerts is determined by matching user preferences and characteristics. For example "a user may specify that he is interested in being alerted when . . . i.e. a Latin American woman, between the ages of 20 and 25, who is interested

in 'Backgammon' and 'Travelling' [is in the proximity]." RX-0093 (Degnbol) at col. 16, lns. 18-21. In addition, Degnbol teaches an alternative embodiment where transmission of alert signals can be configured on an individual "Buddy List" basis, which is "a list of users whose location and/or movements the user wishes to be notified of." *Id.* at col. 9, ln. 31 – col. 10, ln. 3.

Degnbol further teaches that other configuration options include the ability of the user to disable and re-enable their participation in the system at will. RX-0093 (Degnbol) at col. 13, lns. 13-14. For example, Degnbol teaches that a user can configure the system so that he does not receive any alerts between 10:00 p.m. and 8:00 a.m., avoiding nightly interruptions. *Id.* at col. 10, lns. 27-29. Further, as another example, a user can configure the system so that he can pass through an area incognito, without his location being detected and/or transmitted to other users, while still retaining the option to be alerted of others, if desired. *Id.* at col. 13, lns. 14-15.

a. Claim 7

The evidence adduced by Respondents demonstrates, clearly and convincingly, that Degnbol discloses all limitations of asserted claim 7 of the '593 patent.

i. "A system for matching users of mobile communications devices comprising"

Degnbol discloses "a system for matching users of mobile communications devices." RX-0093 (Degnbol) at col. 18, lns. 27-33; *see* RX-0462C (Heppe DWS) Q/A 43.

ii. "a first mobile communications device for transmitting information defining a location of the first mobile communications device"

This claim limitation requires a first mobile communications device for transmitting information defining a location. Degnbol discloses this communications device in Figure 1, and further discusses this communications device in the specification. RX-0093 (Degnbol) at col. 1,

lns. 22-27; col. 1, lns. 29-34; col. 9, lns. 21-23; col. 20, lns. 29-32; *see* RX-0462C (Heppe DWS) Q/A 43.

The parties dispute whether Degnbol discloses "transmitting information defining a location," but the record evidence shows that it does so. *See* Compl. Br. at 536; Resps. Br. at 209-12; RX-0462C (Heppe DWS) Q/A 45.

For example, Figure 1 of Degnbol shows "position reports" flowing from the users' mobile communications devices via the wireless network to the processor that is part of the "central unit" as claimed in the '593 patent. RX-0462C (Heppe DWS) Q/A 45; RX-0093 (Degnbol) at Fig. 1. As Dr. Heppe testified, this disclosure alone is sufficient to disclose the first and second mobile communications devices for transmitting information defining a location. RX-0462C (Heppe DWS) Q/A 45.

Degnbol further discloses that Figure 1 illustrates that the mobile devices perform "mobile-based" position calculations. RX-0093 (Degnbol) at col. 20, lns. 29-32. Dr. Heppe testified that one of ordinary skill in the art at the time of the alleged invention would understand a "mobile-based" position calculation to mean that the position is calculated in the mobile device and then reported to the network and the processor, or "central unit." *See* RX-0462C (Heppe DWS) Q/A 45. Methods to do this, including the use of a GPS receiver, were well known in the art at the time. *Id.* Indeed, Degnbol specifically discloses use of "second- and third- generation cellular . . . systems" to "accomplish [position reporting] in near real time," and the use of GPS. RX-0093 (Degnbol) at col. 19, lns. 31-35; col. 5, lns. 7-11.[82] Thus, Degnbol discloses two

[82] In addition, the Fraccaroli reference (discussed below) notes that 2nd and 3rd generation handsets can contain GPS to facilitate mobile based-positioning. RX-0042 (Fraccaroli) at col. 6, lns. 45-59 ("[H]andsets in GSM and other so-called 2nd generation cellular systems are presently required to be capable of providing information about the user's location and thus facilitate

mobile communications devices for "transmitting information defining the location" of the mobile communications devices.

BHM's expert Mr. Zatkovich testified that Degnbol does not disclose transmitting information defining a location inasmuch as he did not see any discussion within Degnbol of "GPS actually within the mobile device." *See* Zatkovich Tr. 1639-1640; CX-1400C (Zatkovich RWS) Q/A 107. However, Mr. Zatkovich also testified that he does not know the difference between "mobile-based" positioning and "network based" positioning, which were well-known terms in the art at the time of the invention. Zatkovich Tr. 1627-1639; RX-0812 ("Positioning GSM Telephones"); *see* RX-0462C (Heppe DWS) Q/A 45. In addition, in the Background of the Invention section of the specification, Degnbol discloses three references that explicitly teach use of "GPS actually within the mobile device." *See* Zatkovich Tr. 1640; RX-0806 (EP No. 0546758A2); RX-0809 (WO 1994012892); RX-0810 (WO 1995021511). Mr. Zatkovich testified that he had not previously reviewed these three references. Zatkovich Tr. 1640. Mr. Zatkovich further testified that the references disclose a mobile device with GPS functionality used to calculate its own position. Zatkovich Tr. 1643-1646.

Therefore, Degnbol teaches the claim 7 limitation "transmitting information defining a location" through the disclosure of GPS receivers.

As previously discussed with respect to claim construction, sending a position report based on a GPS receiver is not necessary to meet the limitation "transmitting information defining a location." *See* RX-0462C (Heppe DWS) Q/A 46; CX-1400C (Zatkovich RWS) Q/A 108. Claim 7 only requires that the mobile device transmit "information defining a location,"

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mobile-based positioning. . . . These handsets use location methods other than triangulation, such as adoption of a global positioning system (GPS) receiving device, to determine, or assist in the determination of, location.").

which can take many different forms. *See* RX-0462C (Heppe DWS) Q/A 46. For example, dependent claim 14 of the '593 patent recites that "information defining a location" can be an address, a marker, co-ordinates, or a telephone number. *Id.*; JX-0011, ('593 patent) at cl. 14. In addition, other methods for locating devices are disclosed in the '593 specification, such as the use of transceivers to triangulate the position of a mobile communications device. RX-0462C (Heppe DWS) Q/A 46; JX-0011 ('593 patent) at col. 13, ln. 59 – col. 14, ln. 1). Therefore, a registration request from a mobile device that identifies a specific tower meets the "information defining a location" limitation because the registration request is transmitted from the mobile device and the tower location is known to the network. RX-0462C (Heppe DWS) Q/A 46. Degnbol specifically discloses this approach at column 1, lines 22-27. Degnbol also specifically discloses use of and other position determining methods. RX-0093 (Degnbol) at col. 5, lns. 7-11; *see also* RX-0807 (U.S. Patent No. 6,002,936); RX-0812 ("Positioning GSM Telephones"). Thus, Degnbol also discloses the "transmission of information defining a location" limitation through a "network-based" position calculation of a mobile device. RX-0462C (Heppe DWS) Q/A 46.

iii. "a second mobile communications device for transmitting information defining a location of the second mobile communications device and a user sending status"

This claim limitation requires a second mobile communications device for transmitting information defining a location. Degnbol discloses this communications device in Figure 1, and further discusses this communications device in the specification. RX-0093 (Degnbol) at col. 1, lns. 22-27; col. 1, lns. 29-34; col. 9, lns. 21-23; col. 20, lns. 29-32; *see* RX-0462C (Heppe DWS) Q/A 43.

The parties dispute whether Degnbol discloses "transmitting information defining a location," but as discussed above, the record evidence shows that it does so. *See* Compl. Br. at 536; Resps. Br. at 209-12.

The parties also dispute whether Degnbol discloses "a user sending status," but the record evidence shows that it does under all proposed constructions of the term. *See* Compl. Br. at 536-37; Resps. Br. at 212-15; *see* RX-0462C (Heppe DWS) Q/A 47.

Specifically, Degnbol discloses a user's ability "to disable and re-enable their participation in the system at will," allowing the user the ability to operate "incognito" and pass through an area without their location being detected, "while retaining the option to be alerted of others' presence." RX-0093 (Degnbol) at col. 13, lns. 4-15. Dr. Heppe testified that one of ordinary skill in the art would understand Degnbol's disclosure of the user's ability "to disable . . . their participation in the system" allowing the user "to pass through any area incognito [*i.e.*, without being detected]" to mean the user has the option to disable their current location from being known to the central unit and/or sent to other mobile device users. RX-0462C (Heppe DWS) Q/A 47. This disclosure is consistent with the understanding of the first-named inventor, Mr. Drutman, who testified that the user sending status limitation is like a "do not disturb bit." *See, e.g.*, JX-0062C (C. Drutman Dep.) at 151.

Degnbol also discloses a status parameter stored in memory at the central unit that satisfies the disputed limitation. *See* RX-0093 (Degnbol) at Table 1; col. 21, lns. 23-29 ("The database also includes permission information that determines whether other users may be notified of the user's activity. This database is relatively static, but may be dynamically updated to reflect changes user preferences [*sic*]."). This disclosure corresponds to the disclosures of the '593 patent that teach that the sending status is preferably transmitted to the central server for

storage in memory. RX-0462C (Heppe DWS) Q/A 47; *see* JX-0011 ('593 patent) at col. 8, lns. 8-11; col. 9, lns. 29-34); Zatkovich Tr. 1586-1587.

As another example, Degnbol discloses that the system is based on mutual consent, meaning that permission of the polled party is required before notifying the party of a match. *See* RX-0462C (Heppe DWS) Q/A 47; RX-0093 (Degnbol) at col. 14, lns. 4-6; col. 20, lns. 26-28. For example, the stored profile for User B can contain this necessary permission to notify User A as to User B's whereabouts. RX-0462C (Heppe DWS) Q/A 47; *see* RX-0093 (Degnbol) at col. 9, ln. 34 – col. 10, ln. 3. Providing such permission requires a user sending status. Degnbol also discloses that the sending status can be set from the handset and transmitted to the central unit for storage. *See* RX-0093 (Degnbol) at col. 11, lns. 1-3; col. 9, ln. 34 – col. 10, ln. 3.

These disclosures correspond to the '593 patent's disclosures that "the above-mentioned receive/transmit [sending] status 212 and 222 may actually be a data element within the preference/profile data 213 and 223." *See* RX-0462C (Heppe DWS) Q/A 47; JX-0011 ('593 patent) at col. 7, lns. 47-49.

Dr. Heppe testified that these disclosures in Degnbol show a "user sending status" as taught and claimed in the '593 patent under all proposed constructions. RX-0462C (Heppe DWS) Q/A 48. Degnbol discloses a "user sending status" under the plain and ordinary meaning of the term, which is the construction proposed by BHM and OUII. *Id.* Dr. Heppe also testified that Degnbol discloses the limitation under BHM's alternative proposed construction and Respondents' proposed construction, inasmuch as the "ability to send or not send" is implemented at the server according to the status indication sent by the mobile device. *Id.*

Mr. Zatkovich and BHM contend that Degnbol does not disclose a "user sending status" "because there is no mechanism to prevent the mobile communications device (or the mobile

system in the case of Degnbol) from sending its location to the server." *See* Compl. Br. at 536-37; CX-1400C (Zatkovich RWS) Q/A 107, 109. Specifically, Mr. Zatkovich's opined that, "if there is no 'sending status' enabled, the GPS in the device (or other location technology in the device) is not transmitting the location of the device." CX-1400C (Zatkovich RWS) Q/A 109. However, as discussed above, Mr. Zatkovich's interpretation of "sending status" is inconsistent with the specification of the '593 patent, which describes the continuous transmission of information defining a location.

Nevertheless, even under Mr. Zatkovich's interpretation of "user sending status," Degnbol discloses this limitation. *See* RX-0462C (Heppe DWS) Q/A 50. For example, Degnbol discloses an embodiment where individual users are constantly located by the system's universal tracking function. *Id.*; RX-0093 (Degnbol) at col. 1, lns. 22-27; col. 2, lns. 10-13; col. 22, lns. 10-13; Table 2. As Dr. Heppe testified, one of ordinary skill in the art at the time of the alleged invention would understand that these disclosures from Degnbol are associated with the registration and handoff process inherent in cellular communications systems. RX-0462C (Heppe DWS) Q/A 50. This registration and handoff is associated with a "power on" state for initial registration, as well as with handoffs as the unit remains powered and moves through the network. RX-0462C (Heppe DWS) Q/A 50. When the mobile unit is turned off, no tracking takes place. *Id.* When the mobile unit is turned on, it is tracked. *Id.* This constitutes a "sending status" under Mr. Zatkovich's interpretation of the term based on local control through a power-on state, inasmuch as powered and connected units are reported to a network, while unpowered units are not. *Id.*; *see also*, *e.g.*, JX-0011 ('593 patent) at col. 7, lns. 4-15; claim 9. Therefore, the record evidence shows that Degnbol discloses this limitation under all proposed constructions of the term.

iv. **"a central unit having a processor coupled to a memory, the central unit capable of communicating with the first mobile communications device over a first wireless communications link and with the second mobile communications device over a second wireless communications link, the memory storing a first user profile including information associated with a user of the first mobile communications device and a second user profile including information associated with a user of the second mobile communications device, wherein the central unit receives the user sending status from the second mobile communications device and the information defining the locations of the first and the second mobile communications devices and wherein the processor receives the first and the second user profiles to match information of the users and, if there is a match and depending upon the user sending status, effects the transmission to the first mobile communications device of locating information based upon the information defining the locations of the first and the second mobile communications devices"**

The record evidence shows that Degnbol discloses all the elements of this claim limitation. *See, e.g.*, RX-0462C (DWS Heppe) at Q/A 43-55. The only item in this limitation that the parties dispute Degnbol discloses is "locating information" that is "based upon the information defining the locations of the first and second mobile communications devices." *See* Compl. Br. at 537; Resps. Br. at 215-18.

The evidence shows clearly and convincingly that Degnbol discloses "locating information based upon the information defining the locations of the first and the second mobile communications devices." *See* RX-0462C (Heppe DWS) Q/A 51. Specifically, Degnbol discloses transmitting proximity-based alerts and a variable signal, such as a vibration or light signal, based on the relative distance between the mobile users. *See, e.g.*, RX-0093 (Degnbol) at col. 5, lns. 22-24 ("In an optional implementation, closer proximity decreases the intervals between alert signals (i.e. light or sound emission), resulting in an escalation of signal frequency

as users approach each other."); col. 11, lns. 10-11; col. 20, lns. 1-2; *see also* RX-0462C (Heppe DWS) Q/A 51; Heppe Tr. 796-798. As Dr. Heppe testified, one of ordinary skill in the art at the time of the alleged invention would understand that a user can find an object or location, or arrive at a location, if instructed that "you are getting hotter" or "you are getting colder" as the user moves about. RX-0462C (Heppe DWS) Q/A 51. Dr. Heppe further testified that one of ordinary skill in the art would also understand that the variable proximity alert is "derived from the information defining the locations of both mobile communications devices" because the frequency and/or intensity of the variable signal is derived from both mobile devices' locations, becoming more frequent or intense as the users of the mobile devices approach each other, and less frequent or intense as they move farther apart. *Id.* Thus, Degnbol discloses the claimed "locating information" under all proposed constructions of the term. *Id.*

The Degnbol disclosure corresponds to an embodiment in the '593 patent that describes an "object finder or object-carrier tracking." JX-0011 ('593 patent) at col. 12, lns. 14-31. Specifically, the '593 patent teaches that when "goods are stolen and the currency becomes separated from the carrier, a warning indicator may be forwarded by the central server 25 when, for example, the physical distance between the goods and the carrier becomes greater than a maximum set threshold." *Id.* at col. 12, lns. 21-25. This further demonstrates that Degnbol teaches the "locating information" limitation. *See* RX-0462C (Heppe DWS) Q/A 53 (comparing similar embodiments in Degnbol and the '593 patent).

Degnbol also discloses the "locating information" limitation under BHM and Mr. Zatkovich's proposed construction of the term. For example, Degnbol discloses the delivery of "information about the distance between user 'A' and user 'B,' [with] graphics, such as an image or an icon, a map or diagram with a pointer showing the location of the user." RX-0093

(Degnbol) at col. 16, lns. 16-20. When this information is sent as a result of the proximity test disclosed in Degnbol, this information satisfies the limitation of being "derived . . . from both locations," and would allow a user to "arrive at a location" or "contact or find another device or location," as required by BHM's proposed construction. RX-0462C (Heppe DWS) Q/A 53; RX-0093 (Degnbol) at col. 11, lns. 10-11; col. 13, lns. 4-15; col. 20, lns. 1-2; Heppe Tr. 796-798. This disclosure in Degnbol also tracks the disclosure in the '593 patent's "preferred embodiment." *See* JX-0011 ('593 patent) col. 9, lns. 3-14 (disclosing transmission of "locating information . . . indicating that a 'matching' and 'available' mobile communications device is in proximate relation to another. Such locating information may include either graphic or textual information and may be in any known format, *e.g.* a graphical map, textual directions, a video of the actual route to be traveled etc."). Thus, Degnbol discloses the "locating information" limitation under all proposed constructions.

Therefore, it is determined that Respondents have shown by clear and convincing evidence that asserted claim 7 of the '593 patent is invalid as anticipated by Degnbol.

b. Claim 18

The evidence adduced by Respondents demonstrates, clearly and convincingly, that Degnbol discloses all limitations of claim 18 of the '593 patent.

i. "The system according to any of claims 1, 4 or 7"

As set forth above, Degnbol satisfies all limitations of claim 7 of the '593 patent.

ii. "wherein the central unit transmits additional information to at least one of the first and second mobile communications devices with the locating information"

Degnbol discloses the additional limitations of dependent claim 18, "wherein the central unit transmits additional information to at least one of the first and second mobile

communications devices with the locating information." *See* RX-0462C (Heppe DWS) Q/A 67. For example, Degnbol describes sending a notification that "[a] Manchester United Football fan is in the proximity" or that "the generated message may comprise information relating to the subject of interest selected by the associated user." *Id.*; RX-0093 (Degnbol) at col. 5, lns. 1-5; col. 20, lns. 18-21. This personal information and information relating to a subject of interest are both examples of additional information sent with the locating information. RX-0462C (Heppe DWS) Q/A 67. BHM does not dispute that Degnbol discloses this additional limitation of claim 18. *See* Compl. Br. at 536-37; CX-1400C (Zatkovich RWS) Q/A 155.

Therefore, it is determined that Respondents have shown by clear and convincing evidence that asserted claim 18 of the '593 patent is invalid as anticipated by Degnbol.

3. Anticipation – Fraccaroli

The record evidence shows, clearly and convincingly, that U.S. Patent No. 6,549,768 ("Fraccaroli") discloses all elements of the asserted claims of the '593 patent, under all proposed constructions of the claim terms. *See, e.g.*, RX-0462C (Heppe DWS) Q/A 122-156. Fraccaroli is titled "Mobile Communications Matching System," and was filed on August 24, 1999 by Federico Fraccaroli. RX-0042 (Fraccaroli). Fraccaroli is therefore prior art to the '593 patent under at least 35 U.S.C. § 102(e). *See id.* Furthermore, Fraccaroli was not cited or considered by the examiner during prosecution of the '593 patent. *See* JX-0012 ('593 file history).

As illustrated in Figure 1, Fraccaroli discloses a location-dependent system for matching users of mobile communications devices. RX-0462C (Heppe DWS) Q/A 125; RX-0042 (Fraccaroli) at Fig. 1. Figure 1 and the corresponding text of Fraccaroli disclose a system that includes a plurality of mobile stations and a server that stores "matching profiles" corresponding to the plurality of mobile stations. RX-0462C (Heppe DWS) Q/A 125; RX-0042 (Fraccaroli) at

col. 5, lns. 26-36; Fig. 1. The server includes a "matching algorithm" that can be used to match the matching profiles when mobile stations are located in the same area. RX-0462C (Heppe DWS) Q/A 125; RX-0042 (Fraccaroli) at col. 5, lns. 37-47. When there is a match, the users of the two mobile stations are advised of each other. RX-0462C (Heppe DWS) Q/A 125; RX-0042 (Fraccaroli) at col. 10, lns. 40-67. The claimed invention can be applied, for example, to a dating service or to advise friends that are in proximate relation to each other. RX-0462C (Heppe DWS) Q/A 125; RX-0042 (Fraccaroli) at col. 8, ln. 57 – col. 9, ln. 5.

a. Claim 7

i. "A system for matching users of mobile communications devices comprising"

Fraccaroli discloses "a system for matching users of mobile communications devices." RX-0042 (Fraccaroli) at Abstract; col. 1, lns. 10-13; col. 2, lns. 16-21; col. 5, lns. 26-36; Fig. 1; *see* RX-0462C (Heppe DWS) Q/A 126.

ii. "a first mobile communications device for transmitting information defining a location of the first mobile communications device"

This claim limitation requires a first mobile communications device for transmitting information defining a location. Fraccaroli discloses this communications device in Figure 1, and further discusses this communications device in the specification. RX-0042 (Fraccaroli) at col. 2, lns. 16-21; col. 2, lns. 46-50; col. 3, lns. 46-48; col. 3, lns. 51-55; col. 6, lns. 46-54; col. 6, lns. 60-65; col. 7, lns. 4-8; *see* RX-0462C (Heppe DWS) Q/A 126.

iii. "a second mobile communications device for transmitting information defining a location of the second mobile communications device and a user sending status"

This claim limitation requires a second mobile communications device for transmitting information defining a location. Fraccaroli discloses this communications device in Figure 1, and further discusses this communications device in the specification. RX-0042 (Fraccaroli) at col. 2, lns. 16-21; col. 2, lns. 46-50; col. 3, lns. 46-48; col. 3, lns. 51-55; col. 6, lns. 46-54; col. 6, lns. 60-65; col. 7, lns. 4-8; *see* RX-0462C (Heppe DWS) Q/A 126.

The parties dispute whether Fraccaroli discloses a "user sending status," but the record evidence shows that it does so. *See* Compl. Br. at 539-40; Resps. Br. at 221-23.

As Dr. Heppe testified, Fraccaroli's disclosure of a user's ability to restrict access to location information and/or contact information using an input process on a handset teaches "a user sending status" under all proposed constructions. RX-0462C (Heppe DWS) Q/A 128-30. Fraccaroli states, "[t]he mobile station user shall preferably be able to restrict access to the location information (either permanently or on a per call basis)." RX-0042 (Fraccaroli) at col. 7, lns. 38-40. Thus, Fraccaroli discloses that the user has the ability to disable the sending of location information from the mobile station to the central unit. Dr. Heppe testified that a person of ordinary skill in the art would understand that a user's ability to restrict the sending of location information discloses "a user sending status" under all proposed constructions. RX-0462C (Heppe DWS) Q/A 128.

Dr. Heppe also testified that Fraccaroli's disclosure of a user's ability to control when matching is permitted through an input process on a handset discloses the claimed "user sending status" under all proposed constructions. RX-0462C (Heppe DWS) Q/A 128. In particular,

Fraccaroli teaches that a "user has the option to enable or disable matching by a simple input process using the hand set." RX-0042 (Fraccaroli) at col. 10, lns. 5-8. "Matching parameters 204 allows the user to specify the constraints for stating when matching should be attempted . . . . These parameters typically would specify . . . the time at which matching should be attempted (for example, prohibiting matches between 9 a.m. and 5 p.m.)." *Id.* at col. 9, lns. 40-49; *see also id.* at col. 10, lns. 11-15; col. 10, lns. 56-61. According to Fraccaroli, "matching parameters" can be selected by a user via a secure internet page accessible from the user's mobile station or a personal computer. *Id.* at col. 8, lns. 48-56. These disclosures in Fraccaroli track the teaching of the '593 patent and named inventor Charles Drutman's understanding of the user sending status limitation. *See, e.g.*, JX-0062C (C. Drutman Dep.) at 151; JX-0011 ('593 patent) at col. 7, lns. 49-52. Thus, as Dr. Heppe testified, a person of ordinary skill in the art would understand these teachings in Fraccaroli to disclose "a user sending status" under all proposed constructions. RX-0462C (Heppe DWS) Q/A 128.

Mr. Zatkovich and BHM contend that Fraccaroli does not disclose "a user sending status" because Mr. Zatkovich interprets this limitation as requiring that the mobile device be prohibited from sending information defining a location to the central unit if the "user sending status" is disabled. *See* Compl. Br. at 539-40; CX-1400C (Zatkovich RWS) Q/A 128-29. However, for the reasons explained above, this interpretation of "a user sending status" is inconsistent with the specification of the '593 patent. RX-0462C (Heppe DWS) Q/A 129. Nevertheless, even under Mr. Zatkovich's interpretation of this term, Fraccaroli discloses that "[t]he mobile station user shall preferably be able to restrict access to the location information," thus satisfying the claim limitation. *See* RX-0042 (Fraccaroli) at col. 7, lns. 38-40. Furthermore, as Dr. Heppe testified, Fraccaroli's description of mobile station registration also discloses "a user sending status" under

Mr. Zatkovich's interpretation because registration is the process by which the cell location and power-on state of mobile stations is made known to the network. RX-0462C (Heppe DWS) Q/A 130; *see also* RX-0042 (Fraccaroli) at col. 3, ln. 64 – col. 4, lns. 63.

iv. "a central unit having a processor coupled to a memory, the central unit capable of communicating with the first mobile communications device over a first wireless communications link and with the second mobile communications device over a second wireless communications link, the memory storing a first user profile including information associated with a user of the first mobile communications device and a second user profile including information associated with a user of the second mobile communications device, wherein the central unit receives the user sending status from the second mobile communications device and the information defining the locations of the first and the second mobile communications devices and wherein the processor receives the first and the second user profiles to match information of the users and, if there is a match and depending upon the user sending status, effects the transmission to the first mobile communications device of locating information based upon the information defining the locations of the first and the second mobile communications devices"

The record evidence shows that Fraccaroli discloses all the elements of this claim limitation. *See, e.g.*, RX-0462C (Heppe DWS) Q/A 122-156. The only element in this limitation that the parties dispute Fraccaroli discloses is "locating information" that is "based upon the information defining the locations of the first and second mobile communications devices." *See* Compl. Br. at 540; Resps. Br. at 223-25.

However, the evidence shows clearly and convincingly that Fraccaroli discloses "locating information based upon the information defining the locations of the first and the second mobile communications devices." *See* RX-0462C (Heppe DWS) Q/A 131. Specifically, Fraccaroli discloses transmitting a "message signal" to a mobile station that, in a preferred embodiment, "is

a prompt instructing the user of the mobile station of the match and prompting them to initiate a phone call with the mobile station with which they have been matched." RX-0042 (Fraccaroli) at col. 10, lns. 51-56. Fraccaroli further discloses that the "prompt could also include . . . information in the profile of the user of the other mobile station." *Id.* at col. 10, lns. 56-63. Inasmuch as "the location information . . . for each mobile station [is] . . . stored in the data profile for the corresponding USER ID," the "prompt" may also include location information. *See id.* at col. 7, lns. 4-8. Mr. Zatkovich testified that Fraccaroli discloses that any information stored in the user profile, including the location information disclosed at column 7, lines 4-8, could be sent as the prompt resulting from a match. Zatkovich Tr. 1649-1650. Fraccaroli therefore discloses sending a phone number or location information after a match, and thus discloses "locating information." RX-0462C (Heppe DWS) Q/A 131.

Despite Fraccaroli's disclosure that the "prompt" includes "the phone numbers of the persons being matched," Mr. Zatkovich and BHM contend that the "message signal" described in Fraccaroli does not include a phone number. *See* Compl. Br. at 540; CX-1400C (Zatkovich RWS) Q/A 131. Although Fraccaroli does describe one embodiment that provides anonymity, Fraccaroli also describes other embodiments that do not do so. RX-0462C (Heppe DWS) Q/A 131. Furthermore, as Dr. Heppe testified, a person of ordinary skill in the art would understand that prompts to initiate a call and/or prompts that include a user's location information are not only "information usable to arrive at a location," which corresponds to BHM and OUII's proposed construction, but are also "information that enables a user to contact or find another device or location," which corresponds to Respondents' proposed construction. RX-0462C (Heppe DWS) Q/A 131. Named inventor Mr. Drutman also testified that a phone number can be used to "contact or find" another user. *See* JX-0062C (C. Drutman Dep.) at 101-102, 103-104.

Fraccaroli also discloses that the claimed locating information is "based upon the information defining the locations of the first and the second mobile communications devices," which the parties agree should be construed to mean "derived from the information defining the locations of both mobile communications devices." RX-0462C (Heppe DWS) Q/A 134. Fraccaroli discloses a system that provides a method of initiating contact between persons utilizing wireless communications networks "on the basis of their physical location." RX-0042 (Fraccaroli) at col. 2, lns. 46-49. Fraccaroli explains that a "message signal" is sent to a mobile station only if there is a match, and only if the mobile stations are located in the same area. For example, claim 1 of Fraccaroli recites "comparing the profile of the two persons for similarities if the two persons are in the same location" and "in the event of a similarity, sending a signal message to each one of the two persons." *Id.* at col. 11, lns. 47-50; col. 10, lns. 63-67; col. 12, lns. 30-33. As another example, dependent claim 13 of Fraccaroli, which depends from claim 1, is directed to a method that matches mobile stations only if they are located in a circular area centered at the location of one of the mobile stations. As Dr. Heppe testified, a "message signal" is sent only if the two mobile stations are within a certain proximity of each other, which indicates that the locating information is "based upon" or "derived from" the information defining the locations of the two devices. RX-0462C (Heppe DWS) Q/A 131, 134.

Therefore, it is determined that Respondents have shown by clear and convincing evidence that asserted claim 7 of the '593 patent is invalid as anticipated by Fraccaroli.

b. Claim 18

i. "The system according to any of claims 1, 4 or 7"

As set forth above, Fraccaroli satisfies all limitations of claim 7 of the '593 patent.

ii. "wherein the central unit transmits additional information to at least one of the first and second mobile communications devices with the locating information"

Fraccaroli discloses the additional limitations of dependent claim 18, "wherein the central unit transmits additional information to at least one of the first and second mobile communications devices with the locating information." *See* RX-0462C (Heppe DWS) Q/A 144. For example, Fraccaroli discloses that the base station sends "message signals" to mobile stations that include a "prompt." RX-0042 (Fraccaroli) at col. 10, lns. 51-56. The "prompt" may "include . . . information in the profile of the user of the other mobile station." *Id.* at col. 10, lns. 61-63. Such profiles may include: "characteristics of the service subscriber such as business interests, personal interests, identity information of people whose proximity he wants to be aware of and put in contact with if close enough, etc." *Id.* at col. 8, lns. 33-44. Fraccaroli's disclosure of transmitting profile information, such as personal interests, discloses the additional limitation of claim 18. *See* RX-0462C (Heppe DWS) Q/A 144.

Therefore, it is determined that Respondents have shown by clear and convincing evidence that asserted claim 18 of the '593 patent is invalid as anticipated by Fraccaroli.

4. Anticipation – Granstam

U.S. Patent No. 6,587,691 ("Granstam") is titled "Method and Arrangement Relating to Mobile Telephone Communications Network" and discloses a "buddy list" system. RX-0044 (Granstam). Granstam was filed on February 25, 2000, and is therefore prior art to the '593 patent under at least 35 U.S.C. § 102(e). *See id.* Granstam was not cited or considered by the examiner during prosecution of the '593 patent. *See* JX-0012 ('593 file history).

As shown in Figure 3 of Granstam, a user of the "buddy list" system can define a list of "buddies" the user is interested in monitoring on a mobile device. RX-0044 (Granstam) at Fig. 3; RX-0462C (Heppe DWS) Q/A 88. Figure 5 illustrates typical data that a user might receive on the mobile device concerning the listed buddies. RX-0462C (Heppe DWS) Q/A 88; RX-0044 (Granstam) at col. 10, lns. 7-31. As shown, each buddy has a corresponding user status, such as "idle," "busy," "DND" (Do Not Disturb), and "offline." RX-0462C (Heppe DWS) Q/A 88. In addition, locating information is shown for certain buddies, such as Docklands, Liverpool, Manchester, and Sweden. The specificity of the locating information, such as a city versus a country or a more precise position, is dictated by the proximity of the user of the mobile device to each buddy. RX-0462C (Heppe DWS) Q/A 88; RX-0044 (Granstam) at col. 8, lns. 52-63. Therefore, the locating information is based upon the locations of both the user and the buddy/buddies. RX-0462C (Heppe DWS) Q/A 88.

Figure 2 of Granstam shows the architecture of the buddy-list system. RX-0462C (Heppe DWS) Q/A 88. For example, Granstam discloses a "controlling arrangement (CA) 27," which is a processor, and an "Information Database (IDB) 16," which is a memory. RX-0462C (Heppe DWS) Q/A 88; RX-0044 (Granstam) at col. 5, lns. 23-25; col. 7, lns. 8-20. Also, referring to Figure 2, Granstam states that the "Visitor Location Register (VLR)" is generally implemented together with the "Mobile Switching Center (MSC)." RX-0462C (Heppe DWS) Q/A 88; RX-0044 (Granstam) at col. 5, lns. 23-25; col. 7, lns. 8-20; col. 6, ln. 66 – col. 7, ln. 2. The VLR is a database of currently-active mobile subscribers who are receiving service from the local MSC. RX-0462C (Heppe DWS) Q/A 88; RX-0044 (Granstam) at col. 5, lns. 23-25; col. 7, lns. 8-20; col. 6, lns. 63-66. Granstam further discloses that the IDB 16 (memory) can be

implemented as part of the VLR, and that the CA 27 (processor) can be integrated in the MSC. RX-0044 (Granstam) at col. 9, lns. 4-6.

a. Claim 7

i. "A system for matching users of mobile communications devices comprising"

Granstam discloses "a system for matching users of mobile communications devices." RX-0044 (Granstam) at col. 1, lns. 13-16; col. 2, ln. 64 – col. 3, ln. 10; col. 8, lns. 45-52; *see* RX-0462C (Heppe DWS) Q/A 89-100.

ii. "a first mobile communications device for transmitting information defining a location of the first mobile communications device"

This claim limitation requires a first mobile communications device for transmitting information defining a location. Granstam discloses this communications device in Figure 2, and further discusses this communications device in the specification. RX-0044 (Granstam) at col. 1, lns. 11-13; col. 2, ln. 64 – col. 3, ln. 5; col. 6, lns. 2-3; col. 6, lns. 56-58; col. 7, lns. 41-43; col. 7, lns. 50-61; col. 9, lns. 11-15; *see* RX-0462C (Heppe DWS) Q/A 89.

iii. "a second mobile communications device for transmitting information defining a location of the second mobile communications device and a user sending status"

This claim limitation requires a second mobile communications device for transmitting information defining a location. Granstam discloses this communications device in Figure 2, and further discusses this communications device in the specification. RX-0044 (Granstam) at col. 1, lns. 11-13; col. 2, ln. 64 – col. 3, ln. 5; col. 6, lns. 2-3; col. 6, lns. 56-58; col. 7, lns. 41-43; col. 7, lns. 50-61; col. 9, lns. 11-15; *see* RX-0462C (Heppe DWS) Q/A 89.

The parties dispute whether Fraccaroli discloses a "user sending status," but the record evidence shows that it discloses "a user sending status" under all proposed constructions of the term. *See* Compl. Br. at 537-38; Resps. Br. at 228-30; RX-0462C (Heppe DWS) Q/A 91-93. For example, Granstam discloses that the "buddy-structure 30 has public data 31, *e.g.*, available for all subscribers," and that "Public Data may include Nick Names, MSISDN, Icons (Sound/Text/Picture), Location, Location Status, Phone Status, Email Address, ICQ No., greetings, personal data such as name, work, education, references, sex, interest, age, length, weight, hair/eye colour, address, work details, home page, community, user-defined-items, for example part of visiting card, etc." RX-0044 (Granstam) at col. 10, lns. 7-18. Granstam also discloses that users have the ability to disable or alter portions of their public data. RX-0044 (Granstam) at col. 9, lns.39-44; col. 10, lns. 25-27. Dr. Heppe testified that a person of ordinary skill in the art would understand that a user's ability to control whether a mobile station can send data, such as its "Location," to other mobile stations by disabling or altering portions of public data constitutes "a user sending status" under all proposed constructions. *See* RX-0462C (Heppe DWS) Q/A 91.

BHM and Mr. Zatkovich contend that Granstam's disclosure of disabling or altering portions of public data does not constitute "a user sending status" because disabling or altering portions of public data configures a database distant from the user or device, but does not prohibit the device itself from sending data. *See* Compl. Br. at 538; CX-1400C (Zatkovich RWS) Q/A 119. Nevertheless, even under Mr. Zatkovich's construction of "user sending status," Granstam's description of IMSI [mobile device] "attach" and "detach" discloses "a user sending status." *See, e.g.*, RX-0044 (Granstam) at col. 8, lns. 10-15; RX-0462C (Heppe DWS) Q/A 93. IMSI "attach" is a procedure that connects a mobile device to a network when the

device is powered on, and IMSI "detach" disconnects a mobile device from a network when the device is powered off. *See, e.g.*, RX-0044 (Granstam) at col. 8, lns. 10-15; RX-0462C (Heppe DWS) Q/A 93. It was well known in the art that IMSI "attach" and "detach" must be transmitted from the mobile device. *See, e.g.*, RX-0044 (Granstam) at col. 8, lns. 10-15; RX-0462C (Heppe DWS) Q/A 93. Therefore, these procedures represent a "sending status" as claimed in the '593 patent. *See* RX-0462C (Heppe DWS) Q/A 93. Similarly, Granstam's disclosure of registration, the process by which the cell location of mobile stations is made known to the network, also discloses "a user sending status" under Mr. Zatkovich's interpretation of the claim term. RX-0044 (Granstam) at col. 6, lns. 46-55; RX-0462C (Heppe DWS) Q/A 93.

iv. "a central unit having a processor coupled to a memory, the central unit capable of communicating with the first mobile communications device over a first wireless communications link and with the second mobile communications device over a second wireless communications link, the memory storing a first user profile including information associated with a user of the first mobile communications device and a second user profile including information associated with a user of the second mobile communications device, wherein the central unit receives the user sending status from the second mobile communications device and the information defining the locations of the first and the second mobile communications devices and wherein the processor receives the first and the second user profiles to match information of the users and, if there is a match and depending upon the user sending status, effects the transmission to the first mobile communications device of locating information based upon the information defining the locations of the first and the second mobile communications devices"

The record evidence shows that Granstam discloses all the elements of this claim limitation. *See, e.g.*, RX-0462C (Heppe DWS) Q/A 89-100. The only element in this limitation that the parties dispute Granstam discloses is "locating information" that is "based upon the

information defining the locations of the first and second mobile communications devices." *See* Compl. Br. at 538-39; Resps. Br. at 230-32. However, the evidence shows clearly and convincingly that Granstam discloses "locating information," which was construed above to mean "information that enables a user to contact or find another device or location." *See* RX-0462C (Heppe DWS) Q/A 96. The evidence also shows that Granstam discloses "locating information" as construed by and BHM and the Staff to mean "information usable to arrive at a location." *Id.*

Specifically, Granstam discloses a first mobile device, referred to as a "seeking mobile station," that receives and displays "position information" corresponding to a second mobile device, referred to as a "sought mobile station." RX-0044 (Granstam) at col. 2, ln. 64 – col. 3, ln. 3. According to Granstam, "the position information includes the absolute location of a sought mobile station in relation to a seeking mobile station." *Id.* at col. 3, lns. 3-5. Granstam further discloses:

> The processing may be adaptive, i.e. the data is processed and categorized in levels, e.g. divided into "COUNTRY", "CITY", "PLACE" and so on. If [subscriber] A is in Sweden, for example, and [subscriber] B in France, the location is given as "FRANCE", if [subscriber] A is in France, then location is indicated, e.g. by "PARIS", and if [subscriber] A is in Paris the location may be indicated by a street name, e.g. "Place de la Concorde" or the like.

Id. at col. 8, lns. 52-59.

Granstam also discloses that "[a]lthough the 'location' is the preferred representation form, it is clear that a more precise position of the sought subscriber can be provided." RX-0044 (Granstam) at col. 8, lns. 59-61. For instance, "[i]t is also possible to provide graphical presentations through maps (Map on Web), WAP data, browser suited data, etc." *Id.* at col. 8,

lns. 63-65. Figures 5 and 6 of Granstam illustrate a mobile device displaying locating information.

The locating information disclosed in Granstam is "based upon the information defining the locations of the first and the second mobile communications devices," a term that the parties agree should be construed to mean "derived from the information defining the locations of both mobile communications devices." *See* RX-0462C (Heppe DWS) Q/A 97. For example, Granstam discloses providing position information to a first mobile device for locating a second mobile device, wherein the precision of the position information is based upon the separation distance between the first and second mobile devices. *Id.*

BHM and Mr. Zatkovich contend that "[t]his disclosure does not meet 'locating information' under any party's construction because merely providing a country/city/place insufficient [sic] to arrive at a location or 'contact or find' another device." *See* Compl. Br. at 538-39; CX-1400C (Zatkovich RWS) Q/A 122. However, Mr. Zatkovich testified that an address would be locating information, and Granstam teaches "that a more precise position of the sought subscriber can be provided." Zatkovich Tr. 1607-1608; RX-0044 (Granstam) at col. 8, lns. 59-61. Mr. Zatkovich also testified that a map with one user's location "relative to" another's location is locating information, while Granstam teaches that the "location of a sought mobile station [is displayed] in relation to a seeking mobile station." Zatkovich Tr. 1608; RX-0044 (Granstam) at col. 3, lns. 3-5.

Therefore, it is determined that Respondents have shown by clear and convincing evidence that asserted claim 7 of the '593 patent is invalid as anticipated by Granstam.

b. Claim 18

i. "The system according to any of claims 1, 4 or 7"

As set forth above, Granstam satisfies all limitations of claim 7 of the '593 patent.

ii. "wherein the central unit transmits additional information to at least one of the first and second mobile communications devices with the locating information"

Granstam discloses the additional limitations of dependent claim 18, "wherein the central unit transmits additional information to at least one of the first and second mobile communications devices with the locating information." *See* RX-0462C (Heppe DWS) Q/A 109. For example, Granstam discloses transmitting "[p]ublic data [that] may include Nick Names, MSISDN, Icons (Sound/Text/Picture), Location, Location Status, Phone Status, Email Address, ICQ No., greetings, personal data such as name, work, education, references, sex, interest, age, length, weight, hair/eye colour, address, work details, home page, community, user-defined-items, for example part of visiting card, etc." *Id.;* RX-0044 (Granstam) at col. 10, lns. 9-24. This public data includes examples of additional information that is transmitted with the locating information. RX-0462C (Heppe DWS) Q/A 109.

Therefore, it is determined that Respondents have shown by clear and convincing evidence that asserted claim 18 of the '593 patent is invalid as anticipated by Granstam.

5. Obviousness

Respondents argue that, to the extent it is determined that Degnbol, Fraccaroli, or Granstam do not anticipate the asserted claims of the '593 patent, these references render obvious the asserted claims, either alone or in combination with other references. *See* Resps. Br. at 233-39. Although it was determined above that Degnbol, Fraccaroli, and Granstam each

anticipate asserted claims 7 and 18 of the '593 patent, the record evidence regarding obviousness of these claims is summarized below for completeness.

a. Claim 7 – Fraccaroli Alone or in Combination with Degnbol and/or Granstam (Claim 7)

Respondents adduced evidence to show that, in the event it is found that Fraccaroli does not disclose the limitation requiring "if there is a match and depending upon the user sending status, effects the transmission to the first mobile communications device of locating information based upon the information defining the locations of the first and the second mobile communications devices," it would have been obvious to a person of ordinary skill in the art at the time of the alleged invention to combine the teachings of Fraccaroli with the teachings of Degnbol and/or Granstam to disclose this limitation. RX-0462C (Heppe DWS) Q/A 132. As discussed above, Degnbol (RX-0093) and Granstam (RX-0044) each disclose this limitation under all proposed constructions of the term.

Dr. Heppe testified that a person of ordinary skill in the art at the time of the alleged invention would have been motivated to combine the teachings of Fraccaroli with the teachings of Degnbol and/or Granstam because each of these references teaches location sharing, location tracking, and location-based systems that operate on the same or similar wireless communications networks. RX-0462C (Heppe DWS) Q/A 133. Thus, one of ordinary skill in the art at the time of the alleged invention would have found it obvious to combine their teachings with respect to providing location-based information. *Id.*

Mr. Zatkovich disagrees with Dr. Heppe's opinion. *See* CX-1400C (Zatkovich RWS) Q/A 132 (stating that "neither Degnbol or Granstam discloses this limitation" and that it would not have been obvious to combine because "Fraccaroli teaches away from providing personal

information in the event of a match"). Although Fraccaroli does describe one embodiment that provides anonymity to the user, there are other embodiments that do not do so. *See* RX-0462C (Heppe DWS) Q/A 131. For example, Fraccaroli discloses the "prompt could also include . . . information in the profile of the user of the other mobile station." RX-0042 (Fraccaroli) at col. 10, lns. 56-63. Fraccaroli further discloses that the "profile contains personal information such as age, race, marital status, gender, sexual orientation, religion, height, weight, color of eyes and/or hair, smoking habits, education, interests, etc." *Id.* at col. 1, lns. 30-33). Therefore, Fraccaroli does teach providing personal information in the event of a match.

b. Claim 7 – Granstam Alone or in Combination with Degnbol

Respondents adduced evidence to show that, in the event it is found that Granstam does not disclose "a user sending status," it would have been obvious to a person of ordinary skill in the art at the time of the alleged invention to combine the teachings of Granstam with the teachings of Degnbol to disclose this limitation. *See* RX-0462C (Heppe DWS) Q/A 94. As discussed above, Degnbol (RX-0093) discloses this limitation under all proposed constructions.

Dr. Heppe testified that both Granstam and Degnbol use cellular telephony wireless technology and both discuss wireless locating techniques, such as GPS. RX-0462C (Heppe DWS) Q/A 95. Dr. Heppe further testified that Granstam and Degnbol also contemplate similar methods for locating users of mobile devices, and for transmitting data through a cellular network between users via a central unit. *See id.* Dr. Heppe testified that, like Granstam, Degnbol (RX-0093) describes at column 19, lines 7-12 using a central unit to compare profile data of nearby users to determine whether locating information should be transmitted to the users. RX-0462C (Heppe DWS) Q/A 95.

c. Claim 18 – Degnbol, Granstam, and/or Fraccaroli in Combination with Ludwig

Respondents adduced evidence to show that, in the event it were found that Degnbol, Granstam, or Fraccaroli did not disclose the claim 18 limitation "wherein the central unit transmits additional information to at least one of the first and second mobile communications devices with the locating information," it would have been obvious to one of ordinary skill in the art at the time of the alleged invention to combine the teachings of Degnbol, Granstam, or Fraccaroli with the Ludwig reference to render claim 18 obvious. *See* Resps. Br. at 236-39.

The Ludwig reference is PCT application PCT/EP1998/004343 (WO1999/004582 A1), and is titled "Location dependent www service in digital cellular communication networks." RX-0092 (Ludwig). Ludwig was filed on July 13, 1998, with a priority date of July 15, 1997, and was published internationally on January 28, 1999. *Id.* Both of these dates are earlier than BHM's earliest claimed priority date, and Ludwig is therefore prior art to the '593 patent under at least 35 U.S.C. § 102(a).

Respondents' expert Dr. Heppe testified that Ludwig discloses the additional limitation of claim 18 that provides "wherein the central unit transmits additional information to at least one of the first and second mobile communications devices with the locating information." *See* RX-0462C (Heppe DWS) Q/A 70-75. Ludwig teaches providing location-based information services, such as weather forecasts, and traffic reports. *See* RX-0462C (Heppe DWS) Q/A 73. For example, Ludwig discloses the use of mobile communications devices in communication with a remote server to obtain location-based services. RX-0462C (Heppe DWS) Q/A 73; RX-0092 (Ludwig) at col. 8, lns. 5-16. By connecting the server to the Internet, "location specific web sites may offer weather forecast or route traffic information depending on the

geographic location of the mobile station." *Id.* Thus, Ludwig teaches methods helpful for providing "route information or information of traffic jams." *Id.*; *see also* RX-0092 (Ludwig) at col. 21, lns. 12-25).

Dr. Heppe testified that it would have been obvious to a person of ordinary skill in the art at the time of the alleged '593 invention to combine the teachings of Degnbol with the teachings of Ludwig. RX-0462C (Heppe DWS) Q/A 74. Ludwig describes location monitoring as part of its teachings. *Id.* Thus, Ludwig and Degnbol both relate to location-based services, and Degnbol and Ludwig both employ similar mobile communications network technologies, such as VLR, HLR, MSC, and BSS, to implement such services. *Id.* In particular, both these references teach how to provide a mobile device user with location-dependent information. *Id.* Ludwig, for example, teaches providing location-based information services, such as weather forecasts and traffic reports. *Id.* Dr. Heppe testified that, given that much of this information would have been of interest to the mobile device users of Degnbol, it would have been obvious to a person having ordinary skill in the art to combine Degnbol with Ludwig. *Id.*

Dr. Heppe testified that, like Degnbol, Ludwig uses mobile communications devices in communication with a remote server to obtain location-based services. RX-0462C (Heppe DWS) Q/A 74. For example, Ludwig discloses "[t]he mobile device is adapted to request a location dependent WWW service from the WWW server on the basis of location specific data." *Id.* By connecting the server to the Internet, "location specific web sites may offer weather forecast or route traffic information depending on the geographic location of the mobile station." *Id.* Degnbol similarly teaches "generating a message when the distance between the first and the second unit is within a predetermined range," and that this message may contain position information of another user in the form of a map, graphics, image, etc. *Id.*; *see also* RX-0093

(Degnbol) at col. 4, lns. 8-9; col, 5, lns. 17-18. Thus, according to Dr. Heppe, the delivery of additional information, and the obtaining of information over the Internet, such as disclosed in Ludwig, were well known to those of skill in the art at the time of the alleged invention, and could have been added to Degnbol without undue experimentation and with predictable results. RX-0462C (Heppe DWS) Q/A 75. Dr. Heppe testified that it would have been obvious to combine the teachings of Degnbol with the teachings of Ludwig to provide additional information available from the Internet. *Id.* at Q/A 74.

Dr. Heppe further testified that it would have been obvious to a person of ordinary skill in the art at the time of the alleged '593 invention to combine the teachings of Fraccaroli with the teachings of Ludwig to meet the additional limitations of claim 18. *See* RX-0462C (Heppe DWS) Q/A 147. According to Dr. Heppe, both Fraccaroli and Ludwig describe location monitoring, both relate to location-based services and information, and both employ similar mobile communications network technologies. *Id.* at Q/A 147. Ludwig, for example, teaches providing location-based information services, such as weather forecasts and traffic reports. *Id.* Given that mobile device users would be interested in such information, Dr. Heppe testified that it would have been obvious to a person having ordinary skill in the art to combine Fraccaroli with Ludwig to provide routing, mapping, or other location-based information available from the Internet. *Id.* at Q/A 147.

Dr. Heppe also testified it would have been obvious to a person of ordinary skill in the art at the time of the alleged invention to combine the teachings of Granstam with the teachings of Ludwig for similar reasons. *See* RX-0462C (Heppe DWS) Q/A 112. According to Dr. Heppe, both Granstam and Ludwig describe location monitoring, both relate to location-based services and information, and both employ similar mobile communications network technologies. *Id.*

Dr. Heppe testified that it therefore would have been obvious to a person having ordinary skill in the art to combine the teachings of Granstam with the teachings of Ludwig to provide routing, mapping, or other location-based information available from the Internet. *Id.*

d. Secondary Considerations

With respect to secondary considerations of nonobviousness, BHM argues the following:

> BHM has achieved secondary indicia of nonobviousness, including commercial success due to its license with [ ]. Respondents as well have sold millions of mobile devices due to the claimed features which as stated herein are used on the order of "millions" of times per day. See CX-1400C.067-68 (Zatkovich RWS), at Q161.

Compl. Br. at 525.

BHM relies solely on the alleged commercial success achieved by devices manufactured by Respondents and BHM's licensee, [ ], as secondary evidence of non-obviousness. *See* Compl. Br. at 525. BHM's expert Mr. Zatkovich, however, has not identified a nexus between any alleged commercial success and the specific inventions claimed in the '593 patent. Not only has it not been shown that the [ ] products practice the '593 patent, but it has also not been shown that the commercial success of the [ ] products is attributable to their incorporation of the accused software functionalities. Absent such a showing, the evidence regarding commercial success deserves little weight. Further, to the extent that Mr. Zatkovich or BHM contends that [ ] licensed products have been successful due to the technology purportedly claimed in the '593 patent, Mr. Zatkovich again did not identify a nexus between any [ ] product that BHM contends has experienced success and the technology purportedly claimed in the '593 patent. *See id.*; CX-1400C (Zatkovich RWS) Q/A 161.

Accordingly, it is determined that the evidence of secondary considerations adduced by BHM would fail to overcome a finding that the asserted claims of the '593 patent are obvious.

6. Indefiniteness

Respondents contend that asserted claims 7 and 18 of the '593 patent are invalid for indefiniteness under 35 U.S.C. § 112. Resps. Br. at 240-44. Specifically, Respondents argue that each of the asserted claims "attempts to improperly cover a system and a method for using that system within a single claim." *Id.* at 240. It is argued that "it would be unclear [to a person of ordinary skill in the art] whether infringement occurs when one creates a system that is capable of performing the method, or whether infringement occurs only when a user actually uses the system in the manner claimed." *Id.* at 240-41 (citing RX-0462C (Heppe DWS) Q/A 18). It is further argued that "each of these claims is ambiguous to one of ordinary skill in the art and indefinite as a matter of law under section 112, paragraph 2." *Id.* at 241.

Respondents argue that, even though BHM was on notice of their indefiniteness claim, BHM did not brief this issue in its prehearing brief and thereby waived the issue. *See* Resps. Br. at 241 (citing Ground Rule 7.c.). Respondents therefore argue that "the ALJ should find the asserted claims indefinite under 35 U.S.C. 112(2) for improperly attempting to cover a system and a method for using that system within a single claim." *Id.*

Even though BHM may have waived its arguments regarding the validity of the asserted '592 claims over section 112, paragraph 2, a finding of indefiniteness nevertheless should not be made if the claims, "viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus, Inc. v. Biosig Instruments, Inc.*, __ U.S. __, No. 13-369, at 11 (June 2, 2014).

In support of its argument, Respondents offer the testimony of their expert Dr. Heppe:

Q18. Are the asserted claims system claims?

> A18. The preamble of each asserted claim sets forth the alleged invention as a system, but the remainder of the language is ambiguous as to whether alleged invention is a system or a method. For example, the "central unit" limitations of claims 1, 4, and 7 each contain elements that one of skill in the art would interpret as steps of a method. Therefore, one of ordinary skill in the art would not understand the scope of the claims. For example, it would be unclear whether infringement occurs when one creates a system that is capable of performing the method, or whether infringement occurs when a user actually uses the system in the manner claimed.

RX-0462C (Heppe DWS) Q/A 18.

Respondents did not provide additional evidence regarding whether or not a person of ordinary skill in the art would consider claim 7 of the '593 patent indefinite, and BHM did not offer testimony or other evidence in rebuttal to Respondents' allegations. *See* Resps. Br. at 241-44; Compl. Br. at 219-24. Inasmuch the analysis of whether a claim is indefinite under 35 U.S.C. § 112, ¶ 2 requires a determination of what a person of ordinary skill in the art would think upon reading the claim language, it is determined that Respondents have not prevailed in their indefiniteness allegations. The record evidence does not demonstrate, clearly and convincingly, that a person of ordinary skill in the art would consider claims 7 and 18 of the '593 patent indefinite.

VIII. Domestic Industry – Economic Prong

A. General Principles of Law

A violation of section 337(a)(1)(B), (C), (D), or (E) can be found "only if an industry in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned, exists or is in the process of being established." 19 U.S.C. § 1337(a)(2). Section 337(a) further provides:

> (3) For purposes of paragraph (2), an industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned—

> (A) significant investment in plant and equipment;
>
> (B) significant employment of labor or capital; or
>
> (C) substantial investment in its exploitation, including engineering, research and development, or licensing.

19 U.S.C. § 1337(a)(3).

These statutory requirements consist of an economic prong (which requires certain activities)[83] and a technical prong (which requires that these activities relate to the intellectual property being protected). *Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Comm'n Op. at 13 (May 16, 2008) ("*Stringed Musical Instruments*"). The burden is on the complainant to show by a preponderance of the evidence that the domestic industry requirement is satisfied. *Certain Multimedia Display and Navigation Devices and Systems, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-694, Comm'n Op. at 5 (July 22, 2011) ("*Navigation Devices*").

With respect to the economic prong, and whether or not section 337(a)(3)(A) or (B) is satisfied, the Commission has held that "whether a complainant has established that its investment and/or employment activities are significant with respect to the articles protected by the intellectual property right concerned is not evaluated according to any rigid mathematical

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[83] The Commission practice is usually to assess the facts relating to the economic prong at the time that the complaint was filed. *See Certain Coaxial Cable Connectors and Components Thereof and Products Containing Same*, Inv. No. 337-TA-560, Comm'n Op. at 39 n.17 (Apr. 14, 2010) ("We note that only activities that occurred before the filing of a complaint with the Commission are relevant to whether a domestic industry exists or is in the process of being established under sections 337(a)(2)-(3).") (citing *Bally/Midway Mfg. Co. v. U.S. Int'l Trade Comm'n*, 714 F.2d 1117, 1121 (Fed. Cir. 1983)). In some cases, however, the Commission will consider later developments in the alleged industry, such as "when a significant and unusual development occurred after the complaint has been filed." *See Certain Video Game Systems and Controllers*, Inv. No. 337-TA-743, Comm'n Op., at 5-6 (Jan. 20, 2012) ("[I]n appropriate situations based on the specific facts and circumstances of an investigation, the Commission may consider activities and investments beyond the filing of the complaint.").

formula." *Certain Printing and Imaging Devices and Components Thereof*, Inv. No. 337-TA-690, Comm'n Op. at 27 (Feb. 17, 2011) ("*Printing and Imaging Devices*") (citing *Certain Male Prophylactic Devices*, Inv. No. 337 TA-546, Comm'n Op. at 39 (Aug. 1, 2007)). Rather, the Commission examines "the facts in each investigation, the article of commerce, and the realities of the marketplace." *Id.* "The determination takes into account the nature of the investment and/or employment activities, 'the industry in question, and the complainant's relative size.'" *Id.* (citing *Stringed Musical Instruments* at 26).

With respect to section 337(a)(3)(C), whether an investment in domestic industry is "substantial" is a fact-dependent inquiry for which the complainant bears the burden of proof. *Stringed Musical Instruments* at 14. There is no minimum monetary expenditure that a complainant must demonstrate to qualify as a domestic industry under the "substantial investment" requirement of this section. *Id.* at 25. There is no need to define or quantify an industry in absolute mathematical terms. *Id.* at 26. Rather, "the requirement for showing the existence of a domestic industry will depend on the industry in question, and the complainant's relative size." *Id.* at 25-26.

B. Economic Prong Analysis

The record evidence demonstrates that BHM fails to satisfy the economic prong of the domestic industry requirement for several reasons. First, BHM has failed to link or allocate the alleged domestic investments of BHM's licensee [ ] to the products BHM identified in its Identification of Models of Domestic Industry Products submitted on August 30, 2013 ("DI Products"), or to the software applications on the DI Products.[84] Although the specific products

[84] Pursuant to Order No. 44, BHM may not rely on alleged domestic industry products that are absent from the August 30 Identification. BHM's motion to reconsider this Order was denied.

that BHM has sought to rely on to establish a domestic industry have changed several times throughout this investigation, the recited [ ] investments have remained the same because they are linked to broad product categories rather than to specific products. While a precise accounting is not required to satisfy the economic prong of the domestic industry requirement, BHM's recitation of the number of facilities and employees involved with product lines that include, but are not limited to the DI Products, does not form an adequate basis for a determination that a domestic industry exists. Second, BHM has failed to establish that the cited [ ] activities are of the sort deemed relevant to the economic prong analysis. Third, BHM's statement of [ ] investments includes investments made by [ ], which was not a licensed entity at the time of the investments. Inasmuch as BHM failed to apportion properly considered investments to the products BHM is permitted to rely on for domestic industry purposes, BHM cannot prove that there has been a significant or substantial domestic investment in articles protected by each Asserted Patent and, accordingly, has failed to satisfy the economic prong.

1. Allocation of [ ] Domestic Activities

To support its economic prong claims, BHM relies primarily on the testimony of [ ], a paralegal for [ ], a Senior Manager for [ ] (collectively, the "[ ] witnesses"), and of its CEO Hugh Svendsen. The testimony of [ ], and Mr. Svendsen did not, however, recite investments made by [ ] in specific models of [ ] products. Rather, the [ ] witnesses broadly provided investments for general product lines, including televisions,

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Accordingly, BHM may rely only on [ ] domestic investments in the DI Products in attempting to establish the existence of a domestic industry.

tablets, Blu-ray players/recorders, and mobile phones,[85] and Mr. Svendsen did not provide details regarding [ ] domestic investments. *See, e.g.*, CX-1069C ([ ] DWS) Q/A 4, 13; CX-1070C ([ ] DWS), Q/A 14, CX-0013C (Svendsen DWS). BHM has not linked or apportioned the investments provided by the [ ] witnesses to the DI Products that BHM is permitted to rely on pursuant to Order No. 44. Therefore, the evidence regarding [ ] investments does not support a finding that the economic prong is satisfied

a. Investments in Research and Development

The [ ] witnesses stated that both [ ] invest in facilities and labor allegedly relating to research and development of [ ] televisions, tablets, Blu-ray players/recorders, and mobile phones. *See, e.g.*, CX-1069C ([ ] DWS) Q/A 11. There is no testimony explaining what such "research and development" activities entailed. Moreover, neither BHM nor the [ ] witnesses broke down the cited investments as between the different product lines or allocated the cited investments to the DI Products.

[ ] provided the acreage and square footage of [ ] headquarters in [ ]. CX-1069C ([ ] DWS) Q/A 8. Similarly, [ ] stated that [ ] has facilities in [ ]. CX-1070 ([ ] DWS) Q/A 14. There is no evidence, however, of [ ] and [ ] financial investments in these facilities and no evidence linking or allocating any specific portion or percentage of the facilities to the DI Products. Additionally, the [ ] witnesses testified that all of the products they addressed in their testimony are manufactured abroad. [ ] Tr. 277; [ ] Tr. 292.

[85] While BHM identified home theater systems as practicing certain of the asserted patents, [ ], and Mr. Svendsen did not provide investment evidence or expenditure evidence relating to home theater systems.

[ ] also discussed [ ] employment of labor. CX-1069C ([ ] DWS) Q/A 12-13. Although [ ] recited the total number of people employed in the United States by [ ], for a majority of these employees there is no evidence of what their job duties entail or whether they perform any work related to the DI Products. [ ] did testify that approximately [ ] engineers work "among several [ ] business units which support various aspects of the technology incorporated in [ ] televisions, tablets, Blu-ray players/recorders, and mobile phones, which practice the patents at issue." CX-1069C ([ ] DWS) Q/A 13. Nevertheless, [ ] did not testify that each of these [ ] engineers actually perform work on the DI products or, if they do, what percentage of their time had been spent working on the DI Products. Moreover, [ ] does not elaborate on what products she believes "practice the patents at issue." There is no indication that she limited such products to the DI Products that BHM is permitted to rely on under Order No. 44, particularly in light of the fact that Order No. 44 issued on February 14, 2014, after [ ] provided her direct witness statement. Inasmuch as the [ ] witnesses did not provide testimony or evidence related to salaries, BHM cited to a third party website for salary information.[86] *See* CX-1069C ([ ] DWS); CX-1070C ([ ] DWS); CX-0013C (Svendsen DWS) Q/A 72-73. BHM did not establish that this information was reliable or verifiable or that it reflects the actual salaries paid to the [ ] engineers. Thus, BHM failed to provide reliable evidence of [ ] monetary investment in the [ ] engineers, or any investment in labor as it relates to the DI Products.

[ ] also stated that "[t]here are a number of business units that contain groups of employees supporting business related to televisions, tablets, Blu-ray players/recorders, and

[86] As indicated on the face of the evidence, the salaries listed on www.glassdoor.com are posted anonymously and there is no way to verify these salaries are indeed accurate. CX-0086 (website printout).

mobile phones." CX-1069C ([ ] DWS) Q/A 15. No details, however, were provided regarding the functions and duties carried out by these groups (except for the [ ] group), how these groups support the DI Products, the number of employees in these groups who work with the DI Products, or the general amount of time, or percentage of effort, the groups dedicate to the DI Products. It cannot be assumed absent reliable evidentiary support that these groups are fully dedicated to the DI Products. For example, the group "[ ]" performs functions related to the [ ] laptops and desktops, which are not alleged to practice the Asserted Patents.

The data regarding employment of labor by [ ] recited by the [ ] witnesses suffer from the same shortcomings. [ ] stated that approximately [ ] employees have "some responsibilities related to research and development for [ ] tablets ([ ]) and [ ] mobile phones." CX-1069C ([ ] DWS) Q/A 14. There is no evidence, however, of what these responsibilities are or what percentage of the [ ] employees' time is dedicated to the DI Products. Similarly, [ ] stated that [ ] "has had engineers working at its facilities in [ ] developing and supporting [ ] Mobile telephones and tablets for the United States market including, in particular, the [ ] product line." CX-1070C ([ ] DWS) Q/A 14. [ ] did not elaborate on what such development and support activities entail, nor did he identify how many engineers were involved in such activities as they relate to the DI Products or how much of the engineers' time is spent working with respect to these products. Moreover, neither [ ] nor [ ] limited their testimony to employment of labor related to the specific models of mobile phones and tablets that BHM is permitted to rely on for domestic industry purposes, which do not include all devices within the [ ] product line.

As evident from the discussion above, BHM provided no basis on which to determine [ ] actual investment in plants or employment of labor related to research and development of the DI Products, or whether such investment and employment are significant or substantial.

b. Investments in Warranty, Service, and Repair

The [ ] witnesses also testified as to investments made by [ ] in facilities and labor allegedly relating to warranty, service, and repair of [ ] televisions, tablets, Blu-ray players/recorders, and mobile phones. *See, e.g.*, CX-1069C ([ ] DWS) Q/A 11. For example, [ ] stated that [ ] "provides a broad array of technical services for the repair and refurbishment of, and after-market customer support for" products covered by the Asserted Patents. CX-1069C ([ ] DWS) Q/A 11. However, [ ] did not provide details regarding what these services are or how many people are responsible for providing them. Moreover, as with research and development, no attempt was made to link or apportion [ ] investments related to warranty, service, and repair to the DI Products.

[ ] stated that [ ], which has [ ] employees in the United States, is responsible for supporting the [ ]. CX-1069C ([ ] DWS) Q/A 16. According to [ ], employees of the [ ] "[a]mong other things . . . train members of the [ ] to repair televisions, tablets, Blu-ray players/recorders, and mobile phones."[87] CX-1069C ([ ] DWS) Q/A 17. [ ] further stated that there are [ ] full-time [ ] employees "who provide technical repair assistance to the [ ] concerning televisions, tablets, Blu-ray

[87] [ ] testimony regarding the [ ] does not establish the existence of a domestic industry. Neither BHM nor the [ ] witnesses provided testimony or evidence regarding the identity of these [ ], the functions they perform, the products they work on, or the investments they made in the DI Products.

players/recorders, and mobile phones."[88] *Id.* There is no evidence regarding [ ] monetary investments in these employees. Moreover, it is clear from [ ] testimony that these employees have responsibilities that are unrelated to the DI Products. Yet, neither BHM nor the [ ] witnesses allocated the employees' time between the DI Products and products not alleged to practice the Asserted Patents or products that BHM is precluded from relying upon by Order No. 44. [ ] investments in its [ ] therefore are not a reliable indicator of whether [ ] domestic investments in the DI Products are significant or substantial.

[ ] also testified regarding the [ ], where the service and repair of tablets, Blu-ray players/recorders, and mobile phones is administered. CX-1069C ([ ] DWS) Q/A 18. [ ] stated that there are [ ] people in the "[ ] group at the [ ] facility supporting the repair and refurbishment of" these products. *Id.* It is unclear whether these [ ] people overlap with the [ ] people who work in the [ ] group. Moreover, neither BHM nor the [ ] witnesses provided information regarding the salaries for these people or what percentage of their time, if any, is spent working on the DI Products. As to the [ ] facility itself, [ ] stated that the facility is 70,000 square feet. CX-1069C ([ ] DWS) Q/A 18. There was no allocation of any specific portion or percentage of the [ ] facility to the DI Products. While [ ] provided the number of repairs and/or refurbishments completed daily for tablets, Blu-ray players/records, and mobile phones, she did not provide testimony that would enable a determination of the percentage of repairs and refurbishments performed on the DI Products. *See, e.g.,* CX-1069C ([ ] DWS) Q/A 18.

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[88] These [ ] employees may be a subset of the [ ] employees referenced in the previous sentence, inasmuch as they are a part of the [ ].

[ ] also discussed [ ], which holds parts to be used to complete repairs and refurbishments of [ ] tablets, Blu-rays/recorders, and mobile phones. CX-1069C ([ ] DWS) Q/A 19. [ ] did not provide the size of the [ ] or otherwise state what portion of the [ ] facility is made up of the [ ]. Moreover, [ ] stated that some parts are purchased and used by [ ] third-party servicers. *Id.* To the extent that the [ ] is used to sell parts to third parties, it is not clear that these investments should qualify as investments in warranty, service and repair.

[ ] next testified regarding the [ ]. [ ] testified that [ ] employees of the [ ] are located in the United States, with [ ] individuals employed as part of the [ ]. CX-1069C ([ ] DWS) Q/A 19. There was no testimony or other evidence provided regarding the functions or duties carried out by the remaining [ ] employees. Even with respect to the [ ] employees, [ ] did not provide any details about the actual work carried out by the individuals or the percentage of their time that is dedicated to the DI Products. [ ] also discussed the [ ], and stated that the [ ] "assists with operation of finished goods warehouses as well as product return centers." CX-1069C ([ ] DWS) Q/A 20. [ ] did not elaborate on what "assist[ing] with operation of finished goods warehouses" entails or provide details regarding the percentage of employee time that is spent on the DI Products.

[ ] also addressed the [ ] and [ ]. CX-1069C ([ ] DWS) Q/A 21. In particular, [ ] testified as to the total number of employees in these organizations who handle telephone customer support. [ ] offers customer support for products not covered by the Asserted Patents, inasmuch as [

] testified that only roughly a quarter of the total "Q&As" within [ ] customer support knowledgebase relate to [ ] televisions, tablets, and Blu-ray player/recorders. CX-1069C ([ ] DWS) Q/A 21. There was no information provided indicating the percentage of calls fielded by the [ ] or [ ] Customer Call Center that relate to the DI Products, or to the product lines of which the DI Products are a part. Further, [ ] stated that service and repair related telephone calls from customers regarding certain [ ] tablets and mobile phones are managed by [ ] and handled "outside of the U.S." CX-1069C ([ ] DWS) Q/A 21. There is no indication of what management [ ] provides in the United States, the investments therein, or the employment of labor it entails.

[ ] also stated that service and support for [ ] televisions, tablets, Blu-ray players/recorders, and mobile phones can be obtained at any of the [ ] retail locations in the United States. CX-1069C ([ ] DWS) Q/A 23. [ ] provided no information on these locations, such as their size, [ ] investment therein, the number of employees, or the importance of the DI Products to such locations, which sell and support products unrelated to the DI products. [ ] also did not provide any data regarding the amount of repair and servicing functions that occur at such retail locations as opposed to, for example, sales of [ ] products.

c. Investments in Marketing

[ ] discussed [ ] activities in the United States related to marketing of televisions, tablets, Blu-ray players/recorders, and mobile phones. CX-1069C ([ ] DWS) Q/A 24. [ ] stated that approximately [ ] employees work in the [ ] group, which conducted [ ] events in the United States last year. CX-1069C ([ ] DWS) Q/A 24. [ ] provided no additional information or understanding of what these

employees do. Moreover, [ ] testified that the group is responsible for displaying products other than the DI Products, but provided no data regarding the portion of [ ] investment in marketing that can be allocated to the DI Products. CX-1069C ([ ] DWS) Q/A 24.

2. Investments Made by [ ]

[ ] testified as to certain facts relating to [ ], including where it was previously headquartered, the activities that took place there, and the number of people it employed. *See, e.g.*, CX-1070C ([ ] DWS) Q/A 11. None of the [ ] investments recited by [ ], however, is relevant to the economic prong analysis here, inasmuch as [ ] was not a party to the license agreement between Concert, [ ], and [ ]. CX-1386C (License Agreement); CX-0013C (Svendsen DWS) Q/A 50. Thus, prior to [ ] acquisition by [ ], [ ] had no license to the Asserted Patents, no "articles protected by the [asserted] patents," and, therefore, no domestic investments in such articles, as required by the governing statute. 19 U.S.C. §1337(a)(3); *see also, e.g.*, *Certain Electronic Imaging Devices*, Inv. No. 337-TA-726, Order No. 18, 2011 WL 826919, at *7 (Feb. 7 2011) (basing a determination of whether the economic prong is satisfied on only those investments made by a licensee after the relevant license agreement was executed). The fact that [ ] was ultimately acquired by [ ] does not retroactively make its previously investments applicable to the domestic industry analysis in this investigation. This is particularly true insofar as BHM did not identify the early models of [ ] mobile devices as DI Products. Further, [ ] investments suffer from the same deficiencies as the [ ] and [ ] investments discussed above. Specifically, BHM and the [ ] witnesses provided no detail

regarding the specific activities performed or investments made by [ ] and further made no attempt to allocate such investments to the DI Products.

Accordingly, the evidence regarding investments by [ ] do not support a finding that the economic prong is satisfied.

3. [ ] Sales

[ ] and [ ] both testified concerning [ ] product sales. CX-1070C ([ ] DWS) Q/A 17; CX-1069C ([ ] DWS) Q/A 25-28. Evidence of product sales in the United States are not in and of themselves sufficient to establish the economic prong of the domestic industry requirement. Moreover, the sales figures provided by the [ ] witnesses are not limited to the DI Products and, therefore, do not support a finding that the economic prong is satisfied.

4. The Significance and Substantiality of [ ] Investments

As detailed in the sections above, BHM did not adduce evidence of the nature of [ ] domestic investments and the extent to which these investments relate to the DI Products, if at all. BHM provided general figures relating to the size of several [ ] facilities and the number of employees at [ ] and [ ] who may have performed work in connection with product lines that include, but are not limited to, the DI Products. A precise apportionment or accounting may not be necessary before finding that the economic prong of the domestic industry requirement is satisfied. Nevertheless, BHM neither allocated, nor provided a reliable method by which to allocate, these investments to the DI Products. Without evidence of [ ] relevant domestic investments in the DI Products that BHM is permitted to rely on for domestic industry purposes, there is no basis on which it can be determined whether or not such investments rise to the level of significance or substantiality required by 19 U.S.C. § 1337(a)(3).

Moreover, a complainant cannot rely on unlicensed domestic activity. *See Spring Assemblies and Components Thereof, and Methods for Their Manufacture*, Inv. No. 337-TA-88, Comm'n Action and Order, USITC Pub. No. 1172, 0081 WL 667408, at *22 (Aug. 1981). BHM did not adduce evidence to compare the significance of unlicensed domestic activities related to the DI Products with the licensed domestic activities. Yet, BHM relies in large part on the very same third-party applications it accuses of infringement to establish a domestic industry. Specifically, BHM's domestic industry allegations rely on the DI Products being used in conjunction with specific software applications, the majority of which are designed and distributed by third parties, and one of which no longer exists. BHM also relies on an unlicensed third party that made significant contributions to engineering and developing the [ ] phone, *i.e.*, [ ]. *See* CX-1070C ([ ] DWS) Q/A 11. Instead of providing a basis from which to compare the value added to the DI Products by licensed domestic activity to the value added by unlicensed domestic activity, BHM mingled the unlicensed activities and the alleged domestic industry activities.

Although section 337(a)(3)(C) may be satisfied through investments in the exploitation of articles protected by the asserted patents rather than exploitation of the patents themselves, if a complainant cannot show that its exploitation activities are related to features covered by the asserted patents, such investments will carry less weight in the domestic industry analysis. *See, e.g.*, *Certain Male Prophylactic Devices*, Inv. No. 337-TA-546, Comm'n Op., 2008 WL 2952724, at *25 (May 2008). BHM has not shown that [ ] investments are related to features covered by the asserted patents, these investments therefore carry little weight in the economic prong analysis.

In addition, the relationship between [ ] and BHM favors giving little to no weight to [ ] licensed activities. [

]. *See, e.g.*, CX-1386C (License Agreement) at § 3(b). [

], as well as any patents acquired by BHM during the so-called "capture period." *Id.* at § 2(a) and (b). Thus, with [ ] financing, BHM may have acquired patents for the purpose of generating revenue. The Commission has previously found that domestic activities directed to the generation of revenue were entitled to less weight than those that were directed towards production. *Certain Navigation Devices and Systems, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-694, Comm'n Op. (Corrected Version), 2011 WL 3813121 (July 22, 2011) ("Although our statute requires us to consider all 'licensing' activities, we give Pioneer's revenue-driven licensing activities less weight.").

For the reasons discussed above, BHM did not meet its burden of proving satisfaction of the economic prong of the domestic industry requirement based on the domestic investments of its licensee [ ]. BHM did not provide evidence demonstrating the amount of [ ] investment that can properly be allocated to the DI Products, the amount of [ ] investment that can properly be attributable to each individual asserted patent, or the significance or substantiality of such investment.

IX. Conclusions of Law

1. The Commission has subject matter, personal, and *in rem* jurisdiction in this investigation.

2. The accused Samsung, LG, and Toshiba products have been imported into the United States.

3. Samsung's accused products do not infringe asserted claims 1, 5, 23, 30, 34, 37, and 45 of U.S. Patent No. 8,214,873; asserted claims 9 and 14 of U.S. Patent No. 8,045,952; asserted claims 1, 11, and 13 of U.S. Patent No. 8,050,652; or asserted claims 7 and 18 of U.S. Patent No. 6,618,593.

4. LG's accused products do not infringe asserted claims 1, 5, 23, 30, 34, 37, and 45 of U.S. Patent No. 8,214,873; asserted claims 9 and 14 of U.S. Patent No. 8,045,952; asserted claims 1, 11, and 13 of U.S. Patent No. 8,050,652; or asserted claims 7 and 18 of U.S. Patent No. 6,618,593.

5. Toshiba's accused products do not infringe asserted claims 1, 5, 23, 30, 34, 37, and 45 of U.S. Patent No. 8,214,873; asserted claims 9 and 14 of U.S. Patent No. 8,045,952; asserted claims 1, 11, and 13 of U.S. Patent No. 8,050,652; or asserted claims 7 and 18 of U.S. Patent No. 6,618,593.

6. The domestic industry requirement has not been satisfied with respect to any asserted patent.

7. It has been shown by clear and convincing evidence that the asserted claims of U.S. Patent No. 8,214,873 are invalid under 35 U.S.C. § 112, ¶ 1.

8. It has been shown by clear and convincing evidence that the asserted claims of U.S. Patent No. 6,618,593 are invalid in view of the prior art.

9. It has not been shown by clear and convincing evidence that the asserted claims of U.S. Patent No. 8,045,952 or U.S. Patent No. 8,050,652 are invalid.

X. Initial Determination on Violation

Accordingly, it is the initial determination of the undersigned that no violation of section 337 (19 U.S.C. § 1337) has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain microprocessors, components thereof, and products containing same, with respect to asserted claims 1, 5, 23, 30, 34, 37, and 45 of U.S. Patent No. 8,214,873; asserted claims 9 and 14 of U.S. Patent No. 8,045,952; asserted claims 1, 11, and 13 of U.S. Patent No. 8,050,652; or asserted claims 7 and 18 of U.S. Patent No. 6,618,593.

Further, this initial determination, together with the record of the hearing in this investigation consisting of (1) the transcript of the hearing, with appropriate corrections as may hereafter be ordered, and (2) the exhibits received into evidence in this investigation, is hereby certified to the Commission.

In accordance with 19 C.F.R. § 210.93(c), all material found to be confidential by the undersigned under 19 C.F.R. § 210.5 is to be given *in camera* treatment.

The Secretary shall serve a public version of this initial determination upon all parties of record and the confidential version upon counsel who are signatories to the Protective Order, as amended, issued in this investigation.

Pursuant to 19 C.F.R. § 210.42(h), this initial determination shall become the determination of the Commission unless a party files a petition for review pursuant to § 210.43(a) or the Commission, pursuant to § 210.44, orders on its own motion a review of the initial determination or certain issues herein.

XI. Order

To expedite service of the public version, each party is hereby ordered to file with the Commission Secretary no later than July 21, 2014, a copy of this initial determination with brackets to show any portion considered by the party (or its suppliers of information) to be confidential, accompanied by a list indicating each page on which such a bracket is to be found. At least one copy of such a filing shall be served upon the office of the undersigned, and the brackets shall be marked in red. If a party (and its suppliers of information) considers nothing in the initial determination to be confidential, and thus makes no request that any portion be redacted from the public version, then a statement to that effect shall be filed.

David P. Shaw
Administrative Law Judge

Issued: July 7, 2014

CERTAIN DIGITAL MEDIA DEVICES, INCLUDING TELEVISIONS, BLU-RAY DISC PLAYERS, HOME THEATER SYSTEMS, TABLETS AND MOBILE PHONES, COMPONENTS THEREOF AND ASSOCIATED SOFTWARE

INV. NO. 337-TA-882

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **FINIAL INITIAL DETERMINATION (PUBLIC VERSION)** has been served by hand upon the Commission Investigative Attorney, **Monisha Deka, Esq.**, and the following parties as indicated, on AUG 07 2014.

Lisa R. Barton, Secretary
U.S. International Trade Commission
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Washington, DC 20436

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CERTAIN DIGITAL MEDIA DEVICES, INCLUDING TELEVISIONS, BLU-RAY DISC PLAYERS, HOME THEATER SYSTEMS, TABLETS AND MOBILE PHONES, COMPONENTS THEREOF AND ASSOCIATED SOFTWARE

INV. NO. 337-TA-882

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