

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner

v.

S.M.R INNOVATIONS LTD and Y.M.R TECH LTD
Patent Owners

Inter Partes Review Case No. IPR2024-01049
U.S. Patent No. 8,711,866

**PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. 8,711,866**

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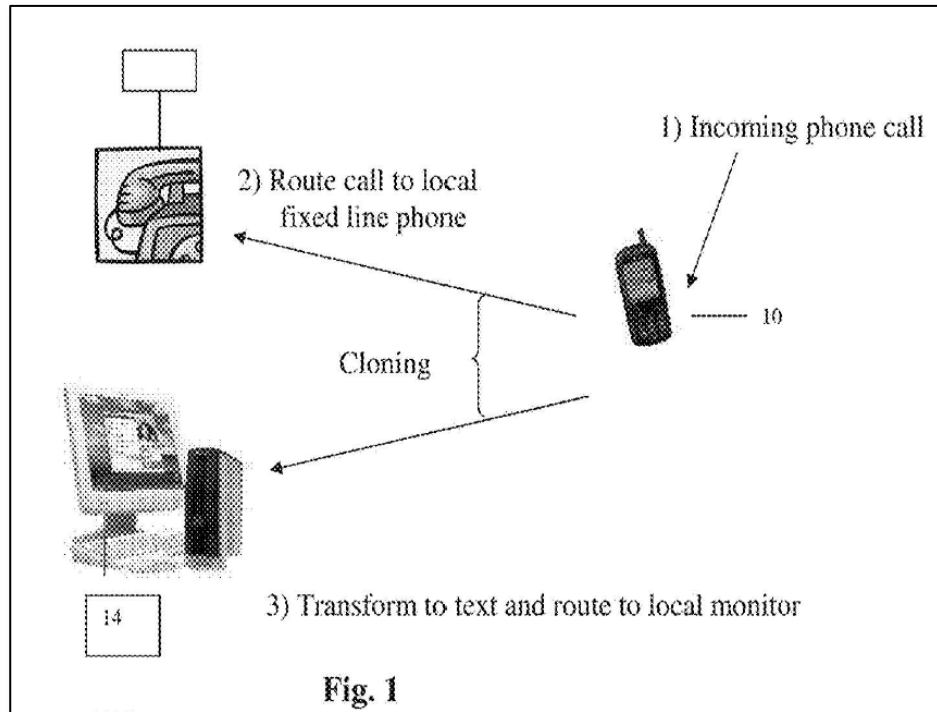
I. INTRODUCTION

Petitioner Apple Inc. requests *Inter Partes* Review of Claims 22-24 (collectively, the “Challenged Claims”) of USPN 8,711,866 (the “’866 Patent”).
’866 Patent (Ex. 1001).

II. THE ’866 PATENT

A. The ’866 Patent’s Alleged Invention

The ’866 Patent is directed to streaming data (e.g., audio and/or video) communications where media is rerouted from a “limited capability device” (e.g., mobile phone) to a “more capable device” (e.g., standalone display, speakers, etc.).
’866 Patent (Ex. 1001), 1:16-20, 4:18-55. Fig. 1 below depicts an incoming phone call originally received at a mobile phone. The audio is cloned with one copy of the audio sent to a fixed line phone and a second copy of the audio converted to text and displayed on a monitor:



'866 Patent, Fig. 1. The '866 Patent explains that such cloning can beneficially allow hearing impaired¹ individuals to participate in phone calls. *Id.*, 11:61-12:11 (teaching that, by transforming a cloned copy of the audio to text and displaying it on a nearby monitor, the “hearing impaired person ‘hears’ the conversation by reading the text appearing on the monitor” and can respond verbally via the phone’s microphone).

B. The '866 Patent's Prosecution

The Challenged Claims require a mobile device wirelessly receiving a single incoming data stream, scanning a local wireless network for a device that can handle

¹ For consistency, Petitioner adopts the '866 Patent's use of “hearing impaired[,]” rather than “hearing-impaired.”

the data stream, selecting a compatible device, cloning a data stream, transforming at least some of the cloned data streams via a media transformer, and routing the cloned data streams from the mobile device to a plurality of compatible devices. *See, e.g., '866 Patent*, Claim 22. During prosecution, original claims 50-52 (which issued as challenged claims 22-24, respectively) were subjected only to an obvious-type double patenting rejection, which was overcome by filing a terminal disclaimer. *'866 FH*, 178 (first office action indicating claims 50-52 were allowable), 227-50 (second office action advancing obvious-type double patenting rejection over U.S. Patent No. 7,969,990), 272-73 (terminal disclaimer submitted). As set forth in the detailed Ground below, the claimed concepts were well known in the art.

C. Priority Date of the Challenged Claims

The '866 Patent is a continuation of U.S. Patent No. 7,969,990 and claims its earliest priority to a US provisional application filed July 25, 2002. *'866 Patent*, (60), (63), 1:7-11. For purposes of this Petition only, Petitioner applies July 25, 2002, as the priority date for the Challenged Claims.

D. A Person of Ordinary Skill in the Art ("POSITA")

A POSITA at the time of the '866 Patent would have had a master's degree in computer engineering, electrical engineering, or a related field, with at least 2 years

of experience with wireless communications. Additional education or experience might substitute for the above requirements. *Dec.*, ¶¶29-31.²

III. 37 C.F.R. § 42.104 REQUIREMENTS

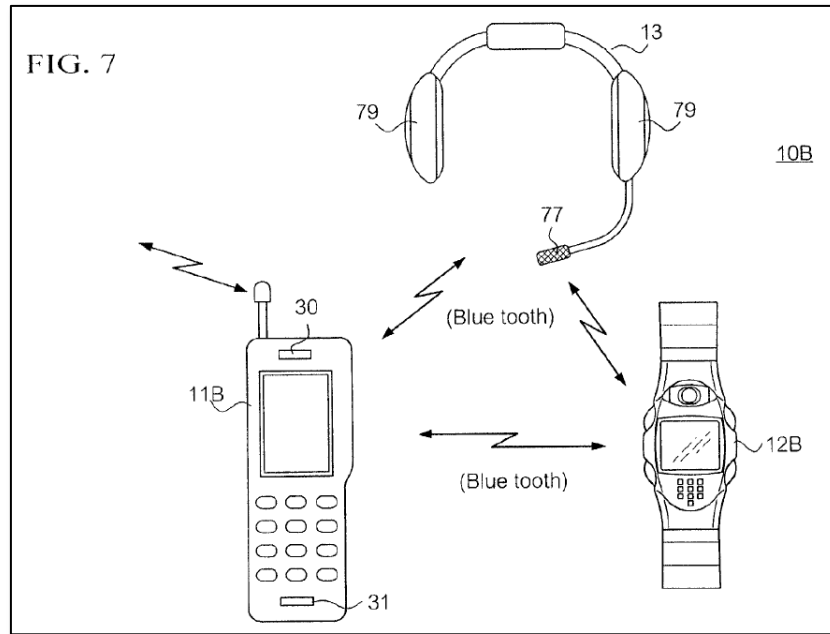
A. 37 C.F.R. § 42.104(a) Standing

Apple certifies the '866 Patent is available for IPR and Apple is not barred or estopped from requesting IPR challenging the claims of the '866 Patent. Apple is not the owner of the '866 Patent, has not filed civil action challenging the validity of any claim of the '866 Patent, and this Petition is filed less than one year after Apple was served with a complaint alleging infringement of the '866 Patent.

B. Summary of Ground and Relief Requested

Chihara teaches a method of routing a data stream (e.g., phone call audio, video) from a mobile device to a plurality of compatible devices (e.g., wireless headset, video watch) on a local wireless network (e.g., Bluetooth). *Chihara*, [0078]-[0081], [0109]-[0118], Figs. 7, 9, 13. In one embodiment, phone call audio is sent to a wireless headset while simultaneously streaming video of the caller to a wristwatch display:

² All citations to “Dec.” are to paragraph numbers in Ex. 1003, Declaration of Dr. Sayfe Kiaei.



Chihara, Fig. 7. The Ground below establishes that a POSITA would have been motivated to utilize this expressly described hardware arrangement in support of the hearing impaired. Namely, phone call audio is exchanged with the wireless headset as in *Chihara's* native embodiment, allowing the user to participate in the call normally. But that same audio is additionally converted to text and displayed on *Chihara's* watch display, improving the hearing impaired caller's ability to discern what the other party is saying. Such speech to text functionality was a well-known solution that allows those with hearing impairments to participate in audio phone calls. As discussed below, *Everett* describes this exact arrangement in which a

hearing impaired³ caller is provided a text version of the conversation in addition to the audio, which improves their ability to participate. *See Everett*, 1:47-56, 2:19-23, 2:35-38, 2:44-48, 2:66-3:5, 3:21-52, Figs. 1-2.

The Ground below also establishes that a POSITA would have looked to the art for guidance on low-level (and well-known) implementation details that are not described in detail by *Chihara*. First, Bluetooth—the wireless protocol expressly proposed by *Chihara*—included device announcing and scouting functionality aligned with the Challenged Claims. The Ground relies on the details of this functionality described in *BluetoothSpec* and proposes that a POSITA would have been motivated to use such functionality to connect *Chihara*’s wireless headset and wireless watch display. Second, while *Chihara* teaches a mobile phone with an LCD screen and buttons, *Chihara* does not describe the specific user interactions with the phone to make selections. A POSITA would, however, have been motivated to implement *Chihara* such that a user could make necessary selections to deploy *Chihara*’s expressly described functionalities and would have looked for guidance in the field of mobile device user interfaces. The Ground relies on *Chang*, which

³ A POSITA would have understood that “hearing-impaired,” as used by *Everett*, is synonymous with the ’866 Patent’s use of “hearing impaired[.]” *Dec.*, n.2. and ¶89. Petitioner uses “hearing impaired” throughout for clarity.

teaches a mobile device with user interfaces for making selections between multiple wireless devices.

In view of the prior art and evidence presented, IPR should be instituted and the Challenged Claims cancelled. 37 C.F.R. § 42.104(b)(1)-(2).

Proposed Ground of Unpatentability	
<u>Ground 1</u>	Claims 22-24 are obvious under § 103(a) over <i>Chihara</i> , <i>BluetoothSpec</i> , <i>Everett</i> , and <i>Chang</i>

Section V maps the evidence to each element of the Challenged Claims. 37 C.F.R. § 42.104(b)(4)-(5).

C. Claim Construction Under 37 C.F.R. § 42.104(b)(3)

In this proceeding, claims are interpreted under the same standard applied by Article III courts (i.e., the *Phillips* standard). 37 C.F.R. § 42.100(b); 83 Fed. Reg. 197 (Oct. 11, 2018); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*). For all terms not expressly addressed below, Petitioner applies the plain and ordinary meaning of all claim terms as understood by a POSITA. Petitioner does not waive any argument in any litigation that claim terms in the '866 Patent are indefinite or additional terms need construction.

1. “Media transformer” should be construed to capture a commercially available voice-to-text converter software module

Claim 22 recites “a media transformer, configured to transform media into forms that accord with respective determined media type requirements[.]” Similarly, Claim 23 recites “a media transformer, configured to transform media into a form

that accords with respective determined media type requirements[.]” Although the claim construction process has not yet begun in the parallel litigation, Petitioner intends to argue that media transformer invokes 35 U.S.C. § 112(f) (“§ 112(f)”), i.e., is a “means-plus-function” limitation, because this limitation does not recite sufficient structure for performing the recited function.⁴ *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015).⁵ Per 37 C.F.R. § 42.104(b)(3), Petitioner

⁴ Petitioner also intends to argue in the parallel litigation that the limitation is indefinite because the ’866 Patent specification describes insufficient corresponding structure for the full scope of the function recited for the claimed “media transformer.” Recognizing that the Board cannot address indefiniteness in an IPR proceeding, Petitioner satisfies its burden by advancing a means-plus-function construction in the IPR based on the limited corresponding structure described in the ’866 Patent. *See DraftKings Inc. v. AG 18, LLC*, IPR2022-01447, Paper 12 at 25 (PTAB Mar. 14, 2023) (instituting review and accepting as procedurally proper a § 112(f) construction advanced in an IPR where the petitioner argued in the parallel litigation that the claim was indefinite for failing to disclose sufficient corresponding structure).

⁵ Petitioner also intends to argue in the parallel litigation that the limitation is indefinite because the ’866 Patent specification describes insufficient corresponding structure for the full scope of the claimed “media transformer.” Recognizing that the Board cannot address indefiniteness in an IPR proceeding, Petitioner satisfies its burden by advancing a means-plus-function construction in the IPR based on the limited corresponding structure described in the ’866 Patent.

understands it is obligated to identify the “specific portions of the specification that describe the structure, material, or acts corresponding to each claimed function” for any limitations that invoke § 112(f). *See also Consolidated Trial Practice Guide*⁶ (“CTPG”), 45 (“Where claim language may be construed according to 35 U.S.C. § 112(f), a petitioner must provide a construction[.]”). Petitioner also recognizes that Patent Owner may contend this limitation does not invoke § 112(f). As set forth below, whether construed as a means-plus function limitation or not, the limitation captures at least commercially available voice-to-text converter software modules—the expressly described structure associated with the claimed media transformer.

Relevant to this limitation, the ’866 Patent explains that a media transformer may be voice-to text transformer:

A media transformer 24 is responsible for transforming its input (incoming media) into a required media type, or types, and outputting the resulting media stream(s), or file(s). It too preferably has a multi-channel Output. The media types required as output are preferably specified externally. ***A preferred embodiment of a media transformer includes a voice to text transformer*** as discussed above.

’866 Patent, 6:38-44. The patent further explains that such transformers were commercially available:

⁶ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

Furthermore, *a preferred embodiment of the present invention provides an ability to route an incoming voice message from say a mobile device or voice mailbox to a facsimile machine or display monitor, combined with a transformation capability*—in this case an ability *to transform voice to text. Software packages that interpret voice and translate into text are well known and commercially available.* Such packages, which presently require training on a specific voice in order to produce reasonable results, may broaden the usage of voice messages. However, even without training, the best packages can produce sufficiently good results to enable say the hard of hearing to make a reasonable interpretation of an incoming voice signal. Thus *such a rerouting-while-transforming capability may be highly desirable for people with special needs—impaired senses (hearing, vision) who may use such a capability to receive information in a form more usable to them.*

Id., 4:56-5:4.

Per § 112(f), the disclosed structure associated with the “media transformer” limitation includes commercially available voice-to-text converter software modules. Because the prior art set forth below strictly aligns with the disclosed speech-to-text media transformation, Petitioner proposes that, for purposes of this proceeding, the recited function requires no express construction beyond its plain terms.

Alternatively, if this limitation is found to not evoke § 112(f), the claimed “media transformer” must be construed broadly enough to capture the specifically

disclosed example of a commercially available voice-to-text converter software module.

IV. THE PRIOR ART

A. Chihara

Chihara was filed June 20, 2001 and published June 6, 2002, qualifying as prior art to the '866 Patent under at least 35 U.S.C. §§ 102(a) and (e). *Chihara* (Ex. 1004). *Chihara* was neither cited nor considered during prosecution of the '866 Patent.

Chihara teaches a method of routing a data stream (e.g., phone call audio, video) from a mobile device to a plurality of compatible devices (e.g., wireless headset, video watch) on a local wireless network (e.g., Bluetooth) where the devices are identified as compatible to handle the data stream. *Chihara*, [0001], [0078]-[0081], [0109]-[0118], Figs. 7, 9, 13.

Because *Chihara*, like the '866 Patent, discloses routing media between electronic devices, *Chihara* is in the same field of endeavor as the '866 Patent and is analogous art. Compare *Chihara* [0001], [0078]-[0081], [0109]-[0118], Figs. 7, 9, 13, with '866 Patent, 1:16-20; Dec., ¶¶82-84.

B. BluetoothSpec

BluetoothSpec was neither cited nor considered during prosecution of the '866 Patent. *BluetoothSpec* was released on February 22, 2001, and was publicly available at least as early as March 31, 2001, qualifying as prior art to the '866 Patent under

at least 35 U.S.C. §§ 102(a) and (b). *BluetoothSpec* (Ex. 1005). *Dec.*, ¶¶85-88. Evidence establishing that *BluetoothSpec* was publicly available before the '866 Patent priority date include an Internet Archive Affidavit from Nathaniel E. Frank-White (Ex. 1041). The Internet Archive affidavit demonstrates that the specific version of *BluetoothSpec* relied upon in this Petition (i.e., Version 1.1) was publicly available for download on www.bluetooth.com as of March 31, 2001. Ex. 1041, at 4. Consistent with this archived timeline, metadata in the *BluetoothSpec* reference indicates that the document relied upon by Petitioner was created on February 22, 2001 and was last modified on February 23, 2001. *Dec.*, ¶¶85-88 (discussing metadata reflected in *BluetoothSpec*). The Internet Archive Affidavit also reflects what appears to be the oldest archived copy of the same Version 1.1 Bluetooth Specification document used herein, establishing that *BluetoothSpec* was publicly available at least as early as December 17, 2001. Ex. 1041, at 7. The “created on” and “last modified” metadata contained in this archived copy of *BluetoothSpec* match that in the *BluetoothSpec* reference relied upon by Petitioner. *Dec.*, ¶¶85-88. Further supporting that *BluetoothSpec* was publicly available to those in the relevant field, U.S. Patent Publication No. 2002/0035699 (“Method and System for Enabling Seamless Roaming in a Wireless Network”) *Crosbie* (Ex. 1034) was filed on July 23, 2001 and notes *that* “[t]he Bluetooth technology is described in the Bluetooth

specification version 1.1, available from Bluetooth SIG, Inc. (see also the *www.bluetooth.com* web site.).” Ex. 1034, [0003].

BluetoothSpec teaches using mobile electronic devices to route media data between a plurality of mobile electronic devices. *BluetoothSpec*, 41-47, 335, 338, 371, 515-18.

Because *BluetoothSpec*, like the ’866 Patent, discloses routing media between electronic devices, *BluetoothSpec* is in the same field of endeavor as the ’866 Patent and is analogous art. *Compare BluetoothSpec*, 41-47, 335, 338, 371, 515-18, *with ’866 Patent*, 1:16-20; *Dec.*, ¶¶85-88.

C. Everett

Everett was neither cited nor considered during prosecution of the ’866 Patent. *Everett* was filed August 31, 2000, qualifying as prior art to the ’866 Patent under at least 35 U.S.C. § 102(e). *Everett* (Ex. 1006).

Both *Everett* and the ’866 Patent propose solutions for facilitating phone calls involving hearing impaired individuals, employing speech-to-text transformation of phone call audio and displaying that text to a call participant. *Compare Everett*, 1:47-56, 2:19-23, 2:35-38, 2:44-48, 2:66-3:5, 3:21-52, Figs. 1-2 *with ’866 Patent*, 1:16-20, 6:38-50, 10:63-11:22, 11:61-12:11 (discussing converting voice call audio to text so a hearing impaired person can participate in a call), Fig. 1; *Dec.*, ¶89. Therefore,

Everett is reasonably pertinent to a problem described by the '866 Patent and is analogous art. *Dec.*, ¶89.

D. Chang

Chang was neither cited nor considered during prosecution of the '866 Patent. *Chang* was filed November 18, 2001, and published May 23, 2002, qualifying as prior art to the '866 Patent under at least 35 U.S.C. §§ 102(a) and (e). *Chang* (Ex. 1007).

Chang teaches an electronic system routing media data from an information apparatus to an output device to be output in the form of text, graphics, images, video, and sound. *Chang*, [0001]-[0002], [0073], [0095]-[0096], [0189]. *Chang* teaches such information apparatus also includes an “interface” “for interactions with users[,]” where such user interface includes “a keyboard, a touch-sensitive or non-touch sensitive screen, push buttons, soft keys, a stylus[.]” *Chang*, [0074], *id.* (“The interface may be implemented in software or hardware or a combination.”).

Because *Chang*, like the '866 Patent, discloses routing media between electronic devices, *Chang* is in the same field of endeavor as the '866 Patent and is analogous art. *Compare Chang*, [0001]-[0002], [0073], [0095]-[0096], [0189] *with '866 Patent*, 1:16-20; *Dec.*, ¶¶90-92.

V. GROUND 1: CLAIMS 22-24 ARE OBVIOUS OVER *CHIHARA, BLUETOOTHSPEC, EVERETT AND CHANG*

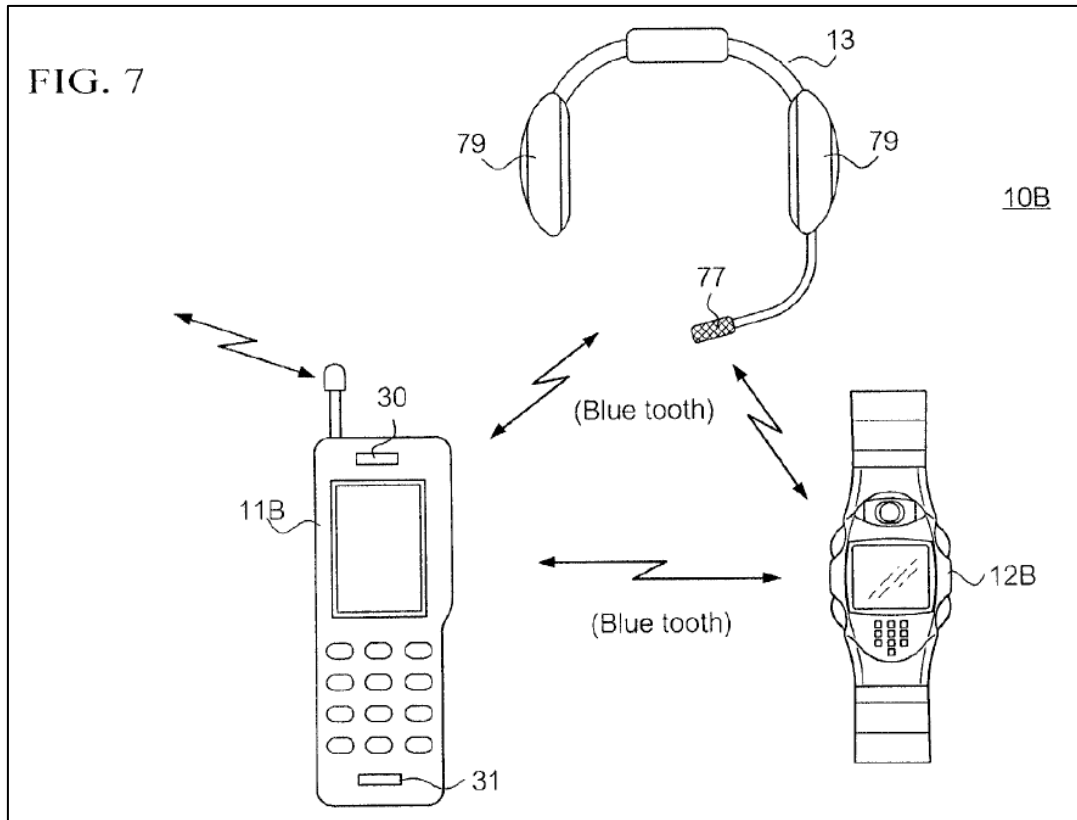
A. Claim 22(Pre) - Apparatus for routing and rerouting streaming data, the apparatus being mobile and comprising:

1. *Chihara Teaches a Mobile Apparatus for Routing and Rerouting Streaming Data*

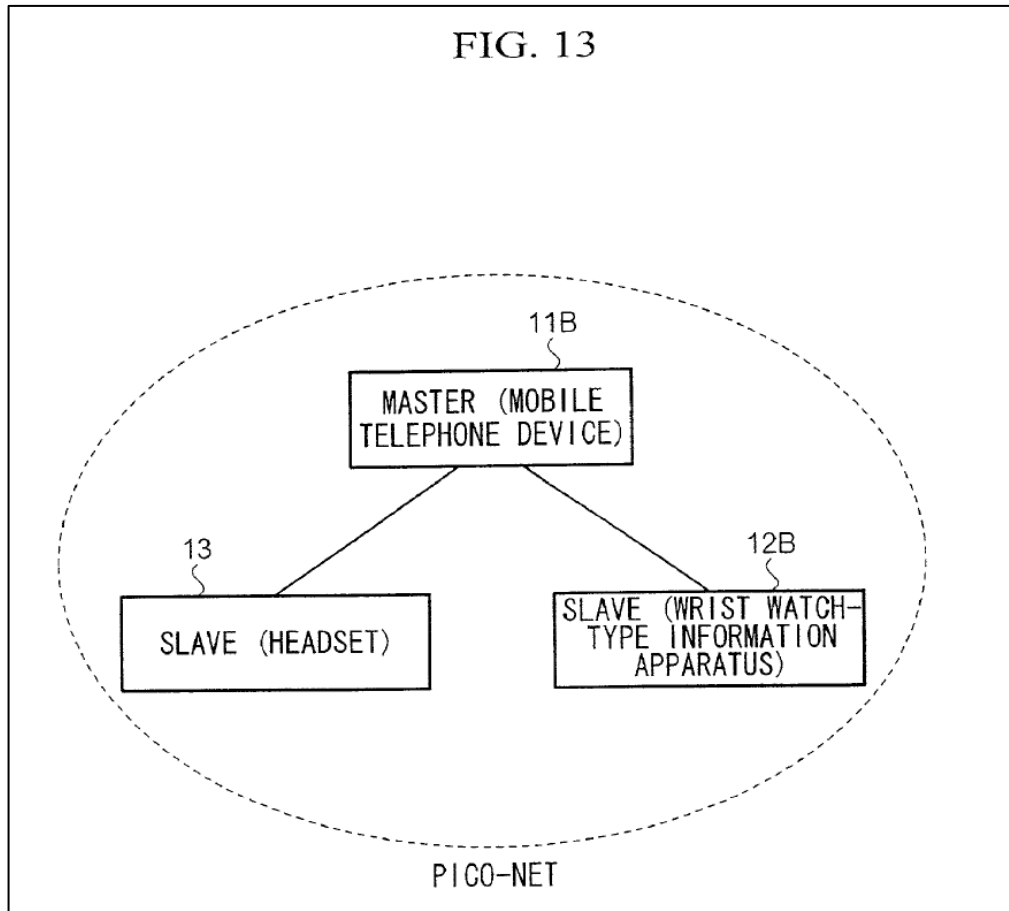
To the extent the preamble is limiting, *Chihara* teaches Claim 22(Pre). *Chihara* discloses a mobile video telephone system (“*apparatus for routing and rerouting streaming data*”)⁷ comprising a mobile telephone, a wrist watch-type information apparatus, and a wireless headset. *Chihara*, [0078]. In one embodiment, *Chihara* teaches mobile videophone system 10B comprises mobile telephone 11B, wrist watch-type information apparatus 12B⁸, and headset 13, as depicted in Fig. 7 below.

⁷ Corresponding claim language indicated with italics in parentheses.

⁸ A POSITA would have understood reference to wrist watch-type information apparatus 12A is a typographical error in *Chihara*. See *Chihara*, [0101], [0108] stating “wrist watch-type information apparatus 12A.” Elsewhere, the watch apparatus is referred to as 12B. See *Chihara*, generally [0078]-[0079], [0081]-[0084], [0090], [0100]-[0105], Figs. 7-9, 12A-12B, 13, 15; *Dec.*, ¶192.



Chihara, Fig. 7. *Chihara* teaches that each of mobile telephone device 11B, wrist watch-type information apparatus 12B, and headset 13 communicate with each other via local bidirectional radio communication (short-distance radio communication) using, for example, Bluetooth. *Chihara*, [0079]-[0080], [0083], [0110]; *Dec.*, ¶192. Fig. 13 below depicts a Bluetooth pico-net with the mobile telephone as the “master” device and the headset and wrist watch-type apparatus as “slave” devices.



Chihara, Fig. 13.

As described below, the mobile telephone device reroutes phone call audio to a selected headset and video or text to a selected wrist watch-type information apparatus using Bluetooth, and the selected headset and wrist watch-type information apparatus route information back to the mobile phone (and ultimately to a calling party on the other end of the phone call or video call) using the bidirectional Bluetooth connection. *Dec.*, ¶193.

Regarding rerouting communication data, *Chihara* teaches rerouting phone call audio from the mobile telephone that receives the call to another device (e.g.,

headset 13). For example, *Chihara* teaches that mobile telephone device 11B “can establish communication with a telephone set connected to a fixed telephone network or another mobile telephone set accommodated in a mobile communication network.” *Chihara*, [0079], [0109]. *Chihara* teaches that “upon receipt of the voice data from the calling party, the microprocessor 23B of the mobile telephone device 11B sends to the [B]luetooth module 22 an instruction to transmit packets to the headset 13.” *Chihara*, [0110]. After said instruction is transmitted, “a series of voice data received from the calling party are sent to the [B]luetooth module 22. The [B]luetooth module 22 places on the SCO packets the voice data received from the calling party, and transmits them to the headset 13 (step S21).” *Id.* Upon receipt of the packets, the headset processes the packets and outputs the call sound from speaker 79. *Chihara*, [0111]. Similarly, the user can speak with the calling party via the headset’s microphone (e.g., microphone 77), such that the communication between the headset and mobile phone is bidirectional. *Chihara*, [0080], [0111]-[0113], Fig. 9; *Dec.*, ¶194; *see also* Claim 22(a)(ii) regarding bidirectional communication.

Similarly, *Chihara* teaches routing image data from the calling party to the wrist watch-type information apparatus (and vice versa). *Chihara*, [0114]-[0118], [0006]-[0009], Fig. 7. *Dec.*, ¶¶192-96.

B. Claim 22(a) - a streaming device comprising:

Chihara teaches a mobile videophone system 10B, including mobile telephone device 11B (“*streaming device*”). *Chihara*, [0078]-[0081], [0113], Figs. 7, 9; *Dec.*, ¶197. See mappings for Claims 22(a)(i)-22(a)(iv), which are hereby incorporated.

C. Claim 22(a)(i) - an announcer device configured to indicate to surrounding media handling devices that said streaming device is available to receive streaming data, thereby to enable receipt of rerouted data from said surrounding media handling devices, and

1. Announcing Availability to Receive Rerouted Data From Surrounding Equipment

Limitations 22(a)(i) and 22(a)(ii) recite an “announcer device” and a “scout device,” each associated with the “streaming device.” Per Claim 22(a)(ii), the “scout device” scans the surroundings to identify surrounding available and compatible media handling devices such that the “streaming device” can “reroute streaming data between [itself] and a selected one of said surrounding media handling devices” (“the Scouting Limitation”). In other words, the “streaming device” sets up communication links that enable it to receive data and reroute that data *to* one or more other compatible devices in the vicinity.

Claim 22(a)(i) recites an “announcer device” in the same streaming device that indicates to surrounding media handling devices that the streaming device is available to “receive streaming data, thereby to enable receipt of rerouted data from said surrounding media handling devices” (“the Announcing Limitation”). The plain

claim language suggests the reverse of Claim 22(a)(ii)—the subject streaming device is receiving rerouted data *from* surrounding media handling devices, rather than rerouting data *to* surrounding media handling devices.

In the parallel litigation, despite parroting the claim language of a mobile device “receiv[ing] rerouting,” Patent Owner has repeatedly and consistently interpreted Claims 22(a)(i) and 22(a)(ii) to capture a single scenario in which a mobile device reroutes data *to* surrounding equipment. The following excerpt from Patent Owner’s July 1, 2023 Complaint maps the Announcing Limitation from the related ’990 Patent, and has remained unchanged through multiple revised infringement allegations in the parallel litigation:

Apple mobile devices such as iPhones comprise an announcer device associated with said mobile communication device, and *configured for indicating to surrounding equipment that said mobile communication device is available to receive rerouting*, thereby to enable receipt of rerouted data from said surrounding equipment via the Wi-Fi connection.

For example, *an Apple mobile apparatus* (e.g., a smartphone or tablet) *announces its availability to receive data from surrounding equipment*.

...

Connecting to the Wi-Fi network, the Apple mobile apparatus (e.g. the wi-fi client) announces itself *by sending probe request frames in accordance with the wi-fi protocol*.

...

Once connected to the Wi-Fi network, an Apple mobile apparatus (e.g., an iPhone) can receive streaming data to then be rerouted to compatible equipment in the vicinity, connected to the same network in accordance with Wi-Fi network capabilities.

Ex. 1042, 07-01-2023 Complaint, Ex. H at 2; *see also* Ex. 1044, 02-06-2024 '990 Patent Infringement Allegations Update, 5 (same), Ex. 1046, 05-17-2024 Preliminary Infringement Contentions, 132 (same). Patent Owner's allegations for the '866 "Announcing Limitation" are consistent, but slightly less detailed. However, like the '990 allegations, Patent Owner has consistently mapped the '866 Patent claims to a scenario in which the alleged "streaming device" (e.g., Apple's iPhone) reroutes streaming media *to* surrounding devices, rather than receiving rerouted streaming media *from* those surrounding devices. *See* Ex. 1043, 07-01-2023 Complaint, Ex. G at 49-53; *see also* Ex. 1045, 02-06-2024 '866 Patent Infringement Allegations Update, 1-11, Ex. 1046, 05-17-2024 Preliminary Infringement Contentions, 96-106. Per Patent Owner's allegations, the Announcing Limitation does not require the streaming device to establish connections that enable it to receive rerouted data *from* those devices. Instead, the Announcing Limitation, like the Scouting Limitation, is satisfied where a streaming device communicates with surrounding media handling devices in order to configure one or more wireless

communication links over which it can reroute data *to* surrounding media handling devices.

For purposes of this proceeding, Petitioner proposes this Board adopt Patent Owner’s interpretation of the Announcing Limitation. *See Western Digital Corporation v. SPEX Technologies, Inc.*, IPR2018-00084, Paper 14, *11 (PTAB Apr. 25, 2018); *see also General Electric v. Vestas*, IPR2018-00928, Paper 9, *16-17 (PTAB Nov. 5, 2018); *10x Genomics, Inc. v. Bio-Rad Laboratories, Inc.*, IPR2020-00086, Paper 8, *19 (PTAB Apr. 27, 2020) (finding “judicial efficiency will be enhanced by allowing Petitioner to rely upon a claim construction that Patent Owner is relying upon in the related district court litigation to assert infringement of the challenged patent”).

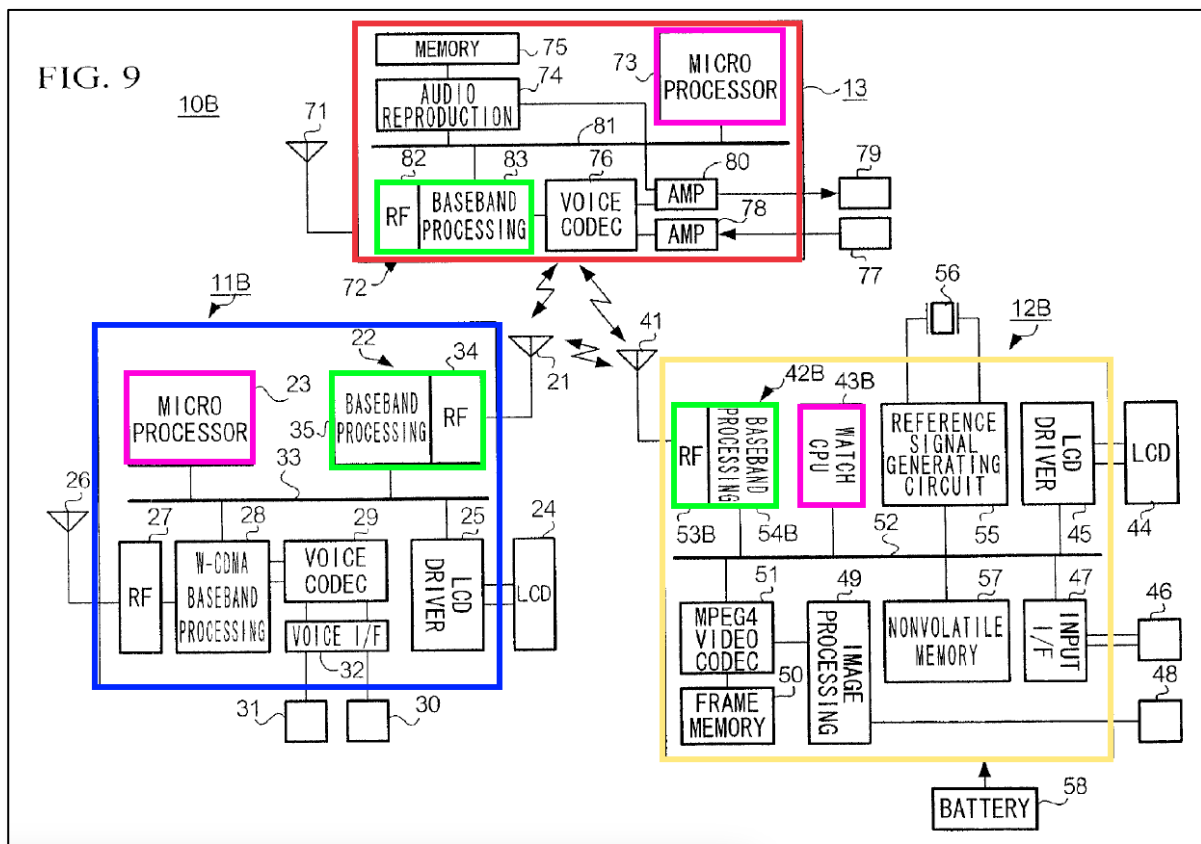
2. *Chihara Teaches an Announcer Device and Rerouting Data*

As discussed above, *Chihara* teaches a mobile videophone system that reroutes streaming data (e.g., phone call audio) received at mobile telephone device 11B to headset 13 and wrist watch-type apparatus 12B. *See* Claim 22(Pre), 22(a). Also as discussed above, *Chihara* teaches a mobile videophone system including mobile telephone device 11B, headset 13, and wrist watch-type apparatus 12B, which communicate via Bluetooth connections using Bluetooth modules (e.g., Bluetooth module 35 of mobile telephone device 11B) where said Bluetooth modules are controlled by processors. *Id.*; *Chihara*, [0081]. As discussed below,

Chihara teaches bidirectional communication between the mobile telephone, headset, and wrist watch-type apparatus, such that a POSITA would have understood that the mobile telephone would have been enabled to receive rerouted streaming data from the headset and wrist watch-type apparatus (“surrounding equipment”) and vice versa. *Dec.*, ¶198. *See* Claim 22(a)(ii).

Chihara teaches that any of the devices (e.g., mobile phone, headset, or wrist watch-type apparatus) may be a “master” device, but in the third embodiment, mobile telephone 11B is the “master” device. *Chihara*, [0101] (“According to this embodiment, the mobile telephone device 11B is determined as a master and the wrist watch-type information apparatus 12[B] and the headset 13 as slaves to configure the pico-net shown in FIG. 13”). Therefore, as discussed in detail below, a POSITA would have understood that Bluetooth module 35 (controlled by a microprocessor and configured to transmit an ID packet) of mobile telephone device 11B would have functioned as an “announcer device” to indicate availability of mobile telephone 11B. *Dec.*, ¶198 (opining that the master device indicates its availability to surrounding equipment using a Bluetooth module controlled by a microprocessor and configured to transmit an ID packet, and since mobile telephone device 11B is the master device in at least one embodiment, Bluetooth module 35 (controlled by a microprocessor and configured to transmit an ID packet) of mobile telephone device 11B functions as an “*announcer device*”).

Annotated Fig. 9 below depicts a block diagram of *Chihara's* system, including (1) mobile telephone 11B (annotated blue) which includes Bluetooth module 35 (annotated green) and microprocessor 23 (annotated pink); (2) headset 13 (annotated red), which includes Bluetooth module 72 (annotated green) and microprocessor 13; and (3) wrist watch-type apparatus 12B (annotated yellow), which includes Bluetooth module 42B (annotated green) and watch CPU 43B (annotated pink):



Chihara, Fig. 9 (annotated).

Chihara teaches that the microprocessor of each device performs numerous functions, including functions related to wireless communication involving the

respective Bluetooth modules. *Chihara*, [0081] (“With the microprocessor 23B according to this embodiment ... the communication link is established with each of the [] wrist watch-type information apparatus 12B and the headset 13 through the bluetooth module 35[.]”), *id.* (“[U]sing these communication links, the microprocessor 23B transmits and receives information to and from the wrist watch-type information apparatus 12B and the headset 13.”), [0080] (“The bluetooth module 72, the microprocessor 73 ... are connected to each other through a bus 81.”), [0050] (“A microprocessor 23 includes memories (not shown) such [as] a ROM and a RAM for storing various data. The microprocessor 23 uses these memories to control the communication and applications, and control the whole of the mobile telephone device 11[.]”), [0054], [0109]-[0114], [0130]; *Dec.*, ¶198.

A POSITA would have understood that Bluetooth is an ad-hoc networking setup, where devices are not permanently linked nor is networking limited to previously-paired devices but devices are dynamically discovered, paired, and connected. *Dec.*, ¶198 (discussing *BluetoothSpec*, 515, which teaches that “Bluetooth implementers ... take advantage of the dynamic, ad-hoc characteristics of the Bluetooth environment[.]”). Further, a POSITA would have understood that Bluetooth discovers nearby Bluetooth-enabled devices, not just devices owned by the user of the device performing the scanning. *Dec.*, ¶198. Thus, a POSITA would have understood that even though *Chihara* teaches a single user owning a mobile

telephone, headset, and wrist watch-type information apparatus, *Chihara's* mobile telephone would discover any available nearby Bluetooth-enabled devices for pairing, not just those owned by the user of the mobile telephone. *Dec.*, ¶198 (including opining regarding *Palin*, 7:26-42 (“...responding Bluetooth unit and its host device, which would include any Bluetooth-enabled external display device in the coverage area.”) and *Chang*, [0185], [0191]-[0205], [0263]-[0265] (“the user may be presented with all the printers 106, if any, that are available to take the print job.”), Figs. 5 (502 “Any Available Output Device?”), 9A-9F).

Additionally, while *Chihara* teaches previously-paired devices may be in a low-power “park” mode, a POSITA would have understood that Bluetooth does not require such previous-paired connections, and new connections with devices may be formed based on discovered available Bluetooth-enabled devices within scanning range, such as *Chihara's* headset, wrist watch-type apparatus, or other nearby Bluetooth-enabled devices (e.g., external display). *Dec.*, ¶198 (opining on *Chang's* teachings).

Chihara does not describe the low-level Bluetooth protocol details implicated when mobile telephone device 11B uses its Bluetooth module (controlled by a processor) to indicate to surrounding equipment (e.g., headset 13, wrist watch-type apparatus 12B) that said mobile telephone device is available to receive rerouting. However, *BluetoothSpec* provides these details, as discussed below.

3. *BluetoothSpec Teaches Announcing Availability – Inquiry Substate*

BluetoothSpec teaches that a “master”/“host” device transmits inquiry messages to discover other nearby Bluetooth devices during an inquiry procedure. *BluetoothSpec*, 559, 561. Specifically, the “inquiry substate is used by the unit that wants to discover new devices.” *BluetoothSpec*, 107. *BluetoothSpec* teaches an “inquiry procedure enables a unit to discover which units are in range, and what their device addresses and clocks are.” *BluetoothSpec*, 96, 105 (“During an inquiry substate, the discovering unit collects the Bluetooth device addresses and clocks of all units that respond to the inquiry message. It can then, if desired, make a connection to any one of them by means of the ... page procedure.”).

During the inquiry procedure, an “ID packet” is transmitted from a “master” device to a “slave” device, and said ID packet comprises an inquiry access code (IAC). *BluetoothSpec*, 96, 55 (an “identity of ID packet consists of the device access code (DAC) or inquiry access code (IAC). It has a fixed length of 68 bits. It is a very robust packet since the receiver uses a bit correlator to match the received packet to the known bit sequence of the ID packet. The packet is used, for example, in paging, inquiry, and response routines.”). Table 10.5 below depicts the messaging from the master to slave in step 1, which includes transmitting an ID packet that comprises an inquiry access code, and further depicts the inquiry response in step 2 from the slave to the master:

step	message	direction	hopping sequence	access code
1	ID	master to slave	inquiry	inquiry
2	FHS	slave to master	inquiry response	inquiry

Table 10.5: Messaging during inquiry routines.

BluetoothSpec, 109 (“Table 10.5”); *Dec.*, ¶198. Regarding the inquiry access code transmitted in the ID packet, a “master” device may transmit a “general inquiry access code” (GIAC) that “is common to all Bluetooth units” or may send “a set of dedicated inquiry access codes” (DIAC) that are “used to inquire for classes of devices.” *BluetoothSpec*, 142, 105; *Dec.*, ¶198.

A POSITA would have understood that Bluetooth module 35 would have been an “announcer device” associated with a mobile communication device (e.g., mobile telephone 11B) “master” device because said Bluetooth module transmits an ID packet comprising an IAC (whether GIAC or DIAC) to surrounding equipment (headset 13, wrist watch-type information apparatus 12B). *Dec.*, ¶198. Further, under the interpretation of the Announcing Limitation advanced by Patent Owner in the parallel litigation, a POSITA would have understood that a Bluetooth module transmitting an ID packet comprising an IAC would have indicated to surrounding equipment that the mobile device is available to receive rerouting. *Dec.*, ¶198. For example, such signaling indicates that the mobile device is powered on and transmitting signals to discover nearby “slave” devices (e.g., headset, wrist watch-

type information apparatus), which are used for rerouting (e.g., phone call). *Dec.*, ¶198; *see* Claim 22(a)(ii).

4. Motivation to Combine Chihara and BluetoothSpec

A POSITA would have been motivated to implement *Chihara* according to *BluetoothSpec*'s teachings, relying on the Bluetooth standard implementation details to perform functionalities for which *Chihara* expressly identifies Bluetooth as a preferred embodiment. *Dec.*, ¶198. A POSITA thus would have recognized the benefits to from implementing *BluetoothSpec*'s teachings, including the inquiry substate process, allowing a mobile device to announce its availability and discover nearby devices using Bluetooth procedures while conforming to the protocols and guidelines of the Bluetooth specification. *Dec.*, ¶198.

Indeed, such a modification would have advantageously improved *Chihara*'s Bluetooth devices to function according to the known techniques of the *BluetoothSpec* to ensure interoperability with Bluetooth-enabled devices, including from various manufacturers (e.g., mobile phones, headsets, wrist watch-type apparatuses). *Dec.*, ¶198. Further, such a modification would have allowed *Chihara*'s mobile telephone to pair with any available Bluetooth-enabled device in the scanning region rather than relying on previously connected devices in "park" mode. *Dec.*, ¶198. Such a use of a known technique would have advantageously allowed *Chihara*'s mobile telephone to pair with various Bluetooth-enabled devices

(e.g., external display) beyond only the headset and wrist watch-type apparatus expressly taught. *Dec.*, ¶198. Additionally, in a scenario where the mobile telephone has not yet paired with the headset or wrist watch-type apparatus, such a modification would have allowed *Chihara*'s mobile telephone to establish Bluetooth pairings with said devices. *Dec.*, ¶198.

Such a modification would have had a reasonable expectation of success because *Chihara* expressly teaches using Bluetooth modules (controlled by processors) for communication links, which was well known and understood, as taught in *BluetoothSpec*. *Dec.*, ¶198. Thus, modifying *Chihara* in accordance with the well-known Bluetooth specification *BluetoothSpec* would not have required undue experimentation but would have provided such details and would have been in accordance with standard Bluetooth protocols. *Dec.*, ¶198.

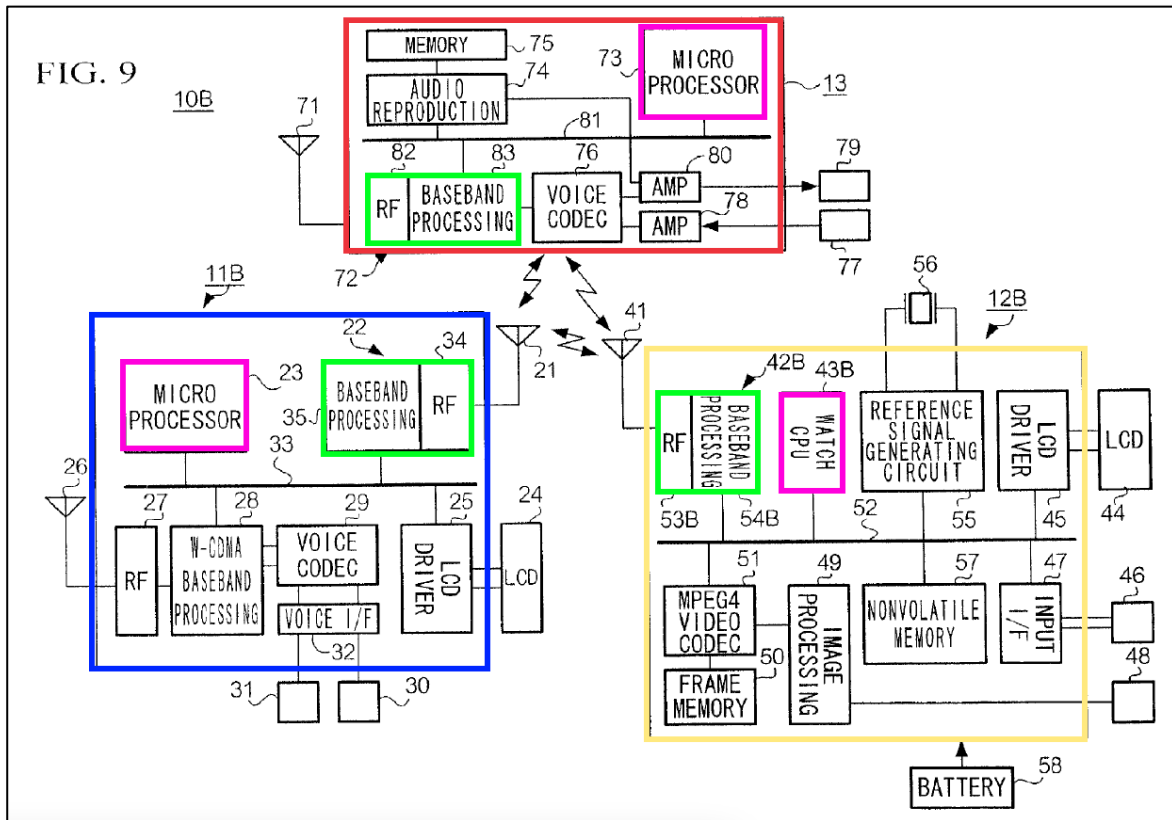
D. Claim 22(a)(ii) - a scout device configured to scan surroundings of said streaming device to identify surrounding media handling devices as being compatible to handle given media, and determine availability of said identified compatible media handling devices, thereby to reroute streaming data between said streaming device and a selected one of said surrounding media handling devices, said scout device further being configured to determine media type requirements of said compatible media handling devices, said apparatus configured to set up a bidirectional wireless communication link between said streaming device and a respective one of said media handling devices, said bidirectional link carrying streaming data over either direction as required of said bidirectional link;

1. Chihara Teaches a Scout Device and Bidirectional Communication Link for Streaming Data

As discussed above, *Chihara* teaches a mobile communication device that reroutes data (e.g., phone call) to one or more selected surrounding equipment (e.g., headset, wrist watch-type information apparatus). *See* Claim 22(Pre)-22(a)(i).

Chihara teaches mobile telephone 12B establishes bidirectional communication links via Bluetooth with compatible nearby equipment, including headset 13 and wrist watch-type information apparatus 12B. *Chihara*, [0049]-[0051], [0054]-[0057], [0081]-[0084], [0101], *generally* [0105]-[0115], Figs. 7, 13. *Chihara* teaches each of these devices includes a Bluetooth module and processor (e.g., microprocessor, watch CPU) for performing such wireless communication functions. *Chihara*, [0080]-[0083]. Annotated Fig. 9 below depicts said Bluetooth modules of the mobile telephone, headset, and wrist watch-type apparatus (35, 72,

42B, respectively) in green and processors of each (23, 73, 43B, respectively) in pink:



Chihara, Fig. 9 (annotated). As explained in 22(a)(i), *Chihara* teaches that the module and processor of each device performs numerous functions related to the announcing functionality to locate and connect with nearby compatible devices. A POSITA would have understood that Bluetooth module 35 in conjunction with microprocessor 23 of mobile telephone device 11B would similarly have been configured to perform scanning as a “scout device.” *Dec.*, ¶199.

As set forth above with reference to the announcing limitation, although *Chihara* teaches a mobile telephone connecting with “surrounding equipment” via

Bluetooth, *Chihara* does not provide the low-level Bluetooth protocol details implicated when a mobile telephone scans its surroundings to identify and determine availability of compatible equipment in the vicinity. However, *BluetoothSpec* provides these details, as discussed below.

2. *BluetoothSpec Teaches Scanning Surroundings to Identify and Determine Availability of Compatible Equipment*

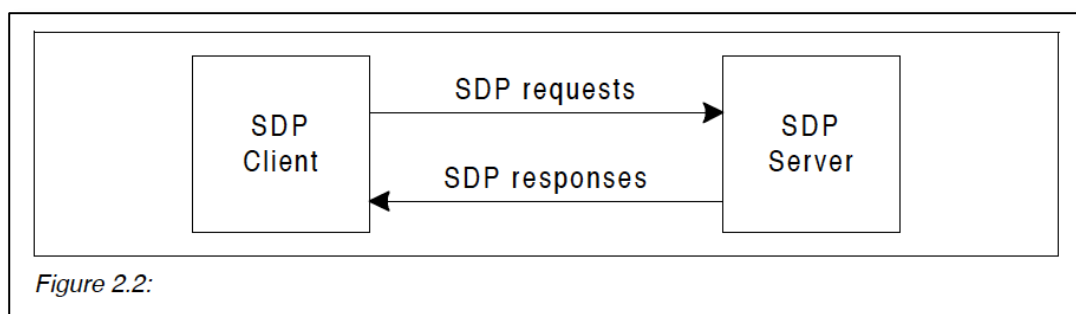
BluetoothSpec teaches such wireless communication details, including using a service discovery protocol (SDP) via a Bluetooth module to scan surroundings and identify and determine availability of compatible equipment in the vicinity.

a) Service Discovery Protocol

BluetoothSpec teaches the “service discovery protocol (SDP) provides a means for applications to discover which services are available and to determine the characteristics of those available services.” *BluetoothSpec*, 335 (“SDP shall provide the means for the discovery of new services that become available when devices enter RF proximity with a client device as well as when a new service is made available on a device that is in RF proximity with the client device.”). *BluetoothSpec* teaches that SDP allows for a “client” device to discover both the existence of “server” devices and the particular services such server devices offer. *BluetoothSpec*, 338 (“The service discovery mechanism provides the means for client applications to discover the existence of services provided by server applications as well as the attributes of those services. The attributes of a service include the type or class of

service offered and the mechanism or protocol information needed to utilize the service.”). A POSITA would have understood that such scanning for information regarding the existence of services of nearby server devices (i.e., devices that provide services via SDP) would have identified “compatible” equipment in the vicinity. *Dec.*, ¶199. Indeed, the mobile device (e.g., mobile telephone) would have received information regarding services offered, which would have informed the user of the mobile device of availability of devices compatible for performing a particular service (e.g., rendering audio or displaying video). *Dec.*, ¶199.

As depicted in Fig. 2.2 below, an SDP client (e.g., *Chihara’s* mobile telephone) transmits an SDP request to an SDP server (e.g., *Chihara’s* headset or wrist watch-type information apparatus) and receives an SDP response from the SDP server:



BluetoothSpec, 338 (“Figure 2.2”). Thus, a POSITA would have understood that such a process of transmitting SDP requests and receiving SDP responses would have served to identify and determine compatible equipment in the vicinity. *Dec.*, ¶199. Indeed, a POSITA would have understood that Bluetooth is typically used for

short range wireless communication between devices, such that an SDP server transmitting an SDP response would have been nearby (“in the vicinity”) of the SDP client device that sent the SDP request. *Dec.*, ¶199.

b) ServiceAvailability Attribute

Regarding the availability of nearby devices, *BluetoothSpec* teaches a mobile device “*identif[ies] and determine[s] availability of compatible equipment in the vicinity.*” *Dec.*, ¶199. For example, *BluetoothSpec* teaches a ServiceAvailability attribute that “represents the relative ability of the service to accept additional clients. A value of 0xFF indicates that the service is not currently in use and is thus fully available, while a value of 0x00 means that the service is not accepting new clients.” *BluetoothSpec*, 371. Additionally, the ServiceAvailability attribute can utilize intermediate values for “services that support multiple simultaneous clients” to “indicate the relative availability of the service on a linear scale.” *Id.* Thus, a POSITA would have understood that the ServiceAvailability attribute indicates the availability of a nearby compatible device. *Dec.*, ¶199. Further, a POSITA would have found it obvious to use a Bluetooth ServiceAvailability attribute to indicate that a nearby compatible device (“*surrounding equipment*”) is available to receive rerouting. *Dec.*, ¶199. Indeed, such ServiceAvailability attributes indicate to a POSITA that a device is “fully available” (or an intermediate value indicating

relative availability) or “not accepting new clients” and thus is currently unavailable. *Dec.*, ¶199.

BluetoothSpec also teaches that the ServiceAvailability attribute “should be treated as a hint or an approximation of an availability status” rather than a “guarantee that the service will be available for use.” *BluetoothSpec*, 371. However, a POSITA would have understood that the ServiceAvailability attribute is a way to identify and determine the current availability of compatible media handling devices in the vicinity, even if such an indication is not an absolute “guarantee” that a particular service will be available when the client requests said service. *Dec.*, ¶199.

3. *Chihara Teaches Bidirectional Communication Link*

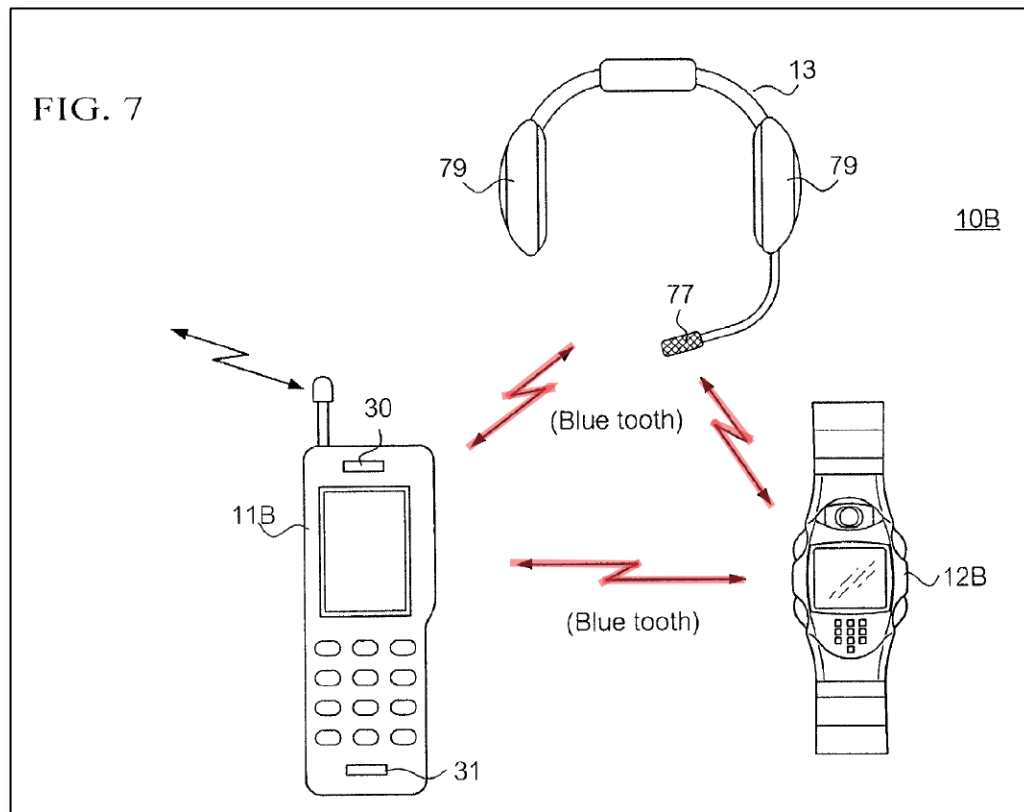
A POSITA would have understood that *Chihara* describes bidirectional communication links that align with those in the '866 Patent. *Dec.*, ¶199. For example, the '866 Patent describes “in the case of a cellular telephone, the telephone communication is a bi-directional type of communication, and any rerouting should preferably support a return path for the communication.” '866 Patent, 5:64-67, 10:63-12:11 (describing Scenarios 1 and 2 where a phone call is routed to a land/fixed line phone, and Scenario 4 where an incoming phone call arrives at a land (fixed) line phone and is cloned to a cell phone).

Chihara similarly teaches rerouting data from a device that originally receives the data to at least one other nearby selected device. *See* Claim 22(Pre)-22(a)(i). For

example, *Chihara* teaches routing a phone call received at a mobile telephone to a selected headset and to a selected wrist watch-type information apparatus. *Chihara*, [0013], [0016], *generally* [0106]-[0118]. *Chihara* teaches such rerouting involves a bidirectional communication link (e.g., Bluetooth) because, for example, a user of the headset can talk to the calling party using a microphone in the headset. *Chihara*, [0140] (“Each of the embodiments described above employs the bluetooth communication as a local bi-directional radio communication[.]”).

Specifically, *Chihara* teaches a first bidirectional communication link between the mobile telephone (“streaming device”) and wrist watch-type apparatus (“wearable radio communication device”). *Chihara*, [0022] (“[T]he mobile telephone device can establish a first communication link for effecting local bi-directional radio communication with the wearable radio communication device”). *Chihara* also teaches a second bidirectional communication link between the mobile telephone and a headset, which may be used to speak to a calling party. *Id.* (“[A]nd a second communication link for effecting local bi-directional radio communication with the headset having a voice input/output unit, and also can effect the bi-directional local radio communication including the voice data communication through the second communication link.”). Indeed, *Chihara* provides numerous teachings of bidirectional communication links (including streaming such as audio of a phone call and video) between such devices. *Chihara*, *generally* [0007]-[0010],

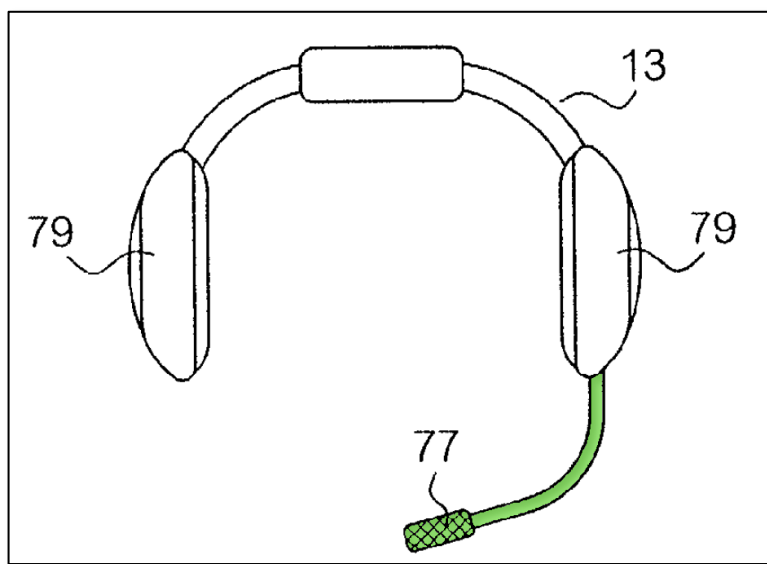
[0014]-[0015], [0017], [0022], [0029], [0049]-[0050], [0078]-[0080], [0083]-[0084], [0109]-[0110], [0114]. Annotated Fig. 7 below depicts such bidirectional Bluetooth communication links (red):



Chihara, Fig. 7 (annotated). A POSITA would have understood that *Chihara's* bidirectional communication would thus have both a first link direction from the mobile telephone to the surrounding equipment and a second link direction from the surrounding equipment to the mobile telephone. *Dec.*, ¶199.

Similarly, *Chihara* teaches a mobile phone receiving a call and rerouting the call to a selected headset that includes a microphone for a user to speak to the calling party. *Chihara*, [0080]. A POSITA would have understood that such a phone call

using a “*bidirectional link*” between the mobile telephone and surrounding equipment would have been a “*bidirectional link*” carrying streaming data over both the “first link” direction (to the surrounding equipment) and “second link” direction (from the surrounding equipment to the mobile telephone). *Dec.*, ¶199. As discussed above, such meets the described scenarios in the ’866 Patent. *Dec.*, ¶199; ’866 *Patent*, 5:47-67, 10:63-12:11. An annotated excerpt of *Chihara*’s Fig. 7 below depicts headset 13 including microphone 77 (green) for bidirectional communication with a calling party, for example:



Chihara, Fig. 7 (excerpt, annotated).

4. *Chihara Teaches Media Type Requirements*

Chihara teaches a mobile telephone including a Bluetooth module and microprocessor for communicating with nearby Bluetooth-enabled devices, such as a headset and wrist watch-type apparatus. *See* Claim 22(Pre), 22(a)(i); *Dec.*, ¶199.

Additionally, *Chihara* as implemented pursuant to *BluetoothSpec* teaches scanning surroundings of the mobile telephone to identify and determine availability of compatible equipment in the vicinity. *Dec.*, ¶199. A POSITA would have understood that such a service discovery protocol performed by *Chihara-BluetoothSpec*'s mobile telephone including a Bluetooth module and processor would have determined media type requirements of nearby Bluetooth-enabled devices. *Dec.*, ¶199. For example, such a discovery protocol would have determined available services of said Bluetooth-enabled devices (e.g., input and/or output of text, video, and/or images). *See* Section V.D.2. A POSITA would have understood that determining available services and device attributes would have indicated “*media type requirements*,” such as whether a device can display video or images, render audio, or receive audio input from a microphone, for example. *Dec.*, ¶199. Thus, a POSITA would have understood that *Chihara-BluetoothSpec* would have determined media type requirements for said devices. *Dec.*, ¶199.

5. *Motivation to Combine Chihara and BluetoothSpec*

As discussed above with reference to the announcing limitation, a POSITA would have been motivated to implement *Chihara* according to *BluetoothSpec*'s teachings, relying on the Bluetooth standard implementation details to perform functionalities for which *Chihara* expressly identifies Bluetooth as a preferred embodiment. Specifically, a POSITA would have been motivated to modify *Chihara*

per *BluetoothSpec*'s teachings to utilize the Bluetooth Service Discovery Protocol (SDP) and ServiceAvailability attribute. *Dec.*, ¶199. Such a modification would have been use of known techniques for Bluetooth (per *BluetoothSpec*) and would have improved *Chihara*'s Bluetooth communications between devices (e.g., mobile telephone, headset, wrist watch-type apparatus) in the same way as *BluetoothSpec*'s wireless communications via Bluetooth. *Dec.*, ¶199. Further, modifying *Chihara* per *BluetoothSpec*'s teachings would have ensured interoperability between Bluetooth-enabled devices from various manufacturers by adhering to protocols from the official Bluetooth specification. *Dec.*, ¶199. Similarly, said modification would have improved *Chihara* by expressly enabling *Chihara*'s mobile device to determine the plurality of media type requirements in surrounding compatible media handling devices, thereby providing *Chihara*'s mobile device with greater specificity in determining which compatible devices to route data to for the display/reproduction of a specific media type. *Dec.*, ¶199.

Such a modification would have had a reasonable expectation of success. *Dec.*, ¶199. Indeed, such a modification would have been pursuant to Bluetooth protocols from the Bluetooth Specification, such that *Chihara* would have merely been modified to utilize established and well-known Bluetooth protocols for its Bluetooth communications. *Dec.*, ¶199.

E. Claim 22(a)(iii) - a media transformer, configured to transform media into forms that accord with respective determined media type requirements, wherein there are a plurality of said types;

1. *Chihara-Everett's Media Transformer*

a) '866 Patent's Media Transformer Descriptions

As discussed in Section III.C, “media transformer” should be construed to capture a commercially available voice-to-text converter software module. Indeed, the '866 Patent describes a “preferred embodiment of a media transformer includes a voice to text transformer[.]” *'866 Patent*, 6:38-45. The '866 Patent further recommends using “well known and commercially available” software for such voice to text transformation. *'866 Patent*, 5:61-63, 4:56-62. Additionally, the '866 Patent describes such transformation would aid a person with a hearing impairment. *'866 Patent*, 5:1-7.

b) *Chihara's Media Transformer Teachings – Text-to-Speech*

As discussed above, *Chihara* teaches a mobile communication device. *See* Claim 22(Pre)-22(a)(i).

In one embodiment *Chihara* teaches transforming received text data (e.g., from an email) to speech. *Chihara*, [0137] (“[T]he mobile telephone device may be provided with a voice synthesis circuit for converting the text data in the received electric mail to the voice data so that the voice data obtained from the voice synthesis circuit may be transferred to the headset. This modification make[s] it possible for

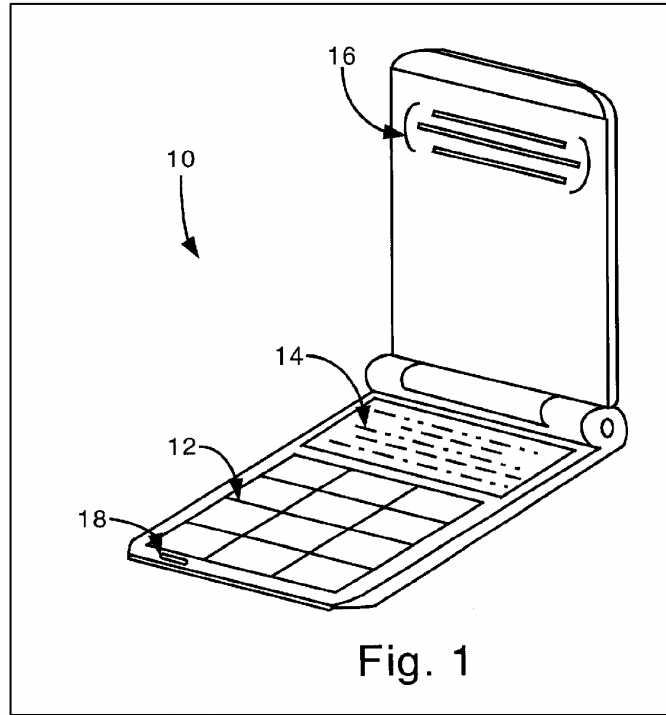
the user to hear the contents of the electric mail by way of the headset.”). *Chihara* does not expressly describe the reverse scenario of transforming phone call audio to text. However, such functionality was well known in the art, with *Everett* teaching such a speech to text transformation using software executed by a processor on a mobile device. For the reasons set forth below, a POSITA would have been motivated to modify *Chihara* per *Everett*’s teachings to include speech-to-text functionality (e.g., software executed by a processor) in the mobile phone to transmit translated speech to a surrounding device such as *Chihara*’s wrist watch-type apparatus. *Dec.*, ¶200. Such functionality relies on the precise hardware and wireless connection arrangement expressly described by *Chihara*. Namely, *Chihara* already teaches an embodiment in which phone call data (e.g., in the form of caller video) is communicated to its wireless wrist watch apparatus while simultaneously allowing the user to speak and listen via the wireless headset. *Id.*, [0078]. The proposed modification simply repurposes this wireless wrist watch connection to communicate voice-to-text data to the watch display and provides the well-understood benefit of assisting the hearing impaired to participate in voice calls. *Dec.*, ¶200.

c) Everett’s Media Transformer Teachings – Mobile Phone with Speech-to-Text Transformation Capability

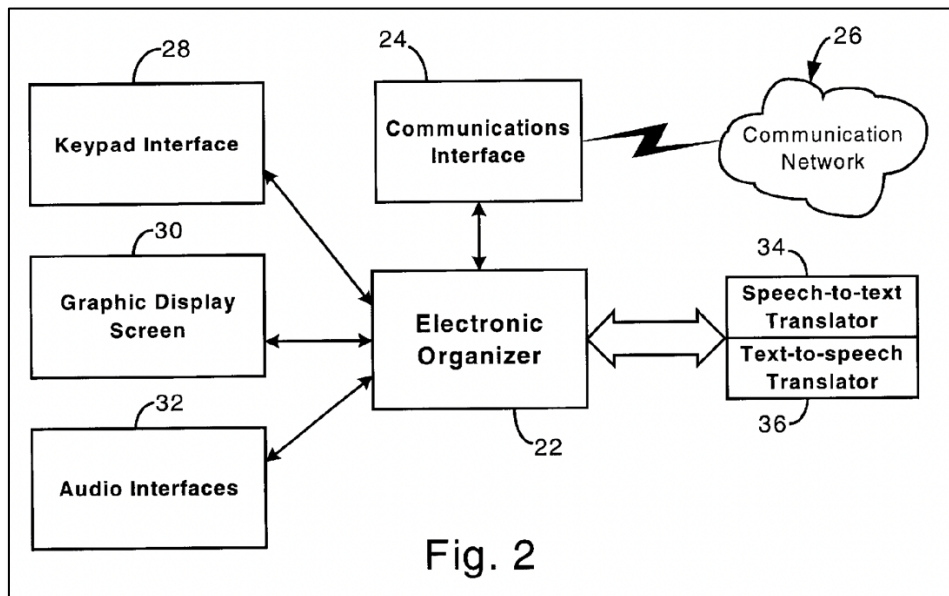
Everett teaches a mobile device that translates speech of an incoming phone call into text, for example, to aid a hearing impaired user. Specifically, *Everett*

teaches “a portable electronic telecommunication device embodied as a cellular telephone 10 which has text-to-speech and speech-to-text translation capabilities so that it can be used by a hearing-impaired user.” *Everett*, 2:19-23. *Everett* teaches cellular telephone 10 includes an “electronic organizer 22” that “can interface with some or all of the other components of the cellular telephone 10.” *Everett*, 2:35-38. Electronic organizer 22 “has storage for one or more programs and interacts with the various components of the cellular telephone 10.” *Everett*, 2:44-48.

Further, *Everett* teaches the “electronic organizer 22 may include the speech recognition translator program module 34 resident and selectively executable thereupon, and when called, the program module 34 translates speech from either the communicating party or the user of the telephone into a data stream of text comprised of text words ideally for each spoken word.” *Everett*, 2:66-3:5, 3:21-31, 3:32-52 (including teaching commercially available speech recognition translator programs), Fig. 3 (depicting a flowchart of translating speech to text). *Everett’s* cellular telephone 10 is depicted below in Fig. 1:



Everett, Fig. 1. Additionally, *Everett's* Fig. 2 below depicts components of cellular telephone 10, including electronic organizer 22 and speech-to-text translator 34:



Everett, Fig. 2.

2. Motivation to Combine Chihara with Everett

A POSITA would have been motivated to modify *Chihara* to capture *Everett's* advantages including, for example, allowing a hearing impaired user to “enjoy the benefits of readily portable telecommunications devices[,]” per *Everett's* teachings. *Everett*, 1:47-56; *Dec.*, ¶200. Such a use of a known technique of using a processor to execute speech-to-text translation software on a mobile device (e.g., cellular phone) (“*media transformer*”) would have advantageously improved *Chihara's* mobile telephone in the same way as *Everett's* cellular telephone. *Dec.*, ¶200.

The modified *Chihara* would have performed such speech-to-text translation at the mobile telephone (in the same way as *Everett*) but would have further transmitted the translated text to the wrist watch-type apparatus for a user to read said text. *Dec.*, ¶200. Indeed, *Chihara* already teaches transmitting images and text to the wrist watch-type information apparatus, during a phone call (and while simultaneously communicating bidirectional audio with the wireless headset), such that modifying *Chihara* to further transmit phone call audio translated to text is consistent with *Chihara's* express teachings and would have had a reasonable expectation of success. *Dec.*, ¶200. Such a modification would have improved *Chihara's* mobile telephone for non-hearing impaired users as well, for example, by providing text on *Chihara's* wrist watch-type apparatus for a user to read in a noisy

environment or other environment where hearing the audio of a phone call is difficult. *Dec.*, ¶200.

Further, a POSITA would have been motivated to maintain *Chihara's* teachings of transmitting audio to the Bluetooth-enabled headset even for a hearing impaired individual. *Dec.*, ¶200. Indeed, it was well understood that hearing loss/impairment may have varying levels of severity due to age, trauma, or other factors, such that a user with some hearing impairment (but not totally deaf) would still be able to advantageously hear some portions of the call or perhaps understand non-verbal spoken cues (e.g., inflection, volume, pauses, etc.). *Dec.*, ¶200 (opining regarding *Engelke* and the advantages of maintaining phone call audio for hearing impaired users). Also, a user would be able to advantageously maintain their usual habits of listening to a call (including non-verbal spoken cues) instead of receiving only the speech-to-text translation. *Dec.*, ¶200.

A POSITA would have understood that modifying *Chihara* per *Everett's* teachings would have had a reasonable expectation of success. Indeed, *Chihara* and *Everett* teach mobile phones, and *Chihara* already teaches similar text-to-speech translation for a received email. *Dec.*, ¶200. Modifying *Chihara* to utilize well-known and commercially available speech-to-text software in a mobile device per *Everett's* teachings thus would have been a solution to a known problem and would have been well within the skillset of a POSITA. *Dec.*, ¶200.

3. *Chihara's Plurality of Media Type Requirements*

Chihara teaches “slave” devices that include particular input/output functionalities, such as headset 13 for outputting phone call audio and receiving user voice input via microphone 77. *Chihara*, [0001], [0006], [0009], [0049], [0078]-[0083], Figs. 7, 9. Additionally, watch 12B includes capabilities such as outputting images, text, and video (for example, in a videocall mode). *Chihara*, [0078], [0114]-[0117], [0132], [0055], Fig. 8. A POSITA would have understood that a user of mobile phone 11B would have taken capabilities of “slave” devices into consideration when selecting devices with which to pair to form a Bluetooth piconet. *Dec.*, ¶200. Specifically, certain devices would have had particular capabilities for outputting media types (e.g., text, audio, and/or video) or inputting media types (e.g., capturing images, audio, and/or video). *Chihara*, [0006]-[0009], [0049], [0055], [0078]-[0083], Figs. 7-9; *Dec.*, ¶200.

In the proposed combination, *Chihara's* wrist watch display is repurposed to provide a text-based read out of the phone call audio, transformed from speech pursuant to *Everett*. Claim 22(a)(iii) requires a user interface that permits the user to select a media type for transformation. In the proposed combination, the media type is text. To satisfy this limitation, the user simply needs the option to indicate that they desire a text display of the phone call audio. This is precisely consistent with at least one embodiment described in the '866 Patent in which phone call audio is

cloned and one cloned copy is converted to text and displayed for a hearing impaired participant. *See '866 Patent*, 11:61-12:11. As set forth in detail below, a POSITA would have understood and found obvious that the proposed combination would provide the user such an option to select a text-based output of the phone call audio.

As discussed above, *BluetoothSpec* teaches details regarding Service Discovery Protocol for determining such capabilities of devices. *See Claim 22(a)(ii)*. Thus, a POSITA would have understood that a user of mobile phone 11B would have received information regarding the media capabilities of potential slave devices with which to pair through *BluetoothSpec's* Service Discovery Protocol before making a pairing selection and forming a pico-net. *Dec.*, ¶200. In this way, a user would have selected particular media type requirements (e.g., choosing to output text such as from speech-to-text per *Everett's* teachings or choosing to output phone call audio and receive microphone input from headset 13 and microphone 77) using the modified *Chihara's* mobile phone 11B. *Dec.*, ¶200.

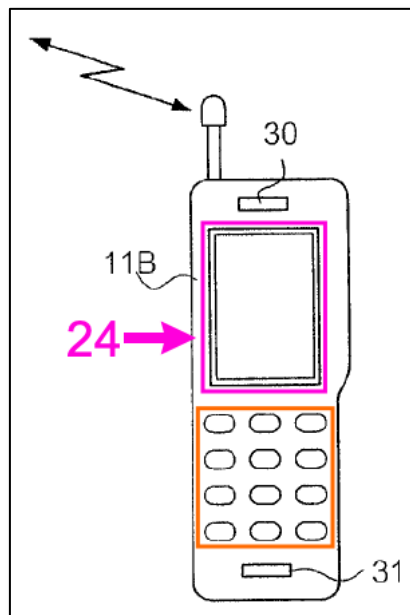
Further, a POSITA would have understood that such selections would have been made using the modified *Chihara's* user interface, as discussed in detail below at Section V.F. *Dec.*, ¶200. Alternatively, a POSITA would have understood that such selections would have been made using the modified *Chihara's* user interface in view of *Chang's* teachings, discussed Section V.F below. *Dec.*, ¶200.

F. Claim 22(a)(iv) - a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer, and

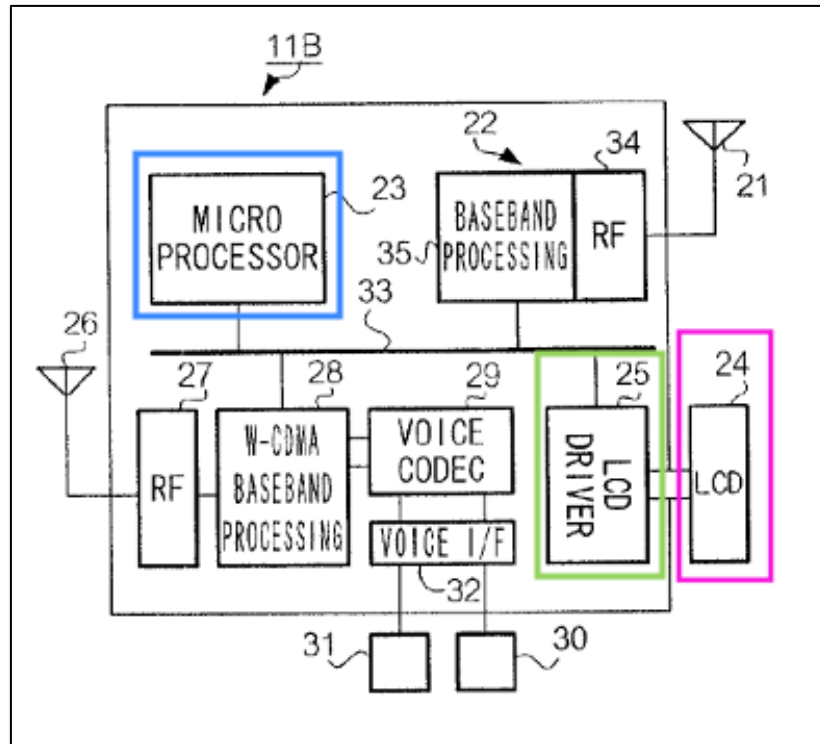
1. Chihara's User Interface for Selecting Media Type Requirements for Transforming at said Media Transformer

As discussed above, *Chihara* in view of *Everett* teaches transforming media content at said media transformer. *See* Claim 22(a)(iii).

Chihara depicts mobile telephone 11B includes user input controls such as buttons (orange) and an LCD display 24 (pink) (collectively a “user interface” along with any necessary instructions executed by microprocessor 23).



Chihara, Fig. 7 (excerpt, annotated); *Dec.*, ¶201.



Chihara, Fig. 9 (excerpt, annotated), [0050] (teaching LCD driver 25 (annotated green) for driving LCD 24 (annotated pink) under control of microprocessor 23 (annotated blue)), [0072], [0130].

Additionally, *Chihara* teaches forming a pico-net between a “master” device (e.g., mobile phone) and multiple “slave” devices (e.g., headset, watch apparatus) at a time. *Chihara*, [0101], [0105]. Specifically, *Chihara* teaches “determining” mobile telephone device 11B “as a master and the wrist watch-type information apparatus 12[B] and the headset 13 as slaves to configure the pico-net shown in FIG. 13.” *Chihara*, [0101] (corrected). *Chihara* also notes that processes occur after the pico-net has been formed: “Once the pico-net is formed, the operation mode of the mobile telephone device 11B” is active. *Id.* A POSITA would have understood that in

Chihara's scenario of mobile telephone device 11B as master of the Bluetooth piconet, a user would have used LCD 24 and input buttons of mobile telephone 11B to select headset 13 and wrist watch-type information apparatus 12B as slave devices out of any nearby available Bluetooth-enabled devices. *Dec.*, ¶201. Indeed, a POSITA would have understood that such Bluetooth pairing would not have occurred automatically but would have utilized user input to select devices with which to pair, for example, before utilizing such “slave” devices for bidirectional phone call audio and receiving images, text (e.g., *Everett's* speech-to-text output), or video. *Dec.*, ¶201 (explaining that a user could select the wireless headset and wrist watch display before a call is received and place those devices in “park” mode, but that the wireless wrist watch display was still manually selected in that case based on its ability to service the user’s desired text read out of phone call audio).

Similarly, a POSITA would have understood that *Chihara's* LCD 24 and input buttons would have allowed a user to select one of a plurality of media type requirements for transforming at the media transformer. *Dec.*, ¶201. Indeed, devices such as wrist watch-type information apparatus 12B were capable of displaying text, images, and video (e.g., video call mode). *Chihara*, [0078]-[0079], [0114]-[0117], [0132], [0049], [0055], Fig. 8. When combining *Chihara* with *Everett's* teachings of performing speech-to-text transformation at the mobile phone and transmitting the outputted text to the wrist watch information apparatus, a POSITA would have

understood that a user would have selected such a text output mode using the mobile phone. *Dec.*, ¶201. Such a selection would have been use of a known technique of choosing a preference for the watch apparatus to function in a text output mode to assist a hearing impaired user instead of being used in a video call mode, for example. *Dec.*, ¶201.

A POSITA would have understood that choosing such an output mode for transformation out of a plurality of available output modes would have been performed at the mobile device rather than the watch because the mobile phone (master device) would have been used to configure the pico-net, and the watch functionality for text output would have been selected when configuring and forming the pico-net. *Dec.*, ¶201. A POSITA would have understood that selecting the watch's operating mode for a pico-net at the mobile device would not have fundamentally altered the functionality of *Chihara's* watch 12B (e.g., would not have permanently disabled video calling mode) but would have been merely selecting one operating mode out of several available operating modes for the mobile telephone to transform speech into text and output said text to watch 12B to assist a user with hearing impairment or other non-impaired users. *Dec.*, ¶201. Thus, *Chihara's* watch 12B would have maintained its full range of capabilities but a user would have had a choice of which mode to utilize at a given time. *Dec.*, ¶201.

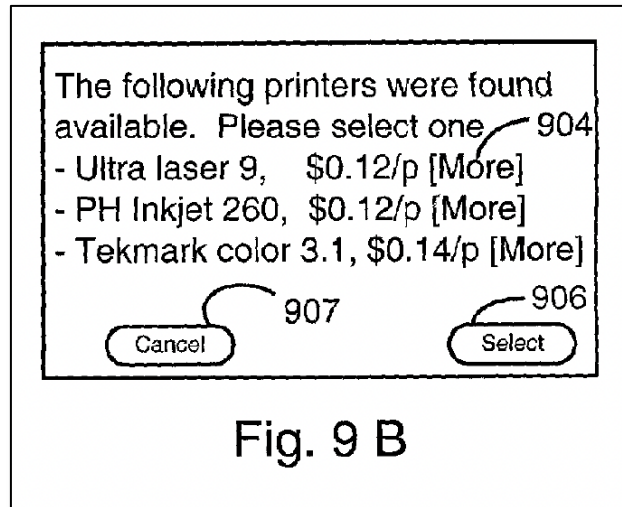
2. *Chang's User Interface for Selecting a Media Type Requirement*

To the extent Patent Owner argues *Chihara* does not render obvious a user interface for selecting a media type requirement, a POSITA would have been motivated to implement *Chihara* pursuant to user interface teachings in the art, such as those described by *Chang*. *Chang* teaches a similar mobile phone device to *Chihara* and *Everett*. For example, *Chang* teaches an information apparatus 100, which may be a “mobile computing device such as palmtop computer, handheld device, laptop computer, personal digital assistant (PDA), smart phone, screen phone ...” *Chang*, [0073], [0078], [0002]. *Dec.*, ¶201.

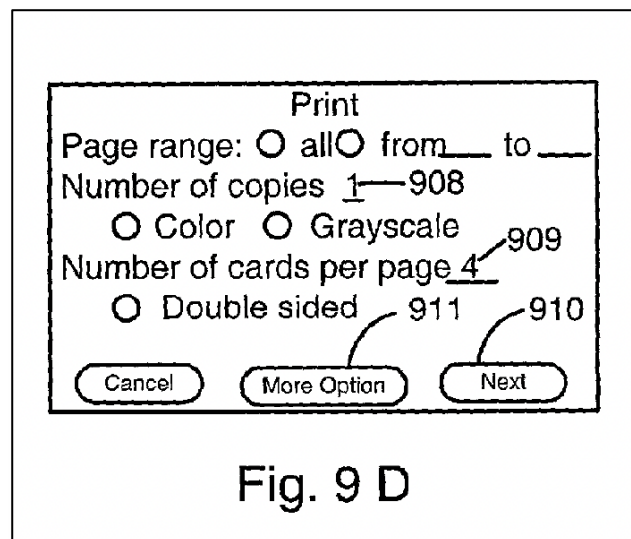
Chang teaches such information apparatus also includes an “interface” “for interactions with users[,]” where such user interface includes “a keyboard, a touch-sensitive or non-touch sensitive screen, push buttons, soft keys, a stylus[.]” *Chang*, [0074], *id.* (“The interface may be implemented in software or hardware or a combination.”). In one example, *Chang* teaches an information apparatus includes a graphical user interface (GUI) that a user can interact with directly via touch or via another user interface (e.g., push buttons) to make selections and perform various tasks. *Chang*, [0046], [0050] (specifying user preferences via a GUI), [0089]-[0090] (obtaining selections “by user input through a GUI”), [0203], [0222], [0259]-[0261] (including teaching regarding Figs. 9A-9F, which depict GUIs for users to make selections), [0265]-[0267] (including teaching moving a cursor on a GUI and

selecting a “select” command), Figs. 9A-9F. *Dec.*, ¶201. *Chang* teaches such selections using a GUI include specifying an output device (e.g., audio device, video display) and specifying a particular job for said output device. *Chang*, [0050]-[0060], [0095]-[0096] (teaching numerous examples of output devices 106 including teaching “[a]ny device capable of playing or reading digital content in audio (e.g., music) or data (e.g., text or document) formats is also a possible output device 106.”). *Dec.*, ¶201.

In one example, *Chang* teaches using a printer as an output device. A user performs a search discovery process to find compatible and available output devices (e.g., printers) including printers that can perform a particular task (e.g., color printing). A user uses a user interface (e.g., GUI with touch screen, stylus, buttons) of information apparatus 100 to make selections of which device to use as an output device 106 and to specify the particular functions the output device will perform. *Chang*, [0259]-[0266], [0074], Figs. 9A-9F. For example, Fig. 9B below depicts the results of an output device search, where three printers (Ultra laser 9, PH Inkjet 260, and Tekmark color) were discovered and a user can select one of said printers to use as an output device.



Chang, Fig. 9B. Further, *Chang* teaches utilizing the user interface for a user to select options for the output task, as depicted in Fig. 9D below:



Chang, Fig. 9D.

While *Chang* teaches an example using a printer as an output device, *Chang* expressly teaches using other output devices including display screens, monitors, televisions, and voice output devices. *Chang*, [0191]-[0192], [0095]-[0096]. *Dec.*,

¶201. A POSITA would have understood that *Chang* would have used a user interface in a similar manner for other such output devices. *Dec.*, ¶201.

3. *Motivation to Combine Chihara, BluetoothSpec, Everett, and Chang*

A POSITA would have been motivated to modify *Chihara-BluetoothSpec-Everett* per *Chang*'s teachings to provide a mobile device with a user interface (e.g., one or more of a GUI, push buttons, stylus, or other user input as discussed above) for a user to select a media type requirement from a plurality of media type requirements for a transformation at a media transformer of a mobile device. *Dec.*, ¶201. Such a modification would have applied *Chang*'s known user interface teachings, allowing *Chihara*'s user to select which device(s) is used for a given call. *Dec.*, ¶201. Indeed, such a modification would have allowed a user to select a particular media type requirement out of a plurality of media type requirements for a transformation (e.g., speech-to-text per *Everett*'s teachings) using a user interface of *Chihara*'s mobile device. *Dec.*, ¶201.

While *Chihara* already depicts buttons and an LCD screen on a mobile device, *Chihara* does not provide an express teaching of a user pressing said buttons or using a touch screen as a user interface. Accordingly, a POSITA would have understood that *Chang* merely provides implementation details for how *Chihara*'s user interface would be implemented. *Dec.*, ¶201. Modifying *Chihara* (as modified by *BluetoothSpec* and *Everett*) would have advantageously provided a user with a

variety of options for making selections at a mobile device, including using a touch screen display or non-touch screen display and making a selection via buttons, for example. *Dec.*, ¶201. Utilizing a GUI for the mobile device would have been use of a known technique that would have advantageously provided a straightforward, easy-to-use experience for a mobile device user. *Dec.*, ¶201.

A POSITA would have had a reasonable expectation of success when modifying *Chihara-BluetoothSpec-Everett* per *Chang*'s teachings. Indeed, *Chihara*, *Everett*, and *Chang* all teach similar mobile devices, including *Chihara* already depicting a mobile phone with an LCD screen and buttons. *Chihara*, [0078]-[0083], Figs. 7-9; *Everett*, 2:19-3:31, Figs. 1-2; *Chang*, [0002], [0073], [0260]; *Dec.*, ¶201. Modifying the *Chihara* combination per *Chang* would have merely required including software or programming instructions and optionally hardware (e.g., substituting a touch-enabled screen instead of a non-touch enabled screen) for allowing a user to utilize user inputs to make selections at the mobile device. *Dec.*, ¶201. Such a modification would have used widely available, off-the-shelf components and/or software, further making the modification straightforward and not requiring undue experimentation.

Further, *Chang*, like *Chihara*, teaches using a Bluetooth connection between devices, such as a mobile phone and an output device (e.g., audio device, video display device). *Chang*, [0075]-[0077], [0106], [0166]-[0167], [0197]; *Dec.*, ¶201.

Thus, interactions between various devices (e.g., mobile phone, headset, watch apparatus) would have been according to the same wireless networking protocol, further providing a reasonable expectation of success for modifying the *Chihara* combination. *Dec.*, ¶201.

G. Claim 22(b) - a media cloner, associated with said media transformer, for making multiple copies of a single incoming data stream, thereby to enable said apparatus to redirect said single incoming data stream to a plurality of locations, at least some of said multiple copies being transformed via said media transformer.

1. '866 Patent's Media Cloner Description

The '866 Patent describes a media cloner as “making multiple copies of the data, in particular but not exclusively an incoming communication[.]” *'866 Patent*, 2:53-57, 3:46-48, 4:18-20 (“multiplication, i.e. cloning”), 6:51-56 (“duplication of its input channel content”), 7:6-16.

In one specific example, the '866 Patent describes cloning audio from an incoming phone call, transmitting one copy of the audio to speakers, transforming a second copy from audio to text, and transmitting that text to a display. *Id.*, 9:49-63; *see also id.*, 11:61-12:9.

2. Chihara-Everett Teaches a Media Cloner

As discussed at length above, *Chihara-Everett* teaches a media cloner that performs the same role in same phone call scenario as is described by the '866 Patent. *See* Claim 22(Pre)-22(a)(i), 22(a)(iii). *Chihara* teaches (1) outputting phone call audio to a wireless headset and (2) using a watch apparatus (i) for bidirectional

video/images between the watch and mobile phone and also (ii) for receiving text at the watch. *Chihara*, [0001], [0006], [0009], [0049], [0078]-[0083], [0114]-[0117], [0132], [0055], Figs. 7-9. Thus, *Chihara* already teaches receiving a media call and outputting portions of that media (e.g., audio, video) to a plurality of output devices. *Dec.*, ¶202.

A POSITA would have understood that the proposed combination of *Chihara* modified by *Everett* (as described above) requires two copies of the phone call data—one sent as audio to the wireless headset and a second, transformed into text, sent to the wireless watch display. *Dec.*, ¶202. A POSITA would have understood that the '866 Patent does not describe specialized hardware for performing such a task, but that a mobile phone is utilized in some embodiments. '866 Patent, generally 5:47-67, 8:13-18, 10:4-12:11, Fig. 1; *Dec.*, ¶202. *Chihara* teaches the same type of mobile device as described in the '866 Patent, i.e., a mobile phone. *Chihara*, [0078]-[0083], [0049]-[0050], Figs. 7-9.

A POSITA would have understood that cloning (e.g., copying) is a basic function of computing devices, including mobile phones. *Dec.*, ¶202. Indeed, copying/cloning digital data is a trivial task performed by standard computer processors and memory, using basic software routines. *Dec.*, ¶202. POSITA would have understood that in the *Chihara* combination, a voice signal would have been received at the mobile phone, digitized, copied, and prepared for transmission to

output devices (e.g., performing compression, modulation, and/or other processes for transmitting audio to the headset and transformed text to the watch via a Bluetooth connection). *Dec.*, ¶202. Therefore, at least some of the copies would have been redirected via the media transformer to transform voice to text. *Dec.*, ¶202.

Thus, a POSITA would have understood that *Chihara's* mobile phone processor programmed to clone data is a media cloner, as claimed. *Dec.*, ¶202. Further, a POSITA would have understood that such a media cloner would have been associated with a media transformer, because *Chihara-Everett's* speech-to-text transformation requires a copy of the phone call to transform and uses software executed by a processor (which also executes media cloning functionalities). *Dec.*, ¶202. Thus, a single incoming data stream (e.g., phone call) received at a mobile device would have been cloned to output the data stream to a plurality of locations (i.e., *Chihara's* headset and watch apparatus) and where “*at least some of said multiple copies being transformed via said media transformer*” because speech-to-text transformation is performed on at least some of the copies. *Dec.*, ¶202.

3. Motivation to Combine Chihara and Everett

The motivations to combine are discussed above at Claim 22(a)(iii). These motivations apply equally here and are incorporated by reference.

H. Claim 23(Pre) - Apparatus for routing'and'⁹ rerouting media data, the apparatus being mobile and comprising:

To the extent the preamble is limiting, *Chihara* teaches an apparatus for routing and rerouting media data, including phone call audio, images, video, and text. *See* Claim 22(Pre); *Dec.*, ¶203.

I. Claim 23(a) - a media data transfer device comprising:

Chihara teaches a media data transfer device, such as mobile telephone 11B, which transfers media data, such as phone call audio to headset 13 and images/video/text to wrist watch-type information apparatus 12B. *See* Claim 22(Pre), 22(a); *Dec.*, ¶204.

J. Claim 23(a)(i) - an announcer device configured for indicating to surrounding media handling devices that said media data transfer device is available to receive media data, thereby to enable receipt of rerouted data from said surrounding media handling devices, and

Chihara teaches media data transfer device including an announcer device and teaches rerouting data such as phone call audio (i.e., media data). *See* Claims 22(a)(i), 23(a); *Dec.*, ¶205.

⁹ A POSITA would have understood that the claimed “routing'and” is a typographical error that should read “routing and” without the apostrophe. *Dec.*, ¶203.

K. Claim 23(a)(ii) - a scout device configured for scanning surroundings to identify surrounding media handling devices as being compatible with given media and determine availability of said identified compatible media handling devices, thereby to reroute media data from said media data transfer device to a selected one of said surrounding media handling devices, said scout device further being configured to determine media type requirements of said media handling devices;

Chihara teaches media type requirements. *See* Claim 22(a)(ii). *Chihara* in view of *BluetoothSpec* teaches scanning surroundings to identify surrounding media handling devices as being compatible with given media and determining availability of said devices. *Id. Dec.*, ¶206.

L. Claim 23(a)(iii) - a media transformer, configured to transform media into a form that accords with respective determined media type requirements, there being a plurality of said media type requirements;

See Claim 22(a)(iii); *Dec.*, ¶207.

M. Claim 23(a)(iv) - a user interface for allowing a user to select one of said plurality of media type requirements for transforming at said media transformer, and

See Claim 22(a)(iv); *Dec.*, ¶208.

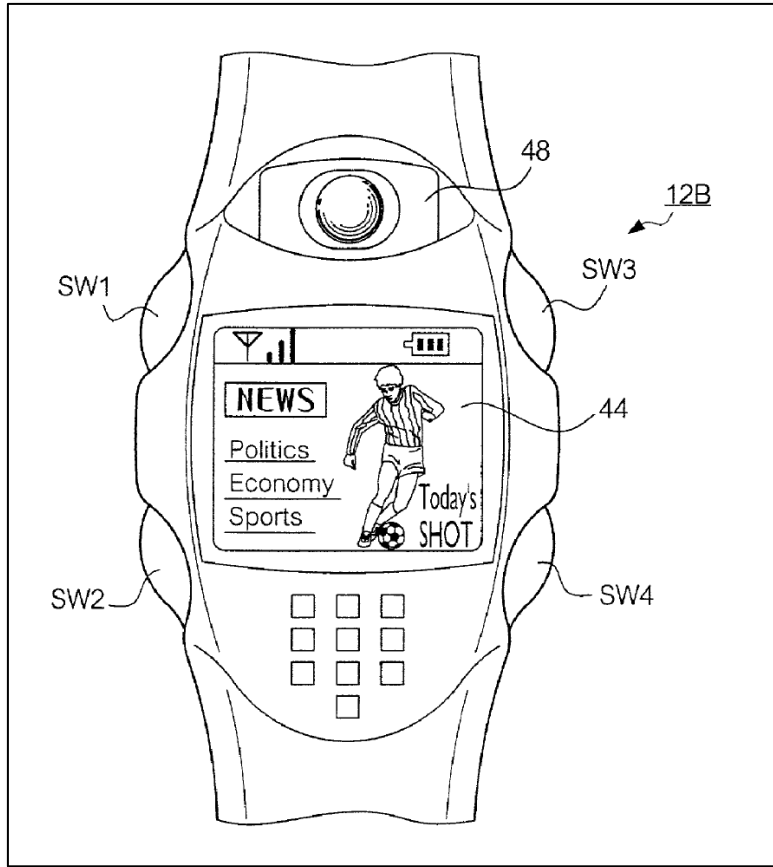
N. Claim 23(a)(v) - a media cloner, associated with said media transformer, for making multiple copies of said media data, thereby to enable said apparatus to redirect said media data to a plurality of locations, at least some of said multiple copies being transformed at said media transformer.

See Claim 22(b); *Dec.*, ¶209.

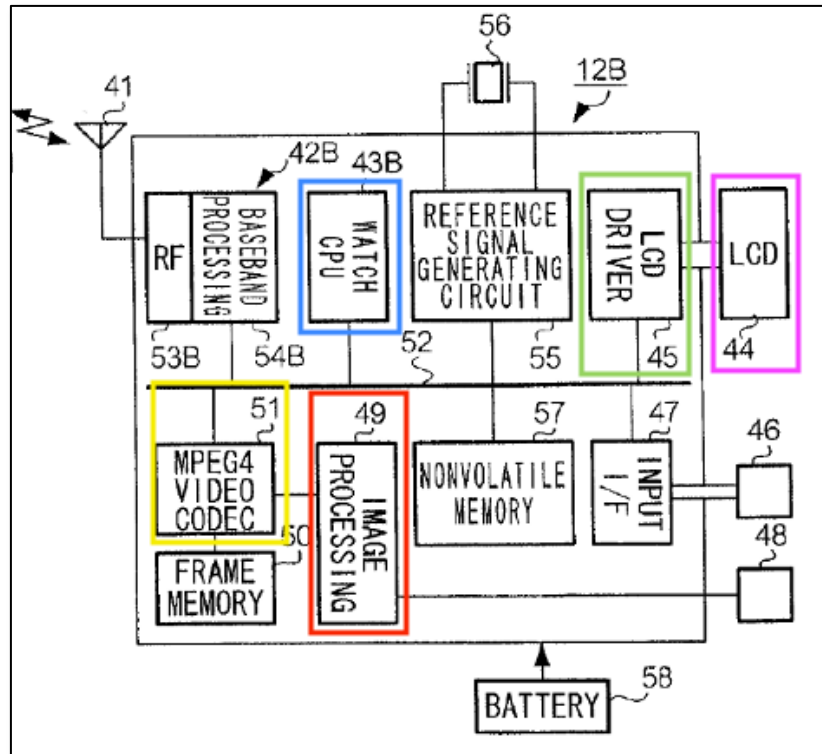
O. Claim 24 - The apparatus of claim 23, wherein said media type requirements comprise a screen capability.

Chihara-Everett teaches a media transformer and media type requirements. *See* Claim 22(a)(iii). For example, a user would have selected particular media type requirements (e.g., choosing to output text such as from speech-to-text per *Everett's* teachings or choosing to output phone call audio and receive microphone input from headset 13 and microphone 77) using the modified *Chihara's* mobile phone 11B. *Dec.*, ¶¶210-211. In the case of *Chihara's* watch apparatus, which includes a screen, and *Chihara's* headset, which does not include a screen, *Chihara's* watch apparatus would have included a screen capability, such as a screen for displaying text, images, or video, for example. *Dec.*, ¶¶210-211. Indeed, a POSITA would have understood that a screen capability would have been met by a device that includes a screen and thus the device is capable of displaying routed media on its screen. *Dec.*, ¶¶210-11. As discussed above, a user would have utilized a user interface to select such a media type requirement. *See* Claim 22(a)(iv).

Chihara's Fig. 15 below depicts display LCD 44 of watch apparatus 12B:



Chihara, Fig. 15. Additionally, *Chihara*'s Fig. 9 below depicts components of watch 12B, including LCD 44 (annotated pink), LCD driver 45 (annotated green), image processing unit 49 (annotated red), MPEG4 video CODEC 51 (annotated yellow), and watch CPU 43B (annotated blue), which a POSITA would have understood would have functioned together to display images, video, and/or text on LCD 44. Dec., ¶¶210-11.



Chihara, Fig. 9 (annotated excerpt), [0049]-[0051], [0078]-[0083], [0090], [0094], [0097], [0114]-[0117], [0129]-[0130]; ¶210-11.

VI. THE BOARD'S DISCRETION UNDER 35 U.S.C. § 314(a)

The parallel litigation remains in a nascent stage, with an initial scheduling order having been submitted just weeks ago. Ex. 1040. Invalidity contentions have yet to be served, no claim constructions positions have been exchanged, and a pending motion to transfer may moot the recently submitted schedule entirely. Accordingly, at least the following *Fintiv* factors favor institution: The IPR filing following closely behind the schedule submission mean it's more likely a stay would be granted (Factor 1), likely schedule modifications moving forward make it less likely that the final written decision in the IPR will precede the trial date (Factor 2),

and the investment in the co-pending proceedings is low (Factor 3). The Petition also shows a strong unpatentability case (Factor 6). Finally, if review is instituted, Petitioner stipulates not to assert in the litigation (1) the Proposed Grounds of invalidity presented here nor (2) any grounds utilizing either *Chihara* or *Everett* for the Challenged Claims, ensuring no overlap in invalidity issues between this IPR and the co-pending litigation (Factor 4). In *Microsoft Corp., v. WSOU Investments, LLC*, a similar stipulation sufficiently mitigated concerns of duplicative efforts and conflicting decisions. IPR2021-00930, Paper 8 at 11 (PTAB Dec. 2, 2021); *see also Google LLC v. Jawbone Innovations, LLC*, IPR2022-01124, Paper 11 at 15-16 (PTAB Jan. 3, 2023). Taken together, these *Fintiv* factors favor the Board declining discretionary denial.

VII. CONCLUSION

For the forgoing reasons, Petitioner respectfully requests *inter partes* review of the Challenged Claims of the '866 Patent.

Respectfully submitted,

BY: /s/ Paul R. Hart
Paul R. Hart, Reg. No. 59.646

COUNSEL FOR PETITIONER

VIII. MANDATORY NOTICES UNDER 37 C.F.R. § 42.8(A)(1)

A. Real Party-In-Interest

Apple Inc. is the real party-in-interest. 37 C.F.R. § 42.8(b)(1).

B. Related Matters

The following matters relate to the '866 Patent:

- *S.M.R Innovations Ltd. v. Apple Inc.*, 6:23-cv-00479, D.I. 1 (W.D. Tex. Jul. 1, 2023)
- *Apple Inc. v. S.M.R Innovations Ltd.*, Inter Partes Review No. IPR2024-01047
- *Apple Inc. v. S.M.R Innovations Ltd.*, Inter Partes Review No. IPR2024-01048
- *Apple Inc. v. S.M.R Innovations Ltd.*, Inter Partes Review No. IPR2024-01050

C. Lead and Back-Up Counsel

Petitioner provides the following designation and service information for lead and back-up counsel. 37 C.F.R. § 42.8(b)(3) and (b)(4).

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CLAIM LISTING APPENDIX

U.S. Patent No. 8,711,866 for Claims 22-24

Claim Designation	Claim Language
Claim 22(Pre)	Apparatus for routing and rerouting streaming data, the apparatus being mobile and comprising:
Claim 22(a)	a streaming device comprising:
Claim 22(a)(i)	an announcer device configured to indicate to surrounding media handling devices that said streaming device is available to receive streaming data, thereby to enable receipt of rerouted data from said surrounding media handling devices, and
Claim 22(a)(ii)	a scout device configured to scan surroundings of said streaming device to identify surrounding media handling devices as being compatible to handle given media, and determine availability of said identified compatible media handling devices, thereby to reroute streaming data between said streaming device and a selected one of said surrounding media handling devices, said scout device further being configured to determine media type requirements of said compatible media handling devices, said apparatus configured to set up a bidirectional wireless communication link between said streaming device and a respective one of said media handling devices, said bidirectional link carrying streaming data over either direction as required of said bidirectional link;
Claim 22(a)(iii)	a media transformer, configured to transform media into forms that accord with respective determined media type requirements, wherein there are a plurality of said types;
Claim 22(a)(iv)	a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer, and
Claim 22(b)	a media cloner, associated with said media transformer, for making multiple copies of a single incoming data stream, thereby to enable said apparatus to redirect said single incoming data stream to a plurality of locations, at least some of said multiple copies being transformed via said media transformer.
Claim 23(Pre)	Apparatus for routing'and rerouting media data, the apparatus being mobile and comprising:
Claim 23(a)	a media data transfer device comprising:

Claim Designation	Claim Language
Claim 23(a)(i)	an announcer device configured for indicating to surrounding media handling devices that said media data transfer device is available to receive media data, thereby to enable receipt of rerouted data from said surrounding media handling devices, and
Claim 23(a)(ii)	a scout device configured for scanning surroundings to identify surrounding media handling devices as being compatible with given media and determine availability of said identified compatible media handling devices, thereby to reroute media data from said media data transfer device to a selected one of said surrounding media handling devices, said scout device further being configured to determine media type requirements of said media handling devices;
Claim 23(a)(iii)	a media transformer, configured to transform media into a form that accords with respective determined media type requirements, there being a plurality of said media type requirements;
Claim 23(a)(iv)	a user interface for allowing a user to select one of said plurality of media type requirements for transforming at said media transformer, and
Claim 23(a)(v)	a media cloner, associated with said media transformer, for making multiple copies of said media data, thereby to enable said apparatus to redirect said media data to a plurality of locations, at least some of said multiple copies being transformed at said media transformer.
Claim 24	The apparatus of claim 23, wherein said media type requirements comprise a screen capability.

APPENDIX OF EXHIBITS

Exhibit 1001	INTENTIONALLY LEFT BLANK
Exhibit 1002	INTENTIONALLY LEFT BLANK
Exhibit 1003	Declaration of Dr. Sayfe Kiaei (“ <i>Dec.</i> ”)
Exhibit 1004	U.S. Patent App. Pub. No. 2002/0068600 to Chihara et al. (“ <i>Chihara</i> ”)
Exhibit 1005	Specification of the Bluetooth System Version 1.1. February 22, 2001. (“ <i>BluetoothSpec</i> ”)
Exhibit 1006	U.S. Patent No. 6,701,162 to Everett (“ <i>Everett</i> ”)
Exhibit 1007	U.S. Patent App. Pub. No. 2002/0062406 to Chang et al. (“ <i>Chang</i> ”)
Exhibit 1008	U.S. Patent No. 7,580,005 to Palin (“ <i>Palin</i> ”)
Exhibit 1009	U.S. Patent No. 6,307,921 to Engelke et al. (“ <i>Engelke</i> ”)
Exhibit 1010	U.S. Patent App. Pub. No. 2002/0178279 to Janik et al. (“ <i>Janik</i> ”)
Exhibit 1011	International Publication No. WO 01/74024 to Hartmaier et al. (“ <i>Hartmaier</i> ”)
Exhibit 1012	European Patent Application No. EP1132847 to Han et al. (“ <i>Han</i> ”)
Exhibit 1013	U.S. Patent App. Pub. 2002/0102998 to Lin (“ <i>Lin</i> ”)
Exhibit 1014	U.S. Patent No. 7,580,005 to Palin (“ <i>Palin</i> ”)
Exhibit 1015	U.S. Patent App. Pub. No. 2003/0110234 to Egli et al. (“ <i>Egli</i> ”)
Exhibit 1016	U.S. Patent No. 6,910,068 to Zintel et al. (“ <i>Zintel</i> ”)
Exhibit 1017	INTENTIONALLY LEFT BLANK
Exhibit 1018	U.S. Patent No. 6,901,273 to Lutnaes (“ <i>Lutnaes</i> ”)
Exhibit 1019	U.S. Patent App. Pub. No. 2002/0141548 to Boda (“ <i>Boda</i> ”)
Exhibit 1020	International Publication No. WO 02/19152 to Bergman et al. (“ <i>Bergman</i> ”)
Exhibit 1021	Matthew S. Gast. <i>802.11 Wireless Networks The Definitive Guide</i> . O’Reilly & Associates. April 2002. (“ <i>Gast</i> ”)
Exhibit 1022	U.S. Patent No. 6,925,108 to Miller et al. (“ <i>Miller</i> ”)
Exhibit 1023	Jim Geier. <i>Wireless LANs</i> . 2 nd Edition. Sams Publishing. July 2001. (“ <i>Geier</i> ”)
Exhibit 1024	U.S. Patent No. 6,212,282 to Mershon (“ <i>Mershon</i> ”)
Exhibit 1025	U.S. Patent No. 6,526,287 to Lee (“ <i>Lee</i> ”)
Exhibit 1026	U.S. Patent App. Pub. No. 2002/0101367 to Geiger et al. (“ <i>Geiger</i> ”)
Exhibit 1027	U.S. Patent App. Pub. No. 2002/0186770 to Jawerth et al. (“ <i>Jawerth</i> ”)
Exhibit 1028	U.S. Patent App. Pub. No. 2003/0013438 to Darby (“ <i>Darby</i> ”)

Exhibit 1029	U.S. Patent App. Pub. No. 2003/0139966 to Sirota et al. (“ <i>Sirota</i> ”)
Exhibit 1030	U.S. Patent No. 5,781,192 to Kodimer (“ <i>Kodimer</i> ”)
Exhibit 1031	U.S. Patent No. 6,297,737 to Irvin (“ <i>Irvin</i> ”)
Exhibit 1032	U.S. Patent No. 6,309,305 to Kraft (“ <i>Kraft</i> ”)
Exhibit 1033	U.S. Patent No. 7,676,372 to Oba (“ <i>Oba</i> ”)
Exhibit 1034	U.S. Patent App. Pub. No. 2002/0035699 to Crosbie (“ <i>Crosbie</i> ”)
Exhibit 1035	U.S. Patent App. Pub. No. 2003/0065803 to Heuvelman (“ <i>Heuvelman</i> ”)
Exhibit 1036	U.S. Patent App. Pub. No. 2004/0198294 to Hagin-Metzer (“ <i>Hagin-Metzer</i> ”)
Exhibit 1037	International Publication No. WO 00/036867 to Lilja et al. (“ <i>Lilja</i> ”)
Exhibit 1038	U.S. Patent No. 8,711,866 (“’866 Patent”)
Exhibit 1039	Prosecution History for the ’866 Patent (“’866 FH”)
Exhibit 1040	<i>S.M.R. Innovations Ltd. v. Apple Inc.</i> , 6:23-cv-00479, D.I. 50 (“[Proposed] Agreed Scheduling Order”) (W.D.Tex. Jun. 7, 2024)
Exhibit 1041	Affidavit of Nathaniel E. Frank-White concerning <i>BluetoothSpec</i>
Exhibit 1042	07-01-2023 Complaint, Ex. H
Exhibit 1043	07-01-2023 Complaint, Ex. G
Exhibit 1044	02-06-2024 ’990 Patent Infringement Allegations Update
Exhibit 1045	02-06-2024 ’866 Patent Infringement Allegations Update
Exhibit 1046	05-17-2024 Preliminary Infringement Contentions

CERTIFICATION OF WORD COUNT

The undersigned certifies pursuant to 37 C.F.R. §42.24 that the foregoing Petition for *Inter Partes* Review, excluding any table of contents, mandatory notices under 37 C.F.R. § 42.8, certificates of service or word count, or appendix of exhibits, contains 12,387 words according to the word-processing program used to prepare this document (Microsoft Word).

Dated: July 5, 2024

BY: /s/ Paul R. Hart
Paul R. Hart, Reg. No. 59,646

COUNSEL FOR PETITIONER

**CERTIFICATE OF SERVICE ON PATENT OWNER
UNDER 37 C.F.R. § 42.105**

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105, the undersigned certifies that on July 5, 2024, a complete and entire copy of this Petition for *Inter Partes* Review including exhibits was provided via Federal Express to the Patent Owner by serving the correspondence address of record for the '866 Patent as listed on PAIR:

PRTSI Inc.
232 NW 42nd Ter
Plantation, Florida 33317

Further, a courtesy copy of this Petition for *Inter Partes* Review was sent via Email to Patent Owner's litigation counsel:

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