

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Goldstein, Steven Wayne	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	PRS-110-US(X)	

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6965770		2005-11-15	Walsh et al.	
	2	7546144		2009-06-09	de Leon et al	
	3	7206429		2007-04-17	Vossler, Stephan P.	
	4	6661901		2003-12-09	Svean et al.	
	5	6840908		2011-01-11	Edwards	
	6	6379314		2002-04-30	Horn	
	7	7558529		2009-07-07	Seshadri et al.	
	8	4539439		1985-09-03	Strothmann et al.	

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	9	3865998		1975-02-11	Weiss et al.	
	10	5694475		1997-12-02	Boyden	
	11	5751820		1998-05-12	Taenzer	
	12	7149319		2006-12-12	Hans-Ueli Roeck	

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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20070025194		2007-02-01	Morse et al	
	2	20070079692		2007-04-12	Glatt, Raoul	
	3	20030069854		2003-04-10	Hsu et al	
	4	20050078843		2005-04-14	Bauman	
	5	20050251224		2005-11-10	Berg, Christian	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
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FOREIGN PATENT DOCUMENTS							Remove	
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	WO2001024576	WO		2001-04-05	Pluvinae et al		☐

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NON-PATENT LITERATURE DOCUMENTS			Remove
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Elias Pampalk, Tim Pohle, and Gerhard Widmer, "Dynamic Playlist Generation Based On Skipping Behavior", Published in: Proc. of the 6th International Society for Music Information Retrieval (ISMIR) Conference, 2005	☐
	2	Provisional Patent Application for U.S. Serial No. 60/805,985, filed June 28, 2006.	☐
	3	Zotkin et al., "Creation of Virtual Auditory Spaces", Acoustics Speech and Signal Processing (ICASSP), May, 2002.	☐
	4	Begault et al., "Direct Comparison of the Impact of Head Tracking, Reverberation, and Individualized Head-Related Transfer Functions on the Spatial Perception of a Virtual Speech Source", J. Audio Eng. Soc., Vol. 49, No. 10, October, 2001.	☐

If you wish to add additional non-patent literature document citation information please click the Add button **Add**

EXAMINER SIGNATURE			
Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Goldstein, Steven Wayne
Art Unit	
Examiner Name	
Attorney Docket Number	PRS-110-US(X)

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/PABLO MELES/	Date (YYYY-MM-DD)	
Name/Print	PABLO MELES	Registration Number	33739

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

**CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION
UNDER 37 CFR 1.102(e) (Page 1 of 1)**

First Named Inventor:	Steven Wayne Goldstein	Nonprovisional Application Number (if known):	
Title of Invention:	PERSONAL AUDIO ASSISTANCE DEVICE AND METHOD		

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.

1. The processing fee set forth in 37 CFR 1.17(i)(1), the prioritized examination fee set forth in 37 CFR 1.17(c), and if not already paid, the publication fee set forth in 37 CFR 1.18(d) have been filed with the request. The basic filing fee, search fee, examination fee, and any required excess claims and application size fees are filed with the request or have been already been paid.
2. The application contains or is amended to contain no more than four independent claims and no more than thirty total claims, and no multiple dependent claims.
3. The applicable box is checked below:

I. ☒ Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)

- i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via EFS-Web.
---OR---
(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.
- ii. The executed inventor's oath or declaration is filed with the application. (37 CFR 1.63 and 1.64)

II. ☐ Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)

- i. A request for continued examination has been filed with, or prior to, this form.
- ii. If the application is a utility application, this certification and request is being filed via EFS-Web.
- iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
- iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
- v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature /pablo meles/	Date January 7, 2014
Name (Print/Typed) Pablo Meles	Practitioner Registration Number 33739
Note: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.*	
☐ *Total of _____ forms are submitted.	

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PRS-110US2
		Application Number	
Title of Invention	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2

☐	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
--------------------------	---

Inventor Information:

Inventor 1					Remove		
Legal Name							
Prefix	Given Name		Middle Name		Family Name		Suffix
Mr.	Steven		Wayne		Goldstein		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service							
City	Delray Beach		State/Province	FL	Country of Residence i	US	
Mailing Address of Inventor:							
Address 1		16390 Maddalena Place					
Address 2							
City	Delray Beach			State/Province	FL		
Postal Code	33446		Country i	US			
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.							
Add							

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
☐ An Address is being provided for the correspondence Information of this application.			
Customer Number	117822		
Email Address	personics_docketing@cardinal-ip.com	Add Email	Remove Email
Email Address	pmeles@personicslabs.com	Add Email	Remove Email
Email Address	sgoldstein@personicslabs.com		Remove Email

Application Information:

Title of the Invention	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD		
Attorney Docket Number	PRS-110US2	Small Entity Status Claimed ☒	
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	5	Suggested Figure for Publication (if any)	5A

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PRS-110US2
		Application Number	
Title of Invention	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD		

Filing By Reference :

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐ Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.			
Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	117822		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the application number blank.

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	11774965	2007-07-09
Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
11774965	Claims benefit of provisional	60806769	2006-07-08

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PRS-110US2
		Application Number	
Title of Invention	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD		

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

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Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ^j (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Authorization to Permit Access:

☐ Authorization to Permit Access to the Instant Application by the Participating Offices

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	PRS-110US2
	Application Number	
Title of Invention	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD	

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.				
Applicant 1		Remove		
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.				
Clear				
☒ Assignee	☐ Legal Representative under 35 U.S.C. 117	☐ Joint Inventor		
☐ Person to whom the inventor is obligated to assign.	☐ Person who shows sufficient proprietary interest			
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:				
Name of the Deceased or Legally Incapacitated Inventor :				
If the Applicant is an Organization check here. ☒				
Organization Name	Personics Holdings, Inc.			
Mailing Address Information:				
Address 1	4800 N Federal Highway			
Address 2	Suite A 205			
City	Boca Raton	State/Province FL		
Country ⁱ	US	Postal Code 33431		
Phone Number	561-368-7800	Fax Number 561-620-3090		

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PRS-110US2
		Application Number	
Title of Invention	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD		
Email Address	sgoldstein@personicslabs.com		
Additional Applicant Data may be generated within this form by selecting the Add button.			Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Assignee 1			
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.			
			Remove
If the Assignee or Non-Applicant Assignee is an Organization check here.			☒
Organization Name	Personics Holdings, Inc.		
Mailing Address Information For Assignee including Non-Applicant Assignee:			
Address 1	4800 N Federal Highway		
Address 2	Suite A 205		
City	Boca Raton	State/Province	FL
Country i	US	Postal Code	33431
Phone Number	561-368-7800	Fax Number	561-620-3090
Email Address	sgoldstein@personicslabs.com		
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.			Add

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications					
Signature	/pablo meles/			Date (YYYY-MM-DD)	2014-01-06
First Name	Pablo	Last Name	Meles	Registration Number	33739
Additional Signature may be generated within this form by selecting the Add button.					Add

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PRS-110US2
		Application Number	
Title of Invention	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of
Invention

PERSONAL AUDIO ASSISTANT DEVICE AND METHOD

As the below named inventor, I hereby declare that:

This declaration
is directed to:



The attached application, or



United States application or PCT international application number _____
filed on _____

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

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Inventor:

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PERSONAL AUDIO ASSISTANT DEVICE AND METHOD

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the priority benefit of U.S. Provisional Application No. 60/806,769, under 35 U.S.C. § 119(e), filed 8 July 2006, and U.S. Non-Provisional Application No. 11/774965 filed 9 July 2007, both of which are incorporated herein by reference in their entireties.

FIELD

[0002] The claimed embodiments relate in general to methods and devices for the storage and recall of audio content via an earpiece, and in particular, though not exclusively, for the storage and playing of music or verbal content on a system that is built into a headphone.

BACKGROUND

[0003] Present audio content playing devices are separated from the headphone system that normally contains the speakers (also referred to as receivers). The reason for this has typically been that audio content has been stored on disks that require a separate playing system. However, even with the advent of storing audio content on non-disk RAM (Random Access Memory) storage systems, the audio content player has been separated from the earpiece system (e.g., plug in headphones or earbuds). Combining the capacity for audio download and playing in an earpiece system is not obvious over related art since

the user interaction system (e.g., play button, keyboard system) does not readily appear compatible with the size of an earpiece device and the difficulty of user interaction.

[0004] Additionally, no system currently exists for registration and download of audio content into an earpiece.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] Examples of the claimed embodiments will become apparent from the following detailed description, taken in conjunction with the drawings in which:

[0006] Figure 1 illustrates the connection between an earpiece device (103 and 104) and a communication network;

[0007] Figure 2 illustrates at least one exemplary embodiment where earpiece devices share information with other earpiece devices within range (e.g., GPS location and identity);

[0008] Figure 3 illustrates an example of various elements that can be part of an earpiece device in accordance with at least one exemplary embodiment;

[0009] Figure 4 illustrates an example of a communication system in accordance with at least one exemplary embodiment that a user can use to register via his/her computer;

[0010] Figure 5A illustrates an earpiece that can store and download audio content in accordance with at least one exemplary embodiment;

[0011] Figure 5B illustrates a block diagram of the earpiece of Figure 5A; and

[0012] Figure 6 illustrates a user interface for setting the parameters of the Personal Audio Assistant.

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

[0013] The following description of exemplary embodiment(s) is merely illustrative in nature and is in no way intended to limit the claimed embodiments, its application, or uses.

[0014] Processes, methods, materials and devices known by one of ordinary skill in the relevant arts can not be discussed in detail but are intended to be part of the enabling discussion where appropriate for example the generation and use of transfer functions.

[0015] Notice that similar reference numerals and letters refer to similar items in the following figures, and thus once an item is defined in one figure, it can not be discussed for following figures.

[0016] Note that herein when referring to correcting or corrections of an error (e.g., noise), a reduction of the error and/or a correction of the error is intended.

SUMMARY OF EXEMPLARY EMBODIMENTS

[0017] At least one exemplary embodiment is directed to a system for Personalized Services delivered to a Personal Audio Assistant incorporated within an earpiece (e.g., earbuds, headphones). Personalized Services include content such as music files (for preview or purchase) related to a user's preferences, reminders from personal scheduling software, delivery and text-to-speech, speech-to-text processing of email, marketing messages, delivery and

text-to-speech of stock market information, medication reminders, foreign language instruction, academic instruction, time and date information, speech-to-speech delivery, instructions from a GPS system and others. A Personal Audio Assistant can be an audio playback platform for providing the user with Personalized Services.

[0018] At least one exemplary embodiment is directed to a Personal Audio Assistant system that is included as part of an earpiece (e.g., Headphone system). The Personal Audio Assistant is capable of digital audio playback, mitigating the need to carry a personal music player. Furthermore, a subscription-based service provides audio content to the user through the Personal Audio Assistant. The type of audio content, which is automatically provided to the user, is based on the user's preferences, which are obtained through a registration process.

[0019] The audio content, which is seamlessly downloaded to the Personal Audio Assistant in the background, is managed from a Server system and is only available on the Personal Audio Assistant for a predetermined period of time or for a fixed number of playback counts. However, the user can purchase any music file or electronic book directly from the Personal Audio Assistant with a simple one-click control interface, storing the purchased audio content on the Personal Audio Assistant as well as storing the content permanently in a user storage lock-box location on the Server system.

[0020] The system provides for audio content to be new and "fresh" each time the user auditions the content. As such, the content is typically auditioned in a

first-in : first-out scenario. In one such example, the user has turned on the Personal Audio Assistant at 8:00 am and by 10:00 am has auditioned 2 hours of content that were created for the user as a manifestation of the user's choices of their preferences of genre, artist, their demographics, day of the week, time of day and purchase history. The system also provides for the elimination of a particular song or playlist *in situ*.

[0021] As the user's Listening History Envelope is updated based on experience, subsequent downloads will only contain content incorporating these revised preferences. The Personal Audio Assistant provides for ample memory, thus permitting hours of uninterrupted playback without the need to download additional content from the server. When in need, the Personal Audio Assistant automatically interrogates various communication platforms as it searches for connections. Once a connection is made, the Listener History Envelope file is uploaded to the server, and a new set of personalized playlist content is downloaded to the Personal Audio Assistant. Accordingly, as the Personal Audio Assistant content is auditioned and thus depleted, the communications system provides for constant replenishment.

[0022] In another embodiment, the Personal Audio Assistant also provides for a new set of business solutions to be offered to the music industry. As the personalized audio content is only available for audition for a limited period of time, and can not be sent to the user again from for weeks to months, the user's purchasing behavior can be demonstrated as spontaneous. The basic model of "Try before you buy" is the expected outcome. In another iteration, the distributor

of the music can choose to offer discounts, which can be time-sensitive or quantity-sensitive in nature, in effect promoting greater purchase activity from the user.

[0023] In another iteration, while in audition a user can wish to place the desired content in a hold status. The hold status forms the basis of a “wish list,” thus allowing the user to hold for future consideration audio content while it is being auditioned. This content resides in the memory of the Personal Audio Assistant for a defined period, and is automatically erased, or the user can do so manually. The selected content will also appear on the user’s computer via a URL address; here it resides on the server ready for audition or purchase and download.

[0024] The system is designed to operate as simply as possible. Using a single button, which has multiple contacts, the interface allows the user to purchase, delete, skip to next, and add to a wish list and even control a listening level.

[0025] In another iteration, the user can download their own music to the Personal Audio Assistant for audition. The Personal Audio Assistant system is capable of text-to-speech processing and can interface with personal scheduling software to provide auditory schedule reminders for the user. Auditory reminders relating to the user’s medication schedule are also generated by the system.

[0026] At least one exemplary embodiment includes input Acoustic Transducers (microphones) for capturing user’s speech as well as Environmental Audio. In further embodiments, stereo input Acoustic Transducers capture

Environmental Audio, and, mixing it with the audio signal path, present the ambient sound field to the user, mitigating the need to remove the Headphone apparatus for normal conversation.

[0027] Additional exemplary embodiments are directed to various scenarios for the delivery and consumption of audio content. The Personal Audio Assistant can store and play back audio content in compressed digital audio formats. In one embodiment, the storage memory of the Personal Audio Assistant is completely closed to the end-user and controlled from the Server. This allows for audio content to be distributed on a temporary basis, as part of a subscription service. In another iteration of the present embodiments, the storage memory of the Personal Audio Assistant is not completely closed to the end-user, allowing the user to transfer audio content to the Personal Audio Assistant from any capable device such as a Personal Computer or a Personal Music Player.

[0028] In at least one exemplary embodiment the Personal Audio Assistant automatically scans for other Bluetooth[®]-enabled audio playback systems and notifies the user that additional devices are available. These additional devices can include a Bluetooth[®] video system, television system, personal video player, video camera, cell phone, another Personal Audio Assistant and others.

[0029] In another iteration, the Personal Audio Assistant can be directly connected to a Terrestrial Radio receiver, or have such a receiver built in to the system.

[0030] In another exemplary embodiment, a technique known as Sonification can be used to convey statistical or other numerical information to

a headphone. For example, the user would be able to receive information about the growth or decline of a particular stock, groups of stocks or even sectors of the markets through the Personal Audio Assistant. Many different components can be altered to change the user's perception of the sound, and in turn, their perception of the underlying information being portrayed. An increase or decrease in some level of share price or trading levels can be presented to the user. A stock market price can be portrayed by an increase in the frequency of a sine tone as the stock price rose, and a decline in frequency as it fell. To allow the user to determine that more than one stock was being portrayed, different timbres and spatial locations might be used for the different stocks, or they can be played to the user from different points in space, for example, through different sides of their headphones. The user can act upon this auditory information and use the controls built-in to the headphone to either purchase or sell a particular stock position.

[0031] Furthermore, specific sonification techniques and preferences can be presented to the user as “themes” from which the user can select. For example, one theme might auralize the current trading price of one stock with an ambient sine tone in the left ear, the price of another stock in the right ear, their respective trade volumes as perceived elevation using personalized head-related transfer function binauralization, and the current global index or other market indicator as the combined perceptual loudness of both tones. Such a scheme affords ambient auditory display in this example of five dimensions of financial data without compromising the user’s ability to converse or work on other tasks. In

another embodiment, the system affords users the ability to customize themes to their liking and to rapidly switch among them using simple speech commands. Additionally, the user can search the web from voice commands and receive results via a text to speech synthesizer.

[0032] In yet another exemplary embodiment the Personal Audio Assistant (PAA) functions as a dictation device for medical professionals for dictating clinical information to a patient's medical record, or write prescriptions for medication or devices. Conversely, the PAA can function as text-to-speech allowing the clinician to audition information from a medical record, rather than reading. The PAA can save considerable time preparing clinician interaction with a patient.

[0033] In another iteration, the Personal Audio Assistant can function as a tool to locate other users of Personal Audio Assistant who share common interests, or who are searching for particular attributes of other users. Whereas the first user has stored specific personal information in the Public Data memory of the Personal Audio Assistant, an example of which might be related to schools attended, marital status, profession etc, or the first user can be in search of another user with these attributes and whereas a second user of a Personal Audio Assistant comes within communication range of the first user, the individual Personal Audio Assistants communicate with each other, access the personal information stored in each of their respective Public Data memories to ascertain if these users have common interests. If a match occurs, each unit can contain both audible and visual indicators announcing that a match has been

made and thus each user can start dialog either physically or electronically via the environmental microphones.

EXAMPLES OF TERMINOLOGY

[0034] Note that the following non-limiting examples of terminology are solely intended to aid in understanding various exemplary embodiments and are not intended to be restrictive of the meaning of terms nor all inclusive.

[0035] Acoustic Isolation Cushion: An “Acoustic Isolation Cushion” shall be defined as a circum-aural or intra-aural device that provides acoustic isolation from Environmental Noise. Acoustic Isolation Cushions can be included as part of a Headphones system, allowing the output of the acoustical transducers to reach the ear unimpeded, but still providing acoustic isolation from Environmental Noise.

[0036] Acoustic Transducer: An “Acoustic Transducer” shall be defined as a device that converts sound pressure level variations into electronic voltages or vice versa. Acoustic Transducers include microphones, loudspeakers, Headphones, and other devices.

[0037] Audio Playback: “Audio Playback” shall be defined as the auditory stimuli generated when Playback Hardware reproduces audio content (music, speech, etc) for a listener or a group of listeners listening to Headphones.

[0038] Audition: “Audition” shall be defined as the process of detecting sound stimulus using the human auditory system. This includes the physical, psychophysical, psychoacoustic, and cognitive processes associated with the perception of acoustic stimuli.

[0039] Client: A “Client” shall be defined as a system that communicates with a Server, usually over a communications network, and directly interfaces with a user. Examples of Client systems include personal computers and mobile phones.

[0040] Communications Port: A Communication Port shall be defined as an interface port supporting bidirectional transmission protocols (TCP/IP, USB, IEEE 1394, IEEE 802.11, Bluetooth®, A2DP, GSM, CDMA, or others) via a communications network (e.g., the Internet, cellular networks).

[0041] Control Data: “Control Data” shall be defined as information that dictates the operating parameters for a system or a set of systems.

[0042] Earcon: An Earcon shall be defined as a Personalized Audio signal that informs the User of a pending event typically inserted in advance of the upcoming audio content.

[0043] Ear Mold Style: “Ear Mold Style” shall be defined as a description of the form factor for an intra-aural device (e.g., hearing aids). Ear Mold Styles include completely in the canal (CIC), in the canal (ITC), in the ear (ITE), and behind the ear (BTE).

[0044] Environmental Audio: “Environmental Audio” shall be defined as auditory stimuli of interest to the user in the environment where the user is present. Environmental Audio includes speech and music in the environment.

[0045] Environmental Noise: “Environmental Noise” shall be defined as the auditory stimuli inherent to a particular environment where the user is present and which the user does not wish to audition. The drone of highway traffic is a

common example of Environmental Noise. Note that Environmental Noise and Audio Playback are two distinct types of auditory stimuli. Environmental Noise does not typically include Music or other audio content.

[0046] E-Tailing System: An "E-tailing System" shall be defined as a web-based solution through which a user can search, preview and acquire some available product or service. Short for "electronic retailing," E-tailing is the offering of retail goods or services on the Internet. Used in Internet discussions as early as 1995, the term E-tailing seems an almost inevitable addition to e-mail, e-business, and e-commerce. E-tailing is synonymous with business-to-consumer (B2C) transactions. Accordingly, the user can be required to register by submitting personal information, and the user can be required to provide payment in the form of Currency or other consideration in exchange for the product or service. Optionally, a sponsor can bear the cost of compensating the E-tailer, while the user would receive the product or service.

[0047] Generic HRTF: A "Generic HRTF" shall be defined as a set of HRTF data that is intended for use by any Member. A Generic HRTF can provide a generalized model of the parts of the human anatomy relevant to audition and localization, or simply a model of the anatomy of an individual other than the Member. The application of Generic HRTF data to Audio Content provides the least convincing Spatial Image for the Member, relative to Semi-Personalized and Personalized HRTF data. Generic HRTF data is generally retrieved from publicly available databases such as the CIPIC HRTF database.

[0048] Headphones: “Headphones” (also known as earphones, earbuds, stereophones, headsets, Canalphones, or the slang term “cans”) are a pair of transducers that receive an electrical signal from a media player, communication receivers and transceivers, and use speakers placed in close proximity to the ears (hence the name earphone) to convert the signal into audible sound waves. Headphones are intended as personal listening devices that are placed either circum-aural or intra-aural according to one of the Ear Mold Styles, as well as other devices that meet the above definition such as advanced eyewear that includes Acoustical Transducers (i.e. Dataview). Headphones can also include stereo input Acoustic Transducers (microphones) included as part of the Ear Mold Style form factor.

[0049] HRTF: “HRTF” is an acronym for head-related transfer function – a set of data that describes the acoustical reflection characteristics of an individual’s anatomy relevant to audition. Although in practice they are distinct (but directly related), this definition of HRTF encompasses the head-related impulse response (HRIR) or any other set of data that describes some aspects of an individual’s anatomy relevant to audition.

[0050] Informed Consent: “Informed Consent” shall be defined as a legal condition whereby a person can provide formal consent based upon an appreciation and understanding of the facts and implications associated with a specific action. For minors or individuals without complete possession of their faculties, Informed Consent includes the formal consent of a parent or guardian.

[0051] Listening History Envelope: “Listening History Envelope” shall be defined as a record of a user’s listening habits over time. The envelope includes system data, time system was turned off, time the system is presenting content, when the system doesn’t audition, system transducers, when the user auditions content, time stamp of content being auditioned, content which is: skipped, deleted, played multiple times, saved in the Wish List, and time between listening sessions.

[0052] Music: “Music” shall be defined as a form of expression in the medium of time using the structures of tones and silence to create complex forms in time through construction of patterns and combinations of natural stimuli, principally sound. Music can also be referred to as audio media or audio content.

[0053] Playback Hardware: Any device used to play previously recorded or live streaming audio. Playback Hardware includes Headphones, loudspeakers, personal music players, mobile phones, and other devices.

[0054] Personal Audio Assistant: A “Personal Audio Assistant” shall be defined as a portable system capable of interfacing with a communications network, directly or through an intermediate, to transmit and receive audio signals and other data.

[0055] Personal Computer: “Personal Computer” shall be defined as any piece of hardware that is an open system capable of compiling, linking, and executing a programming language (such as C/C++, Java[™], etc.).

[0056] Personal Music Player: “Personal Music Player” shall be defined as any portable device that implements perceptual audio decoder technology but is

a closed system in that users are not generally allowed or able to write software for the device.

[0057] Personalized HRTF: A “Personalized HRTF” shall be defined as a set of HRTF data that is measured for a specific Member and unique to that Member. The application of Personalized HRTF data to Audio Content creates, by far, the most convincing Spatial Image for the the Member (Begault et. al. 2001, D. Zotkin, R. Duraiswami, and L. Davis 2002).

[0058] Personalized Services: “Personalized Services” shall be defined as services customized to better meet the needs of an individual. Personalized Services include media content (for preview or purchase) related to a user’s preferences, reminders from personal scheduling software, delivery and text-to-speech processing of email, marketing messages, delivery and text-to-speech of stock market information, medication reminders, foreign language instruction [real-time foreign language translation], academic instruction, time and date information, and others.

[0059] Public Data: “Public Data” shall be defined as data which contains specific and personal information about the registered user of the Personal Audio Assistant. The registered user chooses which portions of their complete Registration Process data they wish to include in this subset. This data becomes distributed to other users who have compliant devices thus allowing other users to know specific details of the registered user.

[0060] Registration Process: “Registration Process” includes the acquisition of the user’s preference via a web page. Typically, the process would include the

items to be captured: Age, demographics, email, gender, Relative Audiogram, Personal Preferences, banking information, credit card information, wake-up and sleep times, music preferences by genre, artist, preferences for writers and authors, desire to receive advertising, turn-on listening level, equalization, email preferences, parental control setup as well as other user-controlled settings.

[0061] Relative Audiogram: A “Relative Audiogram” shall be defined as a measured set of data describing a specific individual’s hearing threshold level as a function of frequency. A Relative Audiogram is only an approximate Audiogram, leaving more complete Audiogram analysis to qualified audiologists.

[0062] Semi-Personalized HRTF: A “Semi-Personalized HRTF” shall be defined as a set of HRTF data that is selected from a database of known HRTF data as the “best-fit” for a specific user. Semi-Personalized HRTF data is not necessarily unique to one user; however, interpolation and matching algorithms can be employed to modify HRTF data from the database to improve the accuracy of a Semi-Personalized HRTF. The application of Semi-Personalized HRTF data to Audio Content provides a Spatial Image that is improved compared to that of Generic HRTF data, but less effective than that of Personalized HRTF data. The embodiments within speak to a variety of methods for determining the best-fit HRTF data for a particular Member including anthropometrical measurements extracted from photographs and deduction.

[0063] Server: A “Server” shall be defined as a system that controls centrally held data and communicates with Clients.

[0064] Sonification: “Sonification” shall be defined as the use of non-speech audio to convey information or to aurally perceptualize non-acoustic data (auralize). Due to a variety of phenomena involving human cognition, certain types of information can be better or more efficiently conveyed using auditory means than, for example, visual means.

EXEMPLARY EMBODIMENTS

[0065] Figure 1 illustrates the connection between an earpiece device (103 and 104) and a communication network (101) via communication interface 102, which can be operatively connected (via a wired or wireless connection) to a server system (100) and/or an e-mail server (105). Additionally a radio signal (e.g., satellite radio) can be input into the earpiece 500 (Figure 5B) via a communication module (e.g., Bluetooth® wireless module 515).

[0066] Figure 2 illustrates at least one exemplary embodiment where earpiece devices share information with other earpiece devices within range (e.g., GPS location and identity). For example multiple users (e.g., 202, 203, 204, and 206) can send signals to each individual earpiece (e.g., 500) when in range (e.g., via a wireless connection 205) or to a mobile audio communications device 200 via a wireless connection (201) with each earpiece (500). Additionally information (e.g., audio content, software download) can be sent via a client’s computer 207 to each earpiece, either directly (e.g., 205), or via 200. For example audio content can be retrieved on a user’s computer and sent to the earpieces that have authorization to use it.

[0067] Figure 3 illustrates an example of various elements that can be part of an earpiece device in accordance with at least one exemplary embodiment. The earpiece can include all or some of the elements illustrated in figure 5B. For example the logic circuit 572 or the operatively connected memory storage device 585, can include spatial enhancement software 329, a DSP codec 330, a speech synthesis and recognition system 311, and a digital timer system 312. Additional elements can be connected to the logic circuit 572 as needed, for example a power supply 320, a software communication interface 307 (e.g., wireless module 515) (which may be connected to communication network 308), data port interface 306, audio input buffers 300 connected to digital audio input 302 and/or analog audio input 303 converted to digital via an ADC 301, environmental audio input acoustic transducer(s) 321 converted to digital via an ADC 316, user control 324, digital audio output 328, output acoustic transducers 319 (which receive signals converted to analog via a DAC 310 and amplified via amplifier 309), display system 318, communication buffers 325, program memory 305, data and personal memory 315, as well as other electronic devices as known by one of ordinary skill in the relevant arts.

[0068] Figure 4 illustrates an example of a communication system in accordance with at least one exemplary embodiment that a user can use to register via his/her computer 419, via a communication network 400 (e.g., Internet connection) connected to many various database and registration systems as illustrated and labeled in Figure 4. For example, server 401, database management system 402, audio content preview database 403, audio

content database 404, playlist engine 405, user's information database 406, HRTF acquisition process module 407, HRTF database 408, lock-box server 409, registration engine 410, e-payment system 413, business-to-business module 414, e-tailing system 415, audiogram database 416, audiogram engine 417 and/or e-mail server 418.

[0069] Figure 5A illustrates an earpiece 500 having sealing section 540 in an ear canal that can store and download audio content 560 in accordance with at least one exemplary embodiment. The earpiece 500, can include a first user interaction element 530 (e.g., a button) , that can be used to turn the earpiece 500 on, or if on then activate an audio play command to start playing saved audio content. The earpiece 500 can also include a second user interaction element 550 (e.g., a slide control) that can be used for example to control the volume. The earpiece 500 can also include recharge ports 570, that can accept two wires of varying voltage that can be inserted into the recharge ports 570 to recharge any batteries in the earpiece 500. The earpiece 500 can include an ambient microphone 520 and an optional communication antenna 510, that if needed can aid in the communication between the earpiece 500 and a communication network.

[0070] Figure 5B illustrates a block diagram of the earpiece of Figure 5A, illustrating the first user interaction element 530, the ambient microphone (AM) 520, that can be used to pick up ambient audio content, an ear canal microphone (ECM) 590 that can pick up audio in the ear canal region, an ear canal receiver (ECR) 580 that can direct audio content to the ear drum, all of which can be

connected operatively to a logic circuit 572. A memory storage device 585 can be operatively connected to the logic circuit (LC) 572, and can store data such as registration, preference, and audio content data. The optional communication antenna 510 can be connected to a communication module (e.g., wireless module 515), and can receive or transmit information 560 to a communication network.

[0071] Figure 6 illustrates a user interface for setting the parameters stored in the memory storage device 585. For example a user can use his/her computer 419 to communicate with a server 401 (e.g., via a communication network 400) to start the user's registration (e.g., with an audio content provider). The registration information can then be transmitted 600 to set the stored parameters in the memory storage device 585 of the earpiece 500. Additionally a requested (e.g., bought) audio content can be downloaded 610 into the memory storage device 585 of the earpiece 500.

[0072] At least one exemplary embodiment is directed to an earpiece comprising: an ambient microphone; an ear canal microphone; an ear canal receiver; a sealing section; a logic circuit; a communication module; a memory storage unit; and a user interaction element, where the user interaction element is configured to send a play command to the logic circuit when activated by a user where the logic circuit reads registration parameters stored on the memory storage unit and sends audio content to the ear canal receiver according to the registration parameters.

[0073] In at least one exemplary embodiment the audio content is stored in the memory storage unit. The earpiece according to claim 2, where the communications module is a wireless communications module. Additionally the earpiece can include a second user interaction element configured to alter the volume of the audio content that is emitted from the ear canal receiver.

[0074] Upon a play command being received by the logic circuit the logic circuit can check registration parameters stored in the memory storage device for example one of the registration parameters can be whether the audio content is a sample audio content or a fully purchased audio content, or the allowed number of times an audio content can be played, and a counter value that keeps track of the number of times the audio content has been played.

[0075] The earpiece can send an auditory warning to be emitted by the ear canal receiver when the counter value is greater than or equal to the allowed number of times the audio content can be played, and where the logic circuit does not send the audio content to the ear canal receiver.

FURTHER EXEMPLARY EMBODIMENTS

[0076] At least one exemplary embodiment is directed to a system for the delivery of Personalized Services to Personal Audio Assistants, the system comprising: a Personal Audio Assistant system for presenting Personalized Services to the user as Audio Playback; a Server system for user registration, Personalized Service management, and communication; a Registration Process

for collecting detailed registration information from users, including the information necessary for creating Personalized Services; a communications protocol (TCP/IP, USB, IEEE 1394, IEEE 802.11, Bluetooth®, A2DP, GSM, CDMA, or other) and a communications network (i.e. the Internet, cellular networks) connecting the Personal Audio Assistant to the Server or connecting the Personal Audio Assistant to other Personal Audio Assistants (peer-to-peer behavior).

[0077] In at least one exemplary embodiment a Personal Computer acts as an intermediate, connecting to the Server system over a communications network and connecting to the Personal Audio Assistant over a local connection. At least one exemplary embodiment includes a Personal Hearing Damage Intervention System (e.g., USPTO – 60/805985 – Goldstein).

[0078] In at least one exemplary embodiment a Personal Audio Assistant system included as part of a Headphone system, the system comprising: a Communications Port supporting a communications protocol enabling communication with the Server system, peer devices, and other capable devices; a non-volatile program memory storage system for storing Control Data, dictating system behavior; a data memory storage system for storing data and audio content; an analog audio input/output and corresponding ADC/DAC; a digital audio input/output and a digital audio signal path; a user control system allowing the user to adjust the level of the audio output and control the behavior of the system; a user control system allowing the user to purchase the content being auditioned in real time; a user control system allowing the user to control, delete,

fast forward, output level control, scan, advance, the data stored both stored in memory as well as new streaming data emails and reminders; a display system for presenting information to the user(s) visually using any method familiar to those skilled in the art (LED, LCD, or other); a display system for presenting information to the user(s) (e.g., using Earcons and other sound files); a speech synthesis system for converting text-to-speech and generating speech signals; a speech recognition system for converting speech to-text to respond and send emails and to interface with the control language as to provide navigational commands; a digital timer system; a power supply system in the form of a battery; a unique identification number for each Personal Audio Assistant; Input Acoustic Transducers; an Output Acoustic Transducer; an Audio amplification system; Acoustic Isolation Cushions conforming to one of the Ear Mold Styles (CIC, ITC, ITE, or BTE; see definitions) and other elements common to Headphone systems; a digital signal processor (DSP) system; and a CODEC processor capable of improving the perceptual sound quality of the content to be auditioned while governed by delivering the correct SPL dose.

[0079] In at least one exemplary embodiment the system is independent of a Headphone array or can be included and imbedded as part of a Personal Computer system, a Personal Music Player system, a personal monitoring system, an automotive audio system, a home audio system, an avionics audio system, a personal video system, a mobile cell phone system, a personal digital assistant system, a standalone accessory, or an advanced eye-wear system with acoustical transducers.

[0080] In at least one exemplary embodiment the various processing needed to derive the intended functions are distributed among any combination of a Server system, a Personal Computer system, a Personal Music Player system, a personal monitoring system, an automotive audio system, a home audio system, an avionics audio system, a personal video system, a mobile cell phone system, a personal digital assistant system, a standalone accessory, or an advanced eye-wear system with acoustical transducers.

[0081] In at least one exemplary embodiment the Personal Audio Assistant system can exchange audio signals with a mobile phone via the Communications Port, allowing the Personal Audio Assistant to function as a mobile phone accessory.

[0082] In at least one exemplary embodiment a communications buffer is included. For example when a network connection is available, the communications buffer uploads stored content (e.g., Listening Habits Envelope) and stores incoming transmissions (e.g., music, electronic books, and updates to the firmware or operating system) from the Communications Port; The contents of the communications buffer are then transmitted whenever a network connection becomes available. At least one exemplary embodiment includes a perceptual audio codec decoding technology in the DSP, enabling the storage and playback of compressed digital audio formats (e.g., MP3, AAC, FLAC, etc.). At least one exemplary embodiment is compliant and compatible with DRM, FairPlay[®] and other forms of digital content governance.

[0083] At least one exemplary embodiment includes a user control system for selecting and playing back audio content stored in memory that operates using any combination of the following methods: a button or tactile interface which upon auditioning a song can be pressed to order content; a button, tactile and/ or voice controlled interface which, when pressed once, commanded to, activates playback of short audio clips or audio thumbnails of the audio content stored in memory; When the button is pressed again during audio thumbnail playback, the current audio content selection is played in its entirety; The behavior of this interface is similar to the “scan” button interface common in FM/AM radio devices; a button, tactile and/or voice controlled interface that, when pressed or commanded to, skips to the next piece of audio content, which is selected randomly from all available audio content that has a play count equal to or less than the play count of the piece of audio content currently playing; The behavior of this interface is similar to the “shuffle” behavior found in some personal music players; an interface for browsing audio content storage devices familiar to those skilled in the art; and a process to allow for increased data memory storage capacity for storing audio content.

[0084] In at least one exemplary embodiment the contents of the data memory are encrypted and controlled by the Server system only, prohibiting the end-user from loading unauthorized audio content into the data memory. Further the contents of the data memory can be manipulated by the end-user, allowing the user to transfer audio content to the Personal Audio Assistant system from any device capable of interfacing with the communications port; For example,

audio content can be transferred to the system from a Personal Music Player or a Personal Computer. According to at least one exemplary embodiment, audio content (or other media content) updates are retrieved from the Server system any time a connection is detected by the communications port. Furthermore, an exemplary embodiment can include an acoustical and/or visual indicator informing the user when a transfer of data is activated.

[0085] In at least one exemplary embodiment radio wave transmissions are used to implement some communications protocol and the communications port acts as a radio receiver. Additionally the Personal Audio Assistant can include: interfaces with some personal scheduling software through the communications port; a speech synthesis system which generates speech-signal reminders corresponding to information from the scheduling software, where the digital timer system triggers the presentation of the speech-signal reminders at the appropriate time.

[0086] Additionally the Personal Audio Assistant can interface with an email platform through the communications port; The speech synthesis system converts the email in text to speech and provides email to the user in aural presentation format. The system further comprising: a process in the Registration engine allowing the user to optimize their personalization process of incoming emails by associating a specific Earcon with the importance of the incoming email. As such, normal priority email contains an introduction sound announcing to the user the level of importance the sender associated with their email; a speech recognition system for converting speech-to-text which interfaces with the

control language as to provide navigational commands allowing the user to respond and send emails.

[0087] In at least one exemplary embodiment the communications port system makes use of some wireless communications protocol (802.11, Bluetooth[®], A2DP, or other) to transmit and receive digital audio data for playback, the system further comprising: an audio codec to encode and decode digital audio transmissions; a wireless communications system (802.11, Bluetooth[®], A2DP, etc.) for transmitting and receiving data (digital audio transmissions, Control Data, etc.); a method for pairing two or more Personal Audio Assistants through a wireless communications protocol to provide a secure exchange of audio content, data such as the user's Public Data; an audio warning signal or visual display system output that notifies the user anytime a compatible transmission becomes available; and a user control system enabling the user to switch between available compatible transmissions.

[0088] In at least one exemplary embodiment the system enables listeners to share digital audio transmissions, the system further comprising: a method for scanning for available digital audio transmissions within range; a user control interface for specifying digital audio transmission behavior; a method for employing the system as a relay to other compliant devices; re-broadcasting digital audio transmissions to increase wireless range. In at least one exemplary embodiment multiple systems are capable of sharing the contents of their program and data memory using the wireless communications protocol.

[0089] In at least one exemplary embodiment of the system, the input Acoustic Transducer is used to record audio content to the data memory storage system, the system further comprising: an implementation of some perceptual audio codec technology in the DSP, enabling the storage of compressed audio formats (e.g., MP3, AAC, FLAC, etc); and an increased data memory storage capacity for storing recorded audio content.

[0090] In at least one exemplary embodiment, the stereo input Acoustic Transducers are ultimately connected to the audio signal path at the DSP, allowing the user to audition Environmental Audio (e.g., speech or music) and mitigating the need for the user to remove the Headphone apparatus to audition Environmental Audio, the system further comprising: a stereo pair of input Acoustic Transducers placed close to the user's ear canal input, conforming to one of the Ear Mold Styles (CIC, ITC, ITE, or BTE, see definitions); and by mounting the input Acoustic Transducers in a CIC or ITC configuration, spatial-acoustic cues are preserved, creating a spatially-accurate Environmental Audio input signal – essentially a personal binaural recording; a method for acoustically compensating for the non-linear frequency response characteristics of the Acoustical Isolation Cushions of a given Headphone system by applying corresponding inverse filters to the Environmental Audio input signal at the DSP; With this method, the system acts as a linear-frequency-response hearing protection apparatus (e.g., USPTO – 60805985 – Goldstein).

[0091] At least one exemplary embodiment includes a system for first attenuating Audio Playback and then mixing the Environmental Audio input

signals, at a louder listening level, with the audio signal path using the DSP, where the system is activated by any combination of the following methods: a manual switch to activate / deactivate the system; a speech-detection apparatus to activate the system when speech is detected as the principal component of the Environmental Audio input; and a music-detection apparatus to activate the system when music is detected as the principal component of the Environmental Audio input.

[0092] At least one exemplary embodiment can include active noise reduction, echo cancellation and signal conditioning that can be environmentally customized through the registration process to better meet the user's specific needs (i.e., occupation-related noise cancellation); A typical application would be a special set of noise cancellation parameters tuned to the drilling equipment used by a dentist.

[0093] In at least one exemplary embodiment the input Acoustic Transducers are instead mounted within circum-aural, intra-aural BTE, or intra-aural ITE molds (see Ear Mold Style), the system further comprising: a spatial audio enhancement system for supplementing the spatial-acoustic cues captured by the stereo pair of input Acoustical Transducers to provide improved spatial perception of Environmental Audio using any combination of the following methods: the application of Generic, Semi-Personalized, or Personalized HRTF data to the Environmental Audio input signal; the application of binaural enhancement algorithms, familiar to those skilled in the art, to the Environmental Audio input signals; the application of a pinna simulation algorithm to the

Environmental Audio input signal; and a synthetic pinna apparatus placed just before the stereo input Acoustic Transducers.

[0094] At least one exemplary embodiment includes a Server system for the creation, Registration, management, and delivery of Personalized Services, the system comprising: a communications system for interfacing with public communication networks to exchange data with Personal Audio Assistants, a Client's computer, mobile phones, PDAs or other capable devices; a database and database management system for storing and retrieving information relating to user Registration, Personalized Services, audio content, Control Data, and other data; a Registration interface system for collecting, storing, and applying information provided by users; a method for creating Personalized Services based on user Registration information; an end-user audio content Lock-Box storage system, providing every registered user access to their purchased media content; a business-to-business interface system for acquiring audio content with record labels, copyright holders, and other businesses; an E-tailing system including an electronic transactions system enabling users to purchase content, items offered for sale or pay subscription fees electronically; an E-Payment system compensating the various copyholders upon purchase of content by user; a Playlist engine, which acquires the user's Registration information, Listening History Envelope and then creates audio playlists, which is optimized for the user preferences and further refinements; and an Email server, which distributes communications to the user and others, regarding marketing data, the status of the user weekly SPL dose, and other information.

[0095] At least one exemplary embodiment includes machine-learning techniques employed to better optimize the user's preferences relating to audio content and other media content, the system further comprising: a method for tracking the purchase history of each user, relating the purchase history to media content preferences, and using the purchase history to make media content recommendations; a method for examining a user's digital media library, stored on a Personal Computer, Personal Music Player, or Personal Audio Assistant, from the Server system, and relating media content preferences and media content recommendations to the user's digital media library; and a method for examining a user's Listening History Profile.

[0096] At least one exemplary embodiment includes a Registration system for collecting a wide variety of information from users, including information necessary for creating Personalized Services, the system comprising: a Server system; an interface system for querying the user to collect registration information including demographics (age, gender), Playback Hardware information, Headphone information, occupational information, home and work locations, medication information, music-related preferences, video-related preferences, and other information; a method for customizing Control Data based on registration information; and a method for creating Personalized Services based on registration information.

[0097] In at least one exemplary embodiment a fast HRTF acquisition process is included as part of the Registration process, the system further comprising a method for the fast acquisition of Semi-Personalized HRTF data via a deduction

process, the method comprising: a database system containing indexed, clustered HRTF data sets; an auditory test signal with distinctive spatial characteristics, where two or more distinct sound source locations exist; a system for the application of potential HRTF matches to the auditory test signal; and a feedback system, allowing the user to select the best listening experience from a number of candidate listening experiences, based on the spatial quality perceived in the HRTF-processed auditory test signal.

[0098] In at least one exemplary embodiment Personalized HRTF data is measured and used instead of Semi-Personalized HRTF data, by any method familiar to those skilled in the art.

[0099] In at least one exemplary embodiment the user is provided some Personal Audio Assistant free-of-charge or at a discount, given the user agrees to a subscription service commitment to receive Personalized Services for a certain amount of time.

[00100] In at least one exemplary embodiment, as part of the Personalized Services, the user is provided with temporary audio content corresponding to the preferences indicated during the registration process; Further, the user is given the option to purchase the audio content permanently; Otherwise, the audio content is replaced with new audio content from the Server, after a predetermined amount of time or a predetermined number of playback counts, the system comprising: a Personal Audio Assistant with an enhanced user control system, enabling a registered user to purchase media content directly from the Personal Audio Assistant with a button; and a Personal Audio Assistant

with an enhanced user control system, enabling a registered user to store a reference to media content that can be purchased by the user at a later time.

[00101] In at least one exemplary embodiment, video or gaming content is included as well as audio content, the system further comprising: a Personal Audio Assistant with an enhanced visual display system, capable of playing video and/or gaming content.

[00102] In at least one exemplary embodiment, as part of the Personalized Services, the user receives medication reminders in the form of speech signals, audio signals, text, or graphics on the user's Personal Audio Assistant; Medication reminders are generated by the Server system based on the user's registration information.

[00103] In at least one exemplary embodiment, as part of the Personalized Services, the user receives stock market information in the form of speech signals, audio signals, text, or graphics on the user's Personal Audio Assistant; The stock market information is selected by the Server system based on the user's registration information, the system further comprising: the user having successfully registered their Personal Audio Assistant with a brokerage firm, or other stock trading engines, the user can then purchase or sell a stock by use of a user button or a speech command.

[00104] Further in at least one exemplary embodiment, the user is able to request specific media content to be transferred temporarily or permanently to the user's Personal Audio Assistant, the system further comprising: an interface system operating on the Server allowing users to request specific media content

by artist, title, genre, format, keyword search, or other methods familiar to those skilled in the art; and a media content search engine system.

[00105] In at least one exemplary embodiment a Relative Audiogram compensation filter is applied to audio signal path by the digital signal processor, the system either (e.g., USPTO – 60805985 – Goldstein): (a) Retrieves Relative Audiogram compensation information from a remote Server after a registration process (during transmission, the information can include HIPAA compliant encoding); or (b) calculates a compensation filter from Relative Audiogram information obtained by the system locally. For example US Patent No. 6,840,908 – Edwards, and US Patent No. 6,379,314 – Horn, discuss methods for the acquisition of an individual's Relative Audiogram.

[00106] In at least one exemplary embodiment a Satellite Radio transmitter/receiver (transceiver) is incorporated within the Headphone proper, allowing the user to at least: receive XM[®], Sirius[®] and other broadcasts for playback over the system; select radio stations for playback over the system via the control system, the control system comprising either a single-click tactile interface or the speech-controlled circuitry; store selected portions of such broadcasts in memory for later recall and playback via the control systems; engage a novel commercial-skip feature for attenuating the playback level of suspected sales commercials broadcasts; and engage a speech-skip feature for attenuating the playback of speech (e.g., news, announcements, etc.).

[00107] At least one exemplary embodiment includes a Walkie-Talkie mode, which broadcasts input to the system's built-in microphone, whereby the user's

speech can be detected by the input acoustic transducer and remotely broadcast where at least one of the following occurs: the Walkie-Talkie mode receives input via AM/FM broadcasts (as well as digital communications protocols) from a nearby user; the Walkie-Talkie mode allows nearby users to engage in conversation with increased perceptual clarity in noisy environments (e.g., aircraft cockpits), using for example a noise-cancellation system; selectively engage and disengage the Walkie-Talkie mode using the control system; detect other users of the system within a given range; and alert the user of the system when other detected systems contain certain Public Data and contain a predefined Public Message Key (e.g., “If the detected system belongs to a single male between the ages of 25 and 30 and whose favorite sport is tennis, then broadcast the message, ‘I like tennis also; would you like to have coffee?’” or “If the detected system belongs to a user who attended Princeton University, then broadcast the message, ‘Go Tigers!’”).

[00108] At least one exemplary embodiment can use other communications to accomplish this service rather than AM/FM; as such the system can incorporate communications transmission protocols (TCP/IP, USB, IEEE 1394, IEEE 802.11, Bluetooth®, A2DP, GSM, CDMA, or other protocols) and a communications network (i.e. the Internet, cellular networks) connecting the Personal Audio Assistant to other Personal Audio Assistants. At least one exemplary embodiment can selectively control the broadcast of public data and public message keys via the control system.

[00109] At least one exemplary embodiment includes a Sonification algorithm within the Headphone, which enables auditory display of digitally received data, including for example financial data, news, GPS data, the system further containing a variety of sonification “themes” selected during the registration process that map requested data (e.g., current average trading price of AAPL stock, the Dow Jones Industrial Index, and the Nasdaq Composite®) to corresponding audio content (e.g., the frequency of a sine tone presented in the left ear, the frequency of a sine tone presented in the right ear, and the global amplitude of both sine tones, respectively).

[00110] At least one exemplary embodiment includes an auditory display, which is synthesized by the onboard Digital Signal Processor. In at least one exemplary embodiment the auditory display is created through the digital audio signal processing effects applied to any other acoustic data the system is capable of reproducing (e.g., terrestrial radio, prepurchased audio content in the user’s digital library, electronic books, etc.); For example, a sudden listening level increase in the playback level of a song to which the user was listening can be triggered by a predefined alert condition (e.g., Nasdaq Composite® has exceeded 2200 points).

[00111] At least one exemplary embodiment includes the ability to create themes using a computer program and uploading a file to the Headphone system.

[00112] At least one exemplary embodiment includes a speech recognition system for converting speech to HTML (Voice Browser), whereby the user can

access the Internet, provide navigational commands, perform searches and receive results via the Headphones through a text (HTML)-speech synthesizer.

[00113] Additionally, the Personal Audio Assistant can be totally incorporated with a mobile cell phone, or any portable technology which incorporates any of the following protocols, TCP/IP, USB, IEEE 1394, IEEE 802.11, Bluetooth[®], A2DP, GSM, CDMA, or others known to those of ordinary skill in the arts via a communications network (e.g., the Internet, cellular networks), the system further comprising: an Acoustic Transducer constructed as part of the mobile cell phone or a series of Acoustic Transducers, which are constructed as part of mobile cell phone; a communications path incorporated into the mobile cell phone providing for bi-directional communication with a Headphone array; the incorporation of the mobile cell phone's microphone(s) to act as the Environmental Audio Acoustical Transducer(s); and the incorporation of the mobile cell phone's keyboard or touch sensitive screen to function as a manual input or to complement speech commands and that can act in a way to respond to Personalized Services offered to a user.

While the present embodiments have been described with reference to exemplary embodiments, it is to be understood that the claimed embodiments are not limited to the disclosed exemplary embodiments. The scope of the following claims is to be accorded the broadest interpretation so as to encompass all such modifications and equivalent structures and functions.

CLAIMS

What is claimed is:

1. A wearable device, comprising:
 - a housing for the wearable device;
 - a first microphone within or on the housing;
 - a communication module within or on the housing;
 - a logic circuit communicatively coupled to the first microphone;
 - a memory storage unit communicatively coupled to the logic circuit; and
 - an interaction element, the interaction element and logic circuit cooperatively initiate control of media content or initiate operations of the wearable device.
2. The wearable device of claim 1, wherein the interaction element and logic circuit are configured to initiate control of access to the media content stored in the memory storage unit.
3. The wearable device of claim 2, wherein the memory storage unit or logic circuit or both are within the housing.
4. The wearable device of claim 2, wherein the memory storage unit or logic circuit or both are remote from the housing.

5. The wearable device of claim 1, wherein the wearable device comprises eye-wear.
6. The wearable device of claim 1, wherein the interaction element comprises a voice controlled user interface.
7. The wearable device of claim 1, wherein the personal audio assistant further comprises a button with multiple contacts coupled to the logic circuit that forms a portion of the interaction element.
8. The wearable device of claim 1, wherein the initiating of the operations of the wearable device is in response to a trigger of a predetermined alert condition.
9. The wearable device of claim 1, wherein the wearable device comprises an earphone.
10. The wearable device of claim 1, wherein the wearable device comprises at least a portion of a personal computer system, a personal music player system, a personal monitoring system, an automotive audio system, a home audio system, an avionics audio system, a personal video system, a mobile cell phone system, a personal digital assistant system, a standalone accessory, or an advanced eye-wear system with acoustical transducers.

11. The wearable device of claim 1, wherein the personal audio assistant further comprises speaker for providing an audible output.

12. The wearable device of claim 1, wherein the wearable device further comprises a GPS receiver and wherein the communication module forms a peer-to-peer network using location information from the GPS receiver.

13. The wearable device of claim 6, wherein the logic circuit is configured to perform a search of the web in response to a voice command received by the voice controlled interface.

14. The wearable device of claim 1, wherein the logic circuit is configured to cooperatively initiate control of media content or initiate operations of the wearable device in response to detection or analysis of audio at the wearable device or at a remote server or at both the wearable device and the remote server.

15. The wearable device of claim 1, wherein the initiating of operations comprises commercial transactional operations.

16. The wearable device of claim 1, wherein the logic circuit is configured to retrieve specific media content in response to voice commands and the personal audio assistant receives results in response to the voice command via text-to-speech synthesis.

17. The wearable device of claim 1, wherein the wearable device further comprises a presentation device operatively coupled to the wearable device for presenting one or more of text, images, webpages, location information, scheduling information, or audible outputs to complement detected voice commands.

18. A wearable device, comprising:

- a housing for the wearable device;

- a first microphone mounted on or within the housing;

- a communication module communicatively coupled to the first microphone;

- one or more processors communicatively coupled to the first microphone;

- and

- a computer readable medium communicatively coupled to the one or more processors and containing instructions which when executed by the one or more processors, cause the one or more processors to perform functions comprising initiating control of audio content or initiating at least one operation of the wearable device.

19. The wearable device of claim 18, wherein the one or more processors initiates control of audio content or initiates control of operations of the wearable device in response to a voice command received by a voice controlled user interface.

20. A wearable device, comprising:

a wearable structure having at least a first microphone;

a communication module communicatively coupled to the at least first microphone;

one or more processors communicatively coupled to the at least first microphone; and

a computer readable medium communicatively coupled to one or more processors and containing instructions which when executed by the one or more processors, cause the one or more processors to perform functions comprising initiating control of audio content in response to detected voice commands in the captured audio.

ABSTRACT

A wearable device includes a housing for the wearable device, a first microphone within or on the housing, a communication module within or on the housing, a logic circuit communicatively coupled to the first microphone, a memory storage unit communicatively coupled to the logic circuit and an interaction element. The interaction element and logic circuit cooperatively initiate control of media content or initiate operations of the wearable device. Other embodiments are disclosed.

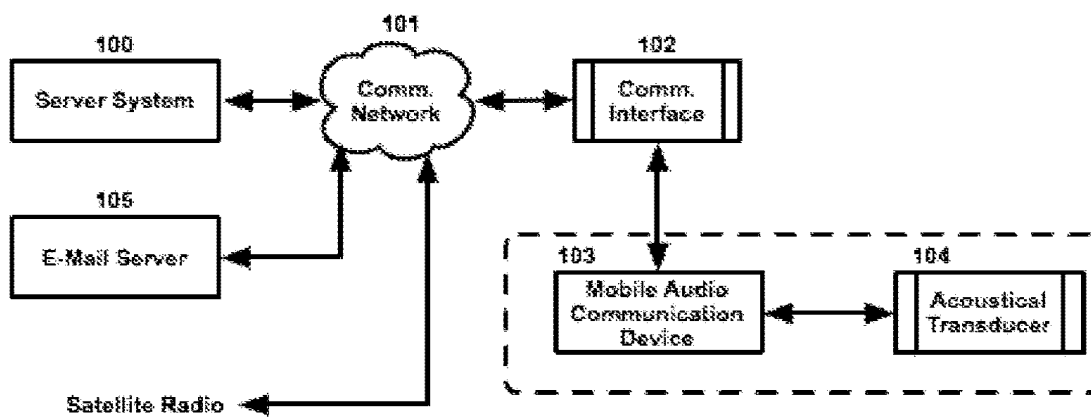


Fig. 1

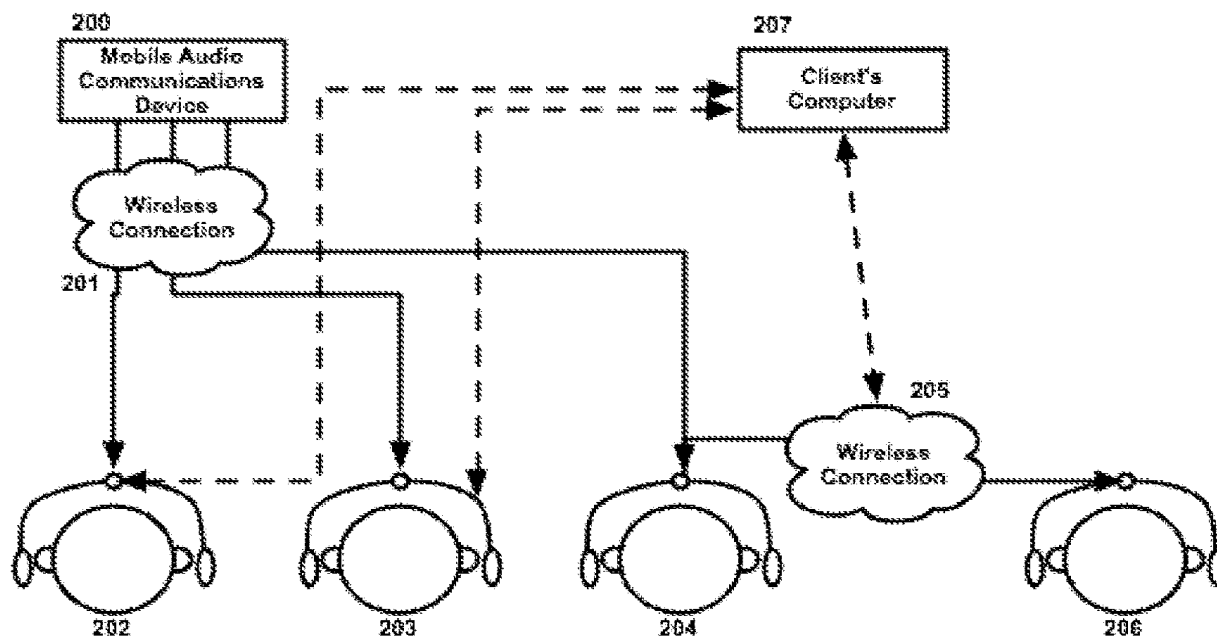


Fig. 2

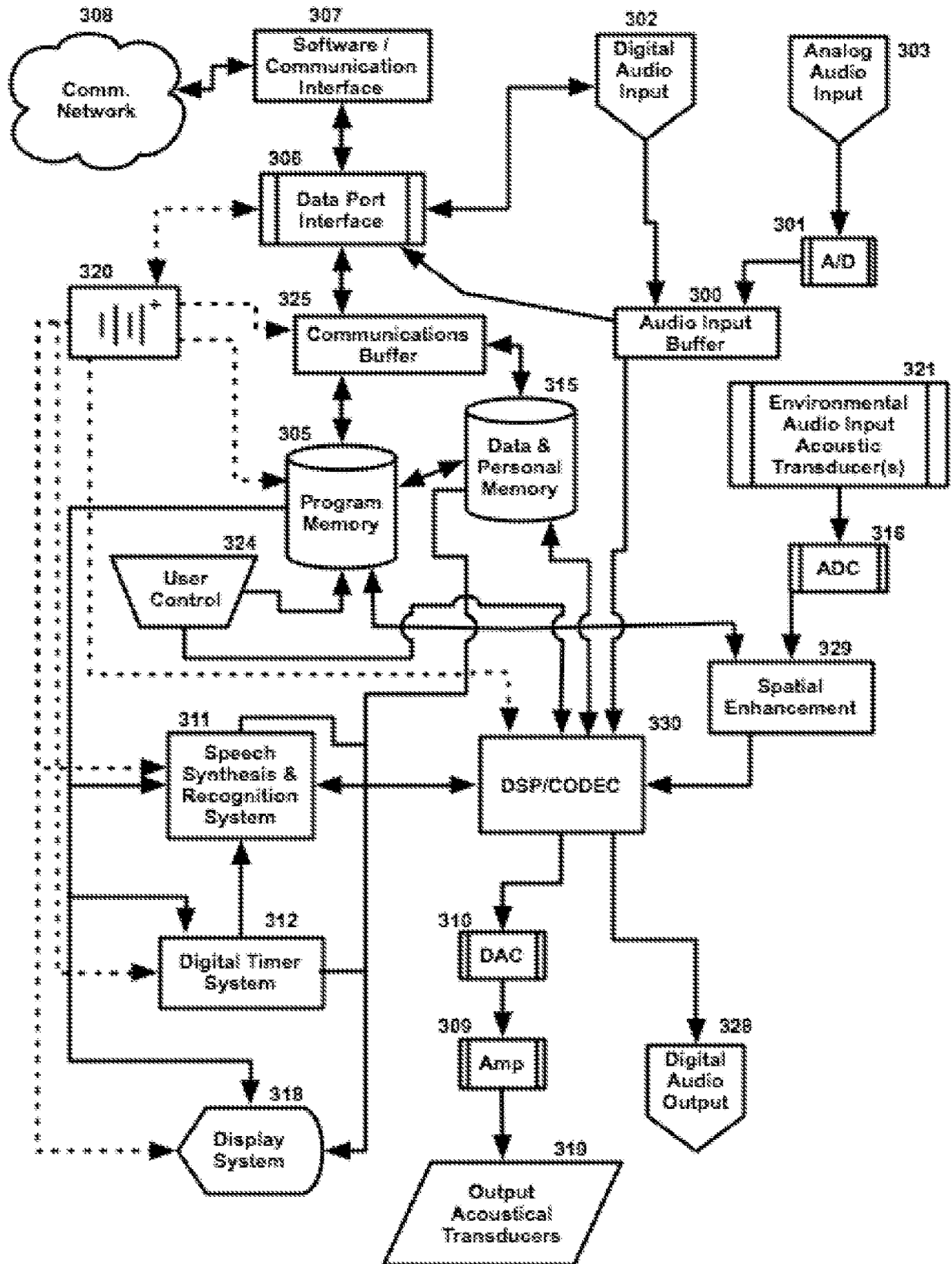


Fig. 3

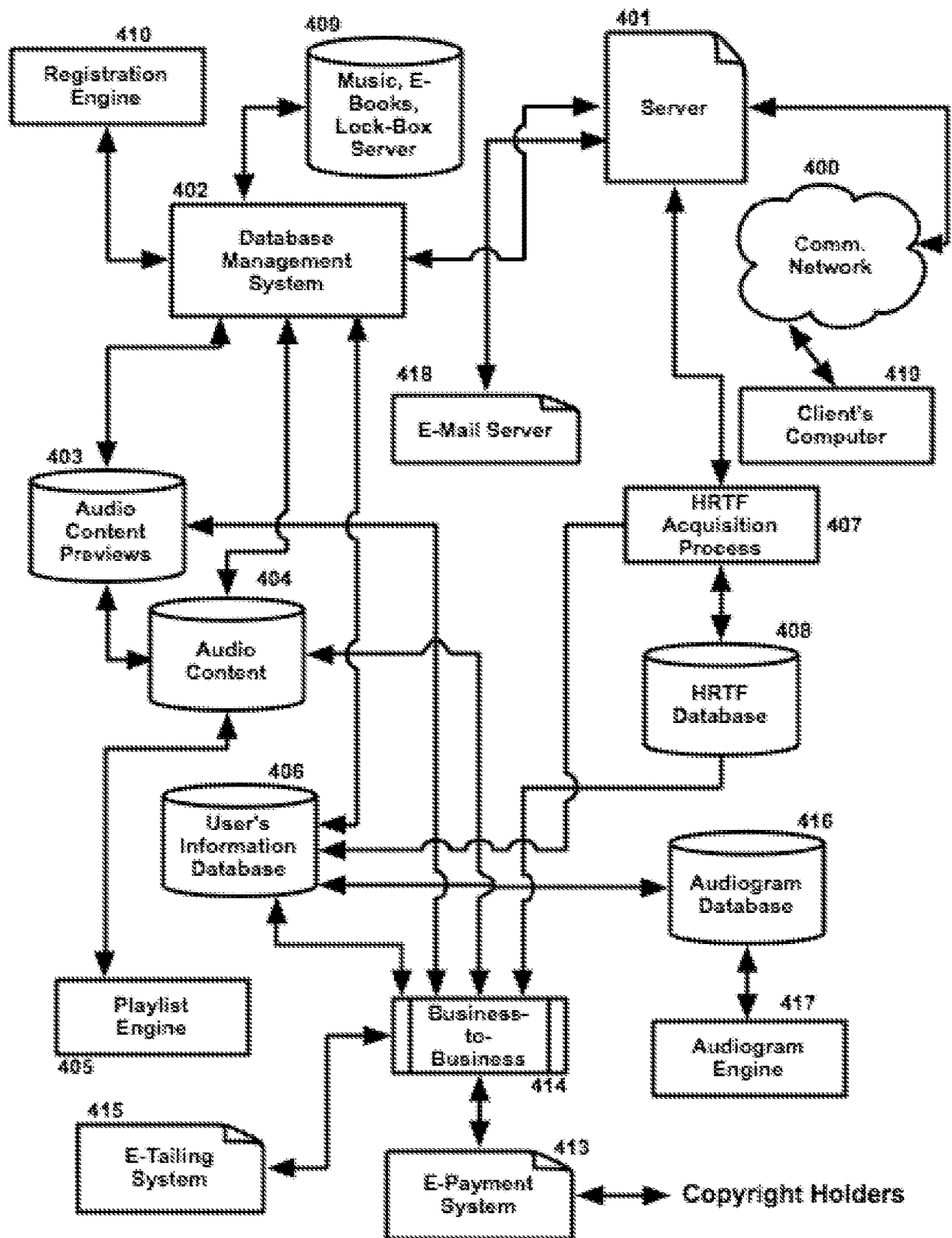
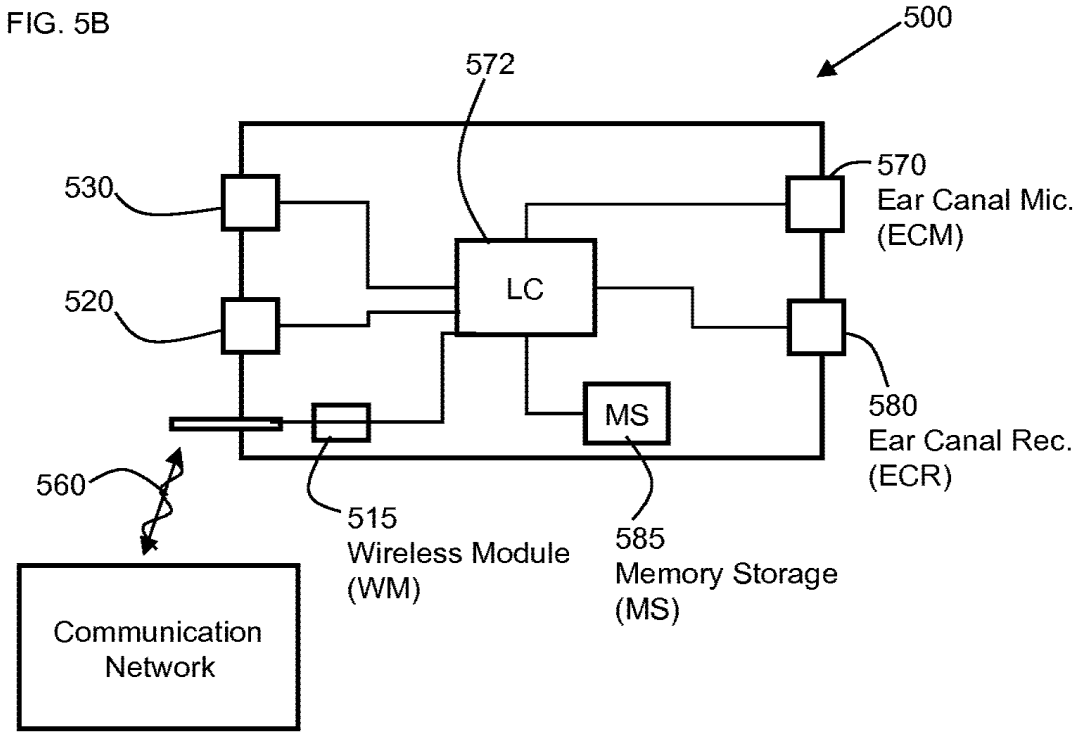
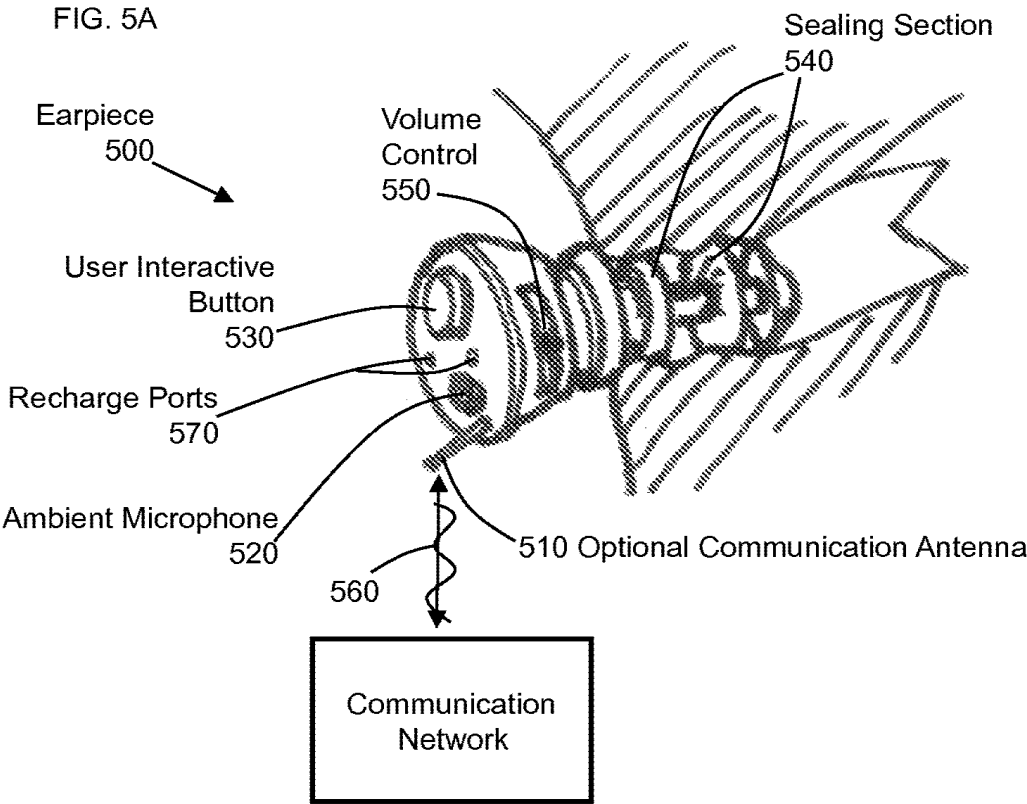
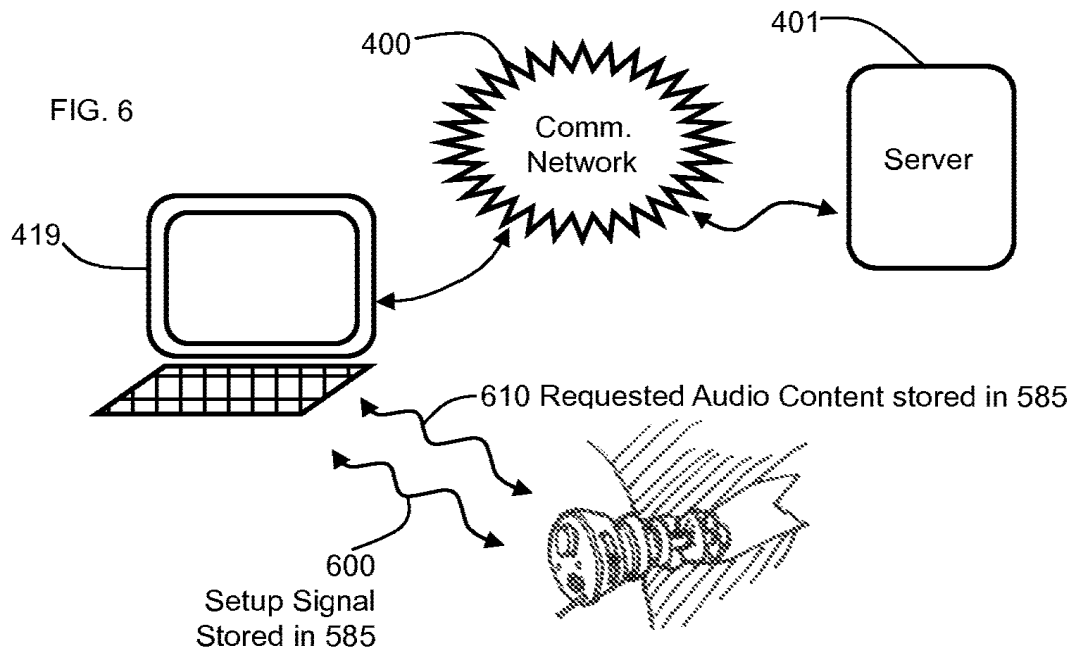


Fig. 4





Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		PERSONAL AUDIO ASSISTANCE DEVICE AND METHOD		
First Named Inventor/Applicant Name:		Steven Wayne Goldstein		
Filer:		Pablo Meles		
Attorney Docket Number:		PRS-110US2		
Filed as Small Entity				
Track I Prioritized Examination - Nonprovisional Application under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360
Request for Prioritized Examination	2817	1	2000	2000
Pages:				
Claims:				
Miscellaneous-Filing:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Publ. Fee- Early, Voluntary, or Normal	1504	1	0	0
PROCESSING FEE, EXCEPT PROV. APPLS.	2830	1	70	70
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				2800

Electronic Acknowledgement Receipt	
EFS ID:	17834581
Application Number:	14148752
International Application Number:	
Confirmation Number:	2918
Title of Invention:	PERSONAL AUDIO ASSISTANCE DEVICE AND METHOD
First Named Inventor/Applicant Name:	Steven Wayne Goldstein
Customer Number:	117822
Filer:	Pablo Meles
Filer Authorized By:	
Attorney Docket Number:	PRS-110US2
Receipt Date:	07-JAN-2014
Filing Date:	
Time Stamp:	07:08:56
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 2800
RAM confirmation Number	8730
Deposit Account	504284
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File Listing:

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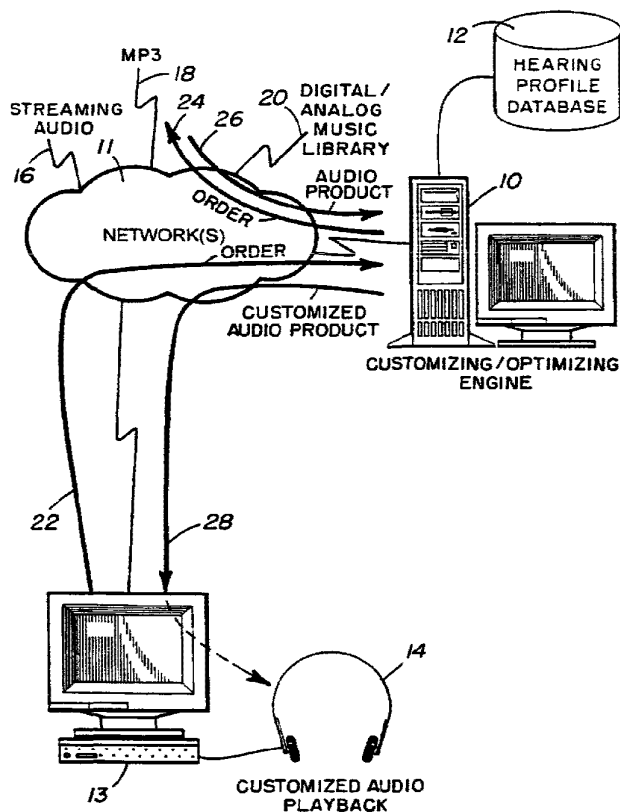
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(54) Title: PRODUCING AND STORING HEARING PROFILES AND CUSTOMIZED AUDIO DATA BASED



(57) Abstract: A method for providing customized audio data products that includes the steps of (1) storing a machine readable hearing profile for a customer, (2) accepting via a data input device or data network for example, machine readable orders from the customer for a particular audio data product, (3) associating the hearing profile for the customer with the particular audio data product, (4) modifying the particular audio data product according to the hearing profile to produce a customized audio data product, (5) delivering the customized audio data product to the customer, for example via a network or by a machine readable storage medium, (6) accepting feedback from the customer concerning the objective or subjective performance of the customized audio data product, and (7) modifying the hearing profile in response to the feedback provided. An audio playback device for playing back customized audio products based on the hearing profiles, and a hearing test device for use in the generation of hearing profiles are provided. The customized audio data product can be delivered using a network, or provided on an article of manufacture that comprises a data storage medium that is configured for connection to and for disconnection from an audio playback device. In one embodiment, an audio playback device and a hearing test device for producing hearing profiles are combined in a single appliance including a headset and earphones.

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PRODUCING AND STORING HEARING PROFILES AND CUSTOMIZED AUDIO DATA BASED

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BACKGROUND OF THE INVENTIONField of the Invention

10 The present invention relates to the distribution, customization and playback of audio data products, like telephone signals, music batch files, and streaming audio data. In particular, the present invention provides for distribution and/or playback of audio data products customized according to a hearing profile of a customer, and for techniques for the production of hearing profiles for customers.

15 Description of Related Art

 The hearing profiles of individuals vary in a number of ways. The ability to hear sounds varies with frequency among individuals across the normal audio frequency range. Also, the dynamic range varies among individuals so that levels of audio stimulus that are perceived as soft sounds and levels of audio stimulus that are perceived as loud sounds differ from person to person. Standard hearing tests are designed to produce an audiogram that characterizes such factors as frequency, sensitivity, and dynamic range in the hearing profiles of individuals. There are also other factors that affect a hearing profile. For example, psycho-acoustic factors concerning the manner in which a person perceives combinations of normal sounds affect the ability to hear in manners that can vary from person to person. Also, environmental factors such as the usual listening environment of a person (library, conference room, concert hall) and the equipment on which the sound is produced (loud speaker, ear phones, telephone hand set), are important. In persons wearing hearing aids or using other assistive hearing devices, the type of aid or device affects the hearing profile. The physiology of an impairment suffered by the individual may also be an important factor in the hearing profile.

30 Audio products that are distributed to customers in digital or analog electronic form are intended for persons having hearing profiles within a normal range. For example, a popular

compression technique for musical compositions being distributed across the Internet, known as MP3, is based on the psycho-acoustic model of a typical listener. Thus, some persons have hearing profiles that may interfere with enjoyment of MP3 compressed music. Other persons may have hearing profiles which make it difficult to understand normal telephone conversations using audio data from the telephone network. Also, individuals may have hearing profiles which make it impossible to enjoy a musical composition in the way which it was intended by the composer or musician, even if it were played back with very high fidelity. Other audio data products, such as streaming audio over the Internet, telephone calls over land line or wireless networks, audio accompanying television programs, radio broadcasts, live radio format broadcasts over the Internet, prerecorded audio books and the like, may be difficult for persons having some hearing profiles to fully enjoy.

The hearing profiles of individuals have been applied in the hearing aid field for customizing and fitting hearing aids for individuals. See, for example, U.S. Patent No. 4,731,850 entitled PROGRAMMABLE DIGITAL HEARING AID SYSTEM, invented by Levitt et al.; and U.S. Patent No. 5,848,171 entitled HEARING AID DEVICE INCORPORATING SIGNAL PROCESSING TECHNIQUES, invented by Stockham, Jr. et al. Thus, techniques for processing sound to offset variations in hearing are well known. However, these techniques are unavailable to persons not using hearing aids. Furthermore, many persons who could benefit from such processing are not in positions to use hearing aids, for a variety of reasons.

Accordingly, it is desirable to provide systems and methods to apply techniques for the processing of audio data according to hearing profiles for the benefit of individuals who are not wearing hearing assistance devices. Also it is desirable to provide tools to simplify the gathering of information needed to develop hearing profiles of individuals, and to apply the gathered information in the distribution and customization of audio data products.

SUMMARY OF THE INVENTION

The present invention provides customized audio data products, and systems and methods for producing the customized audio data products, for a customer, who may be an individual or a group of individuals, processed according to a hearing profile of the customer. Also, the present invention provides tools for gathering information concerning a customer's hearing profile, and for establishing and optimizing such profile for use in the production of the customized audio

data products. According to the present invention, the quality of life as it relates to enjoying music, talking on the telephone, and participating in other listening activities can be improved for a wide range of individuals having hearing profiles that are not typical, whether or not the individual has been fitted with a hearing aid or other assistive hearing device.

5 In addition, the present invention provides an audio playback device for playing back customized audio products based on the hearing profiles, and a hearing test device for use in the generation of hearing profiles.

 The customized audio data product can be delivered using a network, or provided on an article of manufacture that comprises a data storage medium that is configured for connection to and for disconnection from an audio playback device. In some embodiments, the customized
10 audio data product is stored in the data storage medium. The data storage medium comprises in various aspects a CD-ROM, a DVD disk, a floppy disk, a solid state memory card, and other portable memory devices. In another embodiment, the data storage medium comprises a fixed memory element of an audio playback device, such as a personal computer with appropriate
15 decoding and sound production resources.

 In one preferred aspect of the invention, a hearing test device and an audio playback device comprise a single appliance such as a mobile phone, radio, wireless communication device, personal digital assistant with or without a wireless link, or music playback device, and may be coupled with or mounted on a headset. In one example, the appliance is a small portable
20 unit comprising an audio processor, an audio transducer such as ear phones, an optional removable storage media port and a communication port packaged with a battery. The audio processor includes logic implemented using software, hardware or a combination of hardware and software supporting a hearing test, and supporting the decoding of customized audio data products. The removable storage media port is adapted to receive a solid state memory card or
25 other removable memory device on which the customized audio data is stored. In various embodiments, both circuit components and earphones of the appliance are mounted in an ergonomic manner on a headset. In alternatives, circuit components of the appliance are packaged in a portable format and coupled to a headset using cables or wireless connections.

 The communication port on the appliance in this aspect of the invention is adapted for
30 connection to a data processor such as a personal computer that provides a user interface for support of the hearing test. The data processor can be coupled to the network across which

access to sophisticated testing resources may be provided, or can comprise sufficient resources for conducting the test without access to remote resources.

Logic on the appliance comprises resources for the generation of the sounds used in the test in response to signals from the data processor. The data processor provides signals produced in response to user input provided during a testing, and signals produced in response to the testing algorithms being executed. User input generated during a testing is used for the production of a hearing profile for the customer. Customized audio products are produced using the hearing profile, and provided on a portable storage medium for connection to the removable storage media port on the appliance. The customized audio products may be played using the same appliance as used in the generation of the hearing profile. In addition, the hearing profile may be stored on the appliance itself, and used for the production of customized audio products in the appliance based on data products from a wide variety of sources.

Also, the customized audio products may be played on other devices, and stored in other formats as suits the particular needs the customer. Likewise the hearing profiles may be used, optimized and distributed in a variety of ways.

In one preferred aspect of the invention, a method executed by a system for providing customized audio data products includes the steps of (1) storing a machine readable hearing profile of a customer, (2) accepting via an input device or data network for example, machine readable orders from the customer for a particular audio data product, (3) associating the hearing profile of the customer with the particular audio data product, (4) modifying the particular audio data product according to the hearing profile to produce a customized audio data product, (5) delivering the customized audio data product to the customer, for example via a network or by a machine readable storage medium, (6) accepting feedback from the customer concerning the objective or subjective performance of the customized audio data product, and (7) modifying the hearing profile in response to the feedback.

In one embodiment of the present invention, the hearing profile and the audio data product are delivered to the customer via separate channels. In one example, the hearing profile is sent via one communication channel to a machine, such as a set top box, at the location in which the audio data product is played, and the audio data product is sent via another communication channel. According to this example, the hearing profile may be provided over the Internet, while the audio data product is provided via a television cable network. In another

embodiment, the hearing profile is stored in a portable data storage device, such as a card having a magnetic strip memory, or a card having a non-volatile integrated circuit memory. The hearing profile of the customer in this embodiment is stored on a machine using a portable data storage device. The audio data product is customized by the machine using the hearing profile prior to
5 playback.

The system in various embodiments provides input tools, such as a graphical user interface usable, for example, at a kiosk or accessible via a network, for accepting input data concerning a hearing profile of a customer, either supported by a specialized hearing test device as described above or by other resources for use in the test. The input tools are used for creating
10 a machine readable hearing profile, which is stored in a registry of hearing profiles for use in the production of customized audio data products. Alternatively, the hearing profile is stored on a portable data storage medium for use by the customer, as described above.

Also, in various embodiments of the invention, the system provides tools for accepting input data characterizing the feedback from the customer. Processing resources are provided for
15 modifying the machine readable hearing profile in response to the feedback data. The modifying of the machine readable hearing profile in one aspect of the invention comprises applying an optimization modeling process to the hearing profile, by which the profiles are improved over time using feedback arising from a variety of customized audio data products and from a variety of listening conditions.

According to other aspects of the invention, the system includes resources for
20 determining a type of delivery for the customized audio data product, such as by prompting a customer to select a delivery mode. The step of modifying the particular audio data product is responsive to the type of delivery requested by the customer. Thus, for example, if a customer requests a music batch file to be delivered using the MP3 compression technique, the processing
25 algorithm applied, or the parameters applied in a single algorithm, may be different than that applied if the customer requests a telephone conversation delivered via a telephone network customized according to the customer's hearing profile.

The present invention also provides a system that includes a source of an encoded audio data product, and processing resources that are configured to receive a request for the encoded
30 audio data product, and to associate the encoded audio data product with a customer hearing profile. The customer hearing profile is used for production of a customized audio data product.

The customer hearing profile comprises in various embodiments, the coefficients of the transfer function used to transform an audio data product according to a hearing characteristic of a customer, and an identifier of a transfer function used to transform the encoded audio data product, an identifier of a transfer function and coefficients for the identified transfer function, values indicating listening conditions in which the customized audio data product is to be played, specification of psycho-acoustic characteristics of a customer, an audiogram characterizing physical hearing characteristics of a customer, and executable software defining a transfer function for producing the customized audio data product. Thus it can be seen that the hearing profile used for production of the customized audio data product according to the present invention assumes a structure adapted to the distribution of processing and communication resources in the particular system being utilized.

The data processing resources are adapted according to the network resources available. Thus, the processing power for transforming the selected audio data product into the customized audio data product can be positioned at a central location accessible via a network, it can be distributed at a variety of locations in the network, it can be positioned in the playback device at a customer's home or office, and it can be implemented using combinations of processors located in several sites.

The architecture of the system can assume a variety configurations. In one aspect, the processing resources in the system include a network interface and logic to accept via the network interface data concerning the customer for use in producing the customer's hearing profile. In other embodiments, the system includes a source of a plurality of customer hearing profiles, such as a customer registry. In response to a request for particular audio data product, the hearing profile is retrieved from the registry and used for production of the customized audio data product.

A variety of user interface tools, such as Web pages, other tools accessible via a network, graphical user interfaces executed on a customer terminal, graphical user interfaces executed at a terminal in a kiosk, personal digital assistant (PDA) devices with network interfaces, and telephones, are included in various embodiments of the invention for accepting data concerning hearing profiles, selections of audio data products, selections of delivery modes, and other input data utilized in the system.

The resources used for associating a customer hearing profile with an audio data product are centrally located at a site accessible via a network by a large customer base. However, in various embodiments, these resources can be distributed among a variety of sites accessible via a network. In a similar manner, the database for storing the hearing profiles of customers is coupled with the site used for associating the hearing profile with encoded audio data product. Alternatively, the database is distributed among a variety of locations for the purposes, for example, of load balancing, security and redundancy.

The customized audio data product is likewise implemented according to the particular configuration of the network processing and communication resources. Thus, the customized audio data product in various embodiments consists of the hearing profile, or portions of the hearing profile, concatenated with the selected audio data product for processing, or further processing, after delivery. In other embodiments, the customized audio data product includes the encoded audio data product transformed using the hearing profile, and ready for play back, prior to delivery. The transformed audio data is coupled to identifiers such as addresses or customer codes in various embodiments, which may be used in decoding the transformed data.

The encoded audio data product, which is customized and delivered according to the present invention comprises in various embodiments analog or digital instances of pre-recorded audio tracks, pre-recorded audio music tracks, live audio music streams, pre-recorded audio voice tracks, live audio voice tracks, live audio telephone data, audio tracks associated with television programs or movies, or other kinds of batch or streaming mode audio data.

The present invention also supports a variety of modes of delivery for the customized audio data product. The customized audio data product is delivered in various embodiments by providing resources to store the customized audio data product on machine readable storage media, such as CD ROM, DVD, or other storage media formats suitable for shipping to the customer. In one preferred embodiment, the customized audio data product is transmitted via a network to the customer using a format such as MP3, formats for voice over the Internet VoIP, or standard telephone formats. The network in various embodiments includes the Internet, a private network, a telephone network, a satellite communications network, or other wired or wireless communication technologies. The transmitted customized audio data product is adapted for a particular playback device in one embodiment. Thus, the product is adapted for transmission to a

personal computer, to a hand-held PDA having a wireless communication link, or directly to a playback device with a wired or wireless network interface.

Thus, the present invention provides a comprehensive system and method for providing audio data products customized according to individual hearing profiles of customers. The system and method operate without requiring assistance of specialized listening devices or hearing aids and allow for optimization of the hearing profiles and customizing processes according to characteristics of the customer, to the particular audio data product being customized, and the listening environment in which the product is to be enjoyed. Utilizing the techniques of present invention, greater numbers of people may take advantage of the processing techniques developed in the hearing aid arts to account for variations in hearing profiles of individuals. Further, the need for hearing aids or other assistive listening devices will be reduced, and many people will be able to avoid the need for such devices completely.

Other aspects and advantages of the present invention can be seen on review of the drawings, the detailed description, and the claims which follow.

BRIEF DESCRIPTION OF THE FIGURES

Fig. 1 is a diagram of one example system for delivering customized audio data products according to the present invention.

Fig. 2 illustrates a method for delivering customized audio data products according to the present invention.

Fig. 3 is a heuristic diagram illustrating a variety of system configurations and implementations of the present invention.

Fig. 4 is a diagram of one example of a customized audio data product according to the present invention.

Fig. 5 is a diagram of another example of a customized audio data product according to the present invention.

Fig. 6 is a diagram of one example of a hearing profile for use in producing customized audio data products.

Fig. 7 is a diagram of another example of a hearing profile for use in producing customized audio data products.

Fig. 8 is a diagram of yet another example of a hearing profile for use in producing customized audio data products.

Fig. 9 is a simplified diagram of a user interface for selecting a particular audio product in conjunction with the system of the present invention.

5 Fig. 10 is a simplified diagram of a user interface for setting up a hearing profile for a customer in conjunction with the system of the present invention.

Fig. 11 is a simplified diagram of the user interface for obtaining feedback from a customer concerning a hearing profile in conjunction with the present invention.

10 Fig. 12 illustrates environments in which input data is received from customers in conjunction with the production and optimization of hearing profiles according to the present invention.

Fig. 13 illustrates optimization loops, and the interaction among optimization loops for producing hearing profiles according to the present invention.

15 Fig. 14 illustrates processing resources for dynamic optimization of hearing profiles according to the present invention utilizing reference model adaptive control techniques.

Fig. 15 illustrates a graphical user input tool for the purposes of gathering information concerning a hearing profile of a customer.

Fig. 16 illustrates another graphical user input tool for gathering information concerning hearing profiles of customers.

20 Fig. 17 illustrates a second level graphical user input tool used in the conjunction with the input tool of Fig.16.

Fig. 18 illustrates another second level graphical user input tool used in the conjunction with the input tool of Fig.16.

25 Fig. 19 illustrates a configuration of an alternative system according to the present invention in which the hearing profile is applied in a set top box, and delivered via a communication channel different than that used for the audio data product.

Fig. 20 illustrates a configuration of an alternative system according to the present invention in which the hearing profile is provided using a portable storage device for use by a customer to produce customized audio data.

30 Fig. 21 illustrates a configuration of an alternative system according to the present invention in which the customized audio data is provided on a portable storage device.

Fig. 22 illustrates a combination hearing test and playback device for customized audio data according to the present invention.

Fig. 23 illustrates an alternative implementation of a combination hearing test and playback device for customized audio data according to the present invention.

5 Fig. 24 is a block diagram of a hearing test and playback appliance for use with the device of Figs. 22 and 23.

10 DETAILED DESCRIPTION

A detailed description of the various embodiments of the present invention is provided with reference to Figs. 1 through 24.

Fig. 1 provides an illustration of one example system for delivering customized audio data products. Other examples will be discussed below. The system includes a server 10 which
15 is coupled to a network or networks 11 for communication with other network connected devices. The server 10 is also coupled to a database 12 storing hearing profiles of customers. In this example, a customer has a personal computer 13 which is coupled to the network or networks 11. The personal computer 13 includes data processing resources, such as memory, a graphical user interface program, and a digital signal processing based sound board coupled with
20 ear phones 14 for playing back an audio product stored in the PC or being received by via the network through the PC. The network or networks 11 interconnect services to supply audio data products. In this example, suppliers of streaming audio are represented by the line 16, suppliers of MP3 batch files are represented by the line 18, and suppliers of digital and analog music library files are represented by the line 20.

25 In this example, the server 10 includes a variety of data processing resources, including a network interface or interfaces, a host processor for managing an Internet based service, memory resources, and a processor, such as a digital signal processor, used in the customizing of audio data products, and used for optimizing hearing profiles stored in the database 12. In this example, the network interface or interfaces of the server 10 act as a source of audio data
30 products. The user issues an order ORDER via the network as represented by line 22, for a particular audio data product. Resources in the server 10 translate the order into a form

ORDER', as represented by line 24, for retrieving the audio data product from the network. The particular audio data product requested by the customer is returned via the network as represented by line 26 to the server 10. Data processing resources in the server 10 associate a hearing profile from the hearing profile database 12 with the particular audio data product. The customized audio data product is then returned as represented by line 28 via the network to the customer PC 13. The PC 13 processes the customized audio data product and supplies it for customized audio playback at the ear phones 14.

The system of Fig. 1 also provides data processing resources for gathering information needed for developing and storing hearing profiles in the database 12. In addition, the system includes resources for obtaining feedback from customers used in the optimizing of hearing profiles.

Fig. 2 illustrates a basic method of operation of a system according to the present invention. Although Fig. 2 is drawn in the form of a flow chart, the particular sequence of steps can be modified as suits particular implementation or context of execution.

A first step in the method is to characterize the hearing of a customer (block 50). The hearing of a customer can be characterized in the system of the present invention indirectly, such as by entering an audiogram, entering the make of the hearing aid and associated prescription, if any is used by the customer, or entering responses to questionnaires. This indirect input data is processed by the system to produce a hearing profile which can be used in a production of customized audio data products. Alternatively, the hearing of a customer may be characterized directly. For example, a customer may sample a closed set of hearing profile choices and select a preferred one. Alternatively, a network based test can be executed by which information needed for administering the test is delivered to the customer via the Internet or other network, and the customer's responses to stimulus in the test are returned via the network to the processing resources in the system. In another example, a kiosk is set up in a public location for use by customers to establish a hearing profile using the processing resources of the kiosk designed for administering the hearing tests. In yet another embodiment, a test is administered over the telephone, particularly when the audio data product to be delivered is telephone calls. These direct measurements of the hearing profile of customer are processed by the system into hearing profiles used for customizing audio data.

Another process in the method of the present invention is to determine the listening conditions in which the customer will be using the customized audio data product (block 51). The listening conditions may include free field environments in which the transducers consist of loud speakers in a living room being driven by a television, radio, or a home stereo, speakers in
5 an automobile driven by the automobile sound system, or concert conditions of some sort. Other listening conditions may be monaural, such as a telephone or an existing prosthetic device. In another example, listening conditions consist of binaural settings, in which sounds are to be delivered via a headset or a binaural prosthetic device. The listening conditions can be characterized in the hearing profile to be applied for producing the customized audio data
10 product.

The next process illustrated in Fig. 2 in the method of the present invention involves determining the mode of delivery of the audio data product which the customer has requested (block 52). After it has been customized, the audio data product can be delivered on a storage medium, or via a network. Also, the format of delivery, such as an MP3 batch file to be played
15 after it has been delivered and stored on the customer's machine, or a streaming audio product which can be listened to while it is being downloaded from the Internet from a live source or from a stored library of audio products, may be subject to different customization algorithms.

The system also includes resources for determining the audio product requested by the customer (block 53). These resources may be implemented using well-known Internet server
20 techniques for commercial transactions and for presenting catalogs of goods or services. Examples of audio products which may be requested include pre-recorded music, live music performances, radio broadcasts, radio format streaming audio products, telephone calls, television shows, audio books and any other audio data source.

Based upon one or more of the processes in blocks 50-53, the system determines the
25 processing needed to customize the audio data product (block 54). The information gathered in the processes of blocks 50-53 is applied using the principles developed for customizing and fitting hearing aids, and improved using adaptive optimization processes as discussed below.

The processing is applied, and the customized audio data is provided to the customer according to the mode of delivery requested (block 55). The customized audio data may take on
30 a variety of formats as discussed in more detail below.

Another process provided by the system is to obtain customer feedback concerning the objective and subjective performance of the customized audio data (block 56). The feedback is retrieved using Internet based techniques for gathering data in one embodiment. Alternatively, customers can be called on the telephone or prompted to fill out questionnaires to rate the performance of the products.

Utilizing the feedback obtained, the hearing profiles are adjusted (block 57). Adjustments may be made either on the fly, or offline as is determined by the processing resources available, and the type of product being delivered. For example, for streaming audio products it may be desirable to optimize the customization of the product on the fly so that the customer can experience the improvements resulting from feedback being returned to the system within a short period of time.

The final process illustrated in the method of Fig. 2 is to update the database used for storing hearing profiles based upon the adjustments made in response to customer feedback (block 58). In this manner, a database is developed of hearing profiles, including the adjustments made to hearing profiles based on specific kinds of feedback for specific kinds of audio data products. Using information in the database, the system is able to improve techniques for establishing and adjusting hearing profiles over time according to adaptive optimization techniques. In addition, the database may be used to as a resource for delivering other products to the customer.

Fig. 3 is a diagram used for illustrating a variety of configurations of the system of the present invention. It will be apparent to persons of skill in the art that a large number of variations in architecture for a network based data processing system can be applied, depending on such issues as load balancing, security, reliability, and speed.

Fig. 3 illustrates a system that includes a network server 100 which is coupled to a network or networks 101. A plurality of customer end stations, including customer end station 102, customer end station 103, customer end station 104, and customer end station 105 are coupled to the network 101. Also, the network interconnects suppliers of audio data products, such as audio data product server 106. The network server 100 also includes a separate link 107 to another supplier of audio data products 108. Also, connected to the server 100 via a link 109 is a registry of customer hearing profiles 110, such as a database which stores hearing profiles accessible using customer identifiers. In this example, a transform engine 111 is coupled to the

network server 100 via link 112, and also to the network 101. The transform engine 111 includes the resources for applying hearing profiles to an audio data product, in order to produce the customized audio data products for delivery to the customer. The configuration of Fig. 3 also includes other transform engines distributed in the system. Thus, the server 106 for delivering
5 audio data products includes a transform engine 113. Also, the customer end station 105 consists of a personal computer including a transform engine 114 based on, for example, a digital signal processing card.

The customer end stations 102-105 illustrate a variety of playback modes which may be served by the system of the present invention. Thus, the customer end station 102 consists of an
10 MP3 player, which transduces batch mode MP3 music files for supply to ear phones 115. The customer end station 103 consists of a personal computer which is coupled to a stereo receiver 116 which drives loud speakers 117. Customer end station 104 consists of a telephone which supplies the customized audio data to a telephone handset 118. Customer end station 105 consists of personal computers with an on-board transform engine which supplies the audio data
15 transformed to match the hearing profile of the customer to ear phones 119.

The network 101 is illustrated in Fig. 3 as a single entity. However, the network may comprise a plurality of networks, including the telephone network, the World Wide Web, private networks, land based wireless networks, satellite communication networks, and other forms of data communication. The plurality of networks by which audio data products may be
20 communicated can be used alone, or in combination as suits the particular communication channel being set up to deliver the product.

In one preferred mode, the particular audio data product selected by the customer has a particular format, such as an MP3 format. The customized audio data product is also delivered in the particular format of the original audio data product. In this manner, the customer is able to
25 playback the customized audio data product using the type of equipment for which the original product was developed. In alternative embodiments, the customized audio data product is transformed from the format of the original audio data product into the format of the listing device in which customer intends to play back the customized audio data product.

The server 100 in one preferred embodiment includes resources for keeping information
30 used for billing the customer for ordered customized audio data products.

Figs. 4 and 5 illustrate alternative formats for the customized audio data product according to the present invention. In Fig. 4, the customized audio data product consists of a header 200 that includes, for example, a destination address, a field 201 holding the hearing profile, or portions of the hearing profile, and a field 202 holding the audio data product which has been retrieved and modified by the addition of the header 200 and hearing profile 201. The format of customized audio data product shown in Fig. 4 is utilized when the transform engine is located at the customer site or remote from the server at which the hearing profile is associated with the audio data product to be delivered.

Fig. 5 illustrates an alternative format for a customized audio data product which includes a header 210, including a destination address or other parameter like a digital signature or user identification number identifying the customer or associating the customized data product with the customer, and a field 211 holding a transformed version of the audio data product. The format of customized audio data product shown in Fig. 5 is utilized when the transform engine is coupled with the network server which associates the hearing profile with the particular audio data product to be delivered. The parameter, such as the address, user identification number or digital signature mentioned above, is used in decoding the transformation of the audio data product in one embodiment.

According to the present invention, an article of manufacture comprises the customized audio data product having a format such as those shown in Figs. 4 and 5, stored on a storage device, such as machine readable, portable non-volatile memory device.

Figs. 6, 7 and 8 illustrate alternative formats for the hearing profiles to be stored in the registry 110. The hearing profile shown in Fig. 6 includes a customer ID 250, coefficients of transform equations 251, and an identifier of the playback device type and listening environment 252 in which the audio data product is to be played. In Fig. 7, the hearing profile includes a customer identifier 260, the audiogram for customer 261, listening condition data 262, and psycho-acoustic parameters 263 which relate to the listening characteristics of the customer. The hearing profile shown in Fig. 8 includes a customer identifier 270, and software 271 along with code data structures 272 that in combination provide executable transform code for producing the customized audio data product from the selected audio data product. The three examples of hearing profile formats shown in Figs. 6-8 are representative of a large number of hearing profile

formats that could be utilized depending on the type of transform processes being executed, the type of audio products being delivered, and other factors related to the architecture of the system.

According to the present invention, an article of manufacture comprises the hearing profile having a format such as those shown in Figs. 6, 7 and 8, stored on a storage device, such as machine readable, portable non-volatile memory device.

As mentioned before, the system of the present invention provides user input tools for selecting audio products, for setting up hearing profiles, and for providing feedback about the performance of the customer's audio data products. Figs. 9 through 11 show simplified graphic user interface pages used for prompting a user to input data for these purposes. Thus, Fig. 9 shows a page 300 prompting the user to select an audio product. The page 300 includes a first graphical tool 301 for selecting an MP3 music file; a second graphical tool 302 used for selecting streaming audio such as a radio format data, and a third tool 303 used for selecting live audio products, such as a web broadcast performance, or telephone call. Fig. 10 shows a simplified user interface page 310 for setting up a hearing profile. In this example, the page 310 includes a tool 311 for entering audiological data, such an audiogram. The tool 312 is provided for allowing a user to enter playback device types. The tool 313 is included on the page 310, prompting the user to enter environmental parameters. Fig. 11 shows a simplified user interface page 320 prompting the user to provide feedback concerning the hearing profile. Thus in this example, the tool 321 is provided prompting the user to enter subjective performance data, such as whether the customized audio data products sounded good or bad, or whether the pitch of the product was too high or too low. Also, tool 322 is provided to allow the user update the playback device types being used. Finally, in the example of Fig. 11, the tool 323 is provided by which the user is prompted to update parameters about the environment. The pages shown in Figs. 9-11 are obviously simplified versions showing a range of possibilities for input tools provided by the system of the present invention.

Fig. 12 illustrates a variety of scenarios by which a central server 400 interacts with customers in the development and optimization of hearing profiles, and for the selection and delivery of customized audio data products. Thus, the system in Fig. 12 consists of the server 400 which is coupled to the database 401 storing hearing profiles. The server 400 is coupled to the Internet 402, and via Internet 402 to a kiosk 403, and to a plurality of other locations, including a personal computer 403 at the home of the customer, and via wireless link 405 to a

personal digital assistant 406, by which the customer provides feedback away from home. The kiosk 403 includes a computer 410 having a graphical user interface such as a touch screen 411 for administering a hearing test to gather data for development of hearing profiles. In the preferred embodiment, sounds used in the test are provided using an acoustic dome 411, such as the stereo sound dome unit known as a Virtual Audio Imager provided by Brown Innovations, Inc. of Chicago, IL. Utilizing the acoustic dome 411, carefully controlled audio vectors are generated and directed to the customer for use in direct measurement of the customer's hearing profile. A sequence of graphic user interface screens are presented on the touch screen 412, in combination with the audio stimulus provided by the acoustic dome 411. The user's hearing profile is developed based on interaction via the touch screen 412.

The personal computer 404 at the customer's home is utilized for follow-up interaction with the customer, or for gathering indirect data concerning the hearing profile of customer. Thus, via the Internet 402, the server 400 can deliver questionnaires and simple audio tests to the home PC 404. Also, a user can access a web page, or use electronic mail, to provide feedback concerning the performance of the customized audio data product that had been played by the user. Finally as shown in Fig. 12, the user may access the server 400 using a wireless personal digital assistant 406 to provide feedback concerning the performance of the customized audio data product.

Fig. 13 illustrates optimization loops used for the production of a customer's hearing profile according to the present invention. The first optimization loop A is based on administration of an interactive test. For each customer, the vector "s" representing a sound environment, a vector "f" representing a fitting parameter, and a vector "e" representing the customer's evaluation at this stage of the test is developed. The sequence of stimuli is applied to produce the vectors. The vectors are applied to a second loop C. In the second loop C, a fitting algorithm is executed based upon the aggregate of data from many patients. In this loop, data mining techniques can be used to make a best initial guess of the fitting to be applied to customer. The fitting being developed for the customer is applied to a feedback loop B. In the feedback loop B, the fitting "f" developed during the test for the profile represented by transform g^i is applied to a real world environment g^r . The evaluation "e" provided by the customer in response to the real world experience is used in feedback for the purposes of optimization of the fitting.

Fig. 14 illustrates processing resources used in the adaptive optimization of a hearing profile according to the present mention. The customer's profile "p" is applied to a fitting processor 500. Other inputs to the fitting processor 500 include prior evaluation data provided on line 501, prior sound environment data delivered online 502, and customer input. A particular fitting vector "f" is provide on line 503. This fitting vector is processed according to a transfer function 504. Customer evaluation of the playback is provided on line 501. The fitting vector on line 503 and the evaluation on line 501 are fed to a performance correlation unit 505. The performance correlation unit 505 generates a result that is applied to data mining resources 506 for the purposes of determining a reaction to the correlation result. Data mining produces parameters used in testing optimization unit 507. A testing optimization unit 507 updates the environmental parameters for the customer. The data mining resources 506 are seeded with the information gathered from prior evaluations for given customers. Thus, model reference adaptive learning using data mining techniques can be utilized to optimize the fitting for a particular customer. For additional information concerning model reference adaptive optimization techniques, reference can be made to LANDAU, *ADAPTIVE CONTROL, THE MODEL REFERENCE APPROACH*, Merkel Dekker, Inc., New York, 1979.

Figs. 15-18 illustrate graphical user interface tools for use in a kiosk environment such as the kiosk 403 shown in Fig. 12, for development of a hearing profile using direct measurements. The user interface of Fig. 15 provides a simple interface for gathering information about the profile the user. The tool includes a first indicator 600 for signaling to a user whether the left or right ear is being stimulated. Next, a label using either text or graphics is displayed for indicating to the user that a test for loudness is being made. Next, a label 602 for bass and treble tests is provided. A label 603 for testing clarity is provided. A label 604 is provided identifying tests for noise and distortion. The user is given the option of making three selections for each test represented by a left facing arrow 605, a center button 606, and a right facing arrow 607. Thus, for example during a loudness test for the left ear, an indicator in region 600 identifies stimulus to the left ear. A sound is played using the acoustic dome 411 shown in Fig. 12. The user selects the left arrow if the tone is too loud, the right arrow if the tone is too soft, and the center button 606 if the tone sounds right. Similar stimulus-response tests are administered for the other factors to be determined. The upper left-hand section of the screen includes a button 608 to signal to repeat of the test, and a button 609 to signal that the user is ready to proceed to a

next test. Using this stimulus-response technique, with limited feedback options, a basic hearing profile can be developed without professional assistance.

Figs. 16-18 illustrate another technique for gathering feedback from a customer during the development of a hearing profile. A first screen as shown in Fig. 16 is displayed with a row of condition indicators 700-702 across of the top of the screen. The indicators show whether the test being executed is adapted to determine soft sounds, normal sounds, or loud sounds. An array of 16 buttons arranged in a 4 by 4 matrix in this example is displayed to the user. A set of sound stimulus is played, and the user is instructed to select a corresponding button in the 16 button array. After a first selection, preferably within the interior four buttons in the region 703 of the array, a second screen, such as the screen shown in Fig. 17 is displayed to the customer, linked to the choice made in the first screen. The second screen of Fig. 17 includes a second array of 16 buttons presented to the user. The user again selects a preferred setting for a loudness over balance of the stimulus to further refine the profile data. Fig. 18 illustrates another second level screen for the purposes of selecting the preferred level of clarity over noise and distortion for the signal. Utilizing these graphical interface tools in combination with audio stimulus, relatively sophisticated information concerning users' hearing profiles can be gathered automatically by an Internet based, or kiosk based, testing system.

Fig. 19 illustrates another system configuration for the delivery of customized audio data products according to the present invention. The system includes a customized audio server 900 which is coupled to a network or networks 901 for communication with other network connected devices. The servers are also coupled to a hearing profile database 902, such as described above. In this example, a customer has a display system 903 which may be a computer monitor, a television, or another device that is coupled to the network or networks 901. The display system 903 is coupled to an audio system for providing playback of the customized audio, in this example using headphones 904. Also coupled to the display system is a set top box 905 by which the display system is coupled to the network or networks 901. The set top box 905 combines the hearing profile data and the program including audio data to produce the customized audio data product at the customer site.

In one example, the set top box is coupled to a cable television network 906 across which movies and television programming that include audio data products are supplied to the display system 903. Thus, one source of audio data products coupled to the network or networks 901 is

cable television network 906. Other sources of audio data products coupled to the network or networks 901 include streaming audio data 907, MP3 encoded audio data 908, and a digital/analog music library 909.

The customized audio server 900 acts as a gateway for managing the delivery of customized audio data products. In this example, the customized audio server 900 is also coupled to the telephone network, as indicated by the telephone 910. One example transaction using the system of Fig. 19 includes placement of an order for customized audio data products using the telephone 910 using touch tone commands or voice recognition mechanisms. When the order is placed to the customized audio server 900, a request is issued to the source of the requested audio data product, in this example to the cable television network, for delivery of a chosen audio data product. Also, the customized audio server 900 transmits a hearing profile to the set top box 905 across a communication channel between the customized audio server 900 and the set top box 905. The cable television network 906 transmits the requested programming including the audio data product to the set top box 905 using a separate communication channel. Thus, for example, the hearing profile is transmitted from the customized audio server 900 to the set top box 905 using the Internet, while the programming is supplied from the cable television network 906 using the television cable protocols and media. Also, separate Internet channels may be used for the independent channels from the customized audio server 900 and from the source of the audio data.

In other transactions using the system of Fig. 19, the order may be placed via the communication link between the set-top box 905 and customized audio server 900, or via other communication links with the customized audio server 900. Also, feedback concerning the performance of the customized audio data product can be provided using the set top box 905 or via other communication channels to the customized audio server 900. In other configurations, the database 902 is coupled to the network or networks 901 at a site apart from the customized audio server 900.

Fig. 20 illustrates another system configuration for producing customized audio data products according to the present invention in which the hearing profile is carried on a portable storage device 950, such as a plastic card having a magnetic strip or carrying an integrated circuit memory. In this example, a hearing profile database 951 is coupled to the network or networks 952. A plurality of sources of audio data products are also coupled to the network or networks

952, including, for example, streaming audio data 953, MP3 encoded audio data 954, cable television network 955, and a digital/analog music library 956. In the system shown in Fig. 20, a kiosk workstation 960 is coupled to the network or networks 952. Using the workstation 960 and the tools described above for the creation of a hearing profile, an individual generates a hearing profile data set. A card writer 961, or other resource for storing data on a portable storage device 950 is coupled to the kiosk workstation 960. The hearing profile data is stored on the portable storage device 950 and the individual carries it to a location at which a playback device 963 is used to play the customized audio. The user has a personal computer 964, or other network connected appliance such as an internet enabled cell phone or palm sized computer, which is coupled to the network or networks 952. Coupled with personal computer 964 is a card reader 965 by which the data in the portable storage device 950 is downloaded to the personal computer 964.

A transaction using the system of Fig. 20 includes a user issuing an order for a particular customized audio data product directly to the source of the product. Thus, in this example, the order for a customized audio data product is placed directly to the digital/analog music library 956. The selected audio data product is delivered to the personal computer 964. The personal computer 964 uses the hearing profile from the portable storage device 950 to produce the customized audio data product, and delivers it to the playback device 963. In one embodiment, the personal computer 964 is also configured to provide feedback information concerning the performance of the customized audio data product. The feedback information is delivered via the network or networks 952 to the hearing profile database server 951.

Portable storage devices carrying hearing profile data may be used in a variety of settings. For example, a card reader may be coupled to a set top box for a cable or satellite television network to allow for the delivery of customized audio data with standard programming. Also, a card reader and headphone set may be installed in a movie theater to allow for the delivery of customized audio data to moviegoers. Card readers may be coupled to telephones to allow for the correction of audio telephone conversations. Examples of portable storage devices include plastic cards with magnetic strips, PC Card format or PCMCIA format add-on cards for computers, flash memory cards, cards like the "Memory Stick" provided by Sony Corporation, a floppy disk, or other machine readable storage devices adapted to be carried from machine to machine.

Also, in various embodiments of the present invention, customer identification data, such as fingerprints or other biometric data, may be recorded and stored with the hearing profile and/or the customized audio data of a customer for purposes of authentication of feedback data, automatic accounting for use of the hearing profile data, or access playback authorization and other purposes.

Fig. 21 illustrates yet another configuration for distribution of customized audio data products according to the present invention. In Fig. 21, the customized audio data product is provided on a portable storage device 1000. The article of manufacture consisting of the portable storage device having a customized audio data product stored therein is produced in a server 1001 coupled to a network or networks 1002. A plurality of sources of audio data products, for example as mentioned before including a source of streaming audio 1003, a source of MP3 audio 1004, a cable television network 1005, and a digital/analog music library 1006, are coupled to the network or networks 1002.

In one example scenario among many possible scenarios, a customer logs on at end station 1007 coupled to the network or networks 1002. A customer places an order by a message ORDER 1008 to server 1001. The server 1001 produces the article by ordering the requested audio data product from a particular source, such as by a message ORDER' 1009 sent to the digital/analog music library 1006. The audio data product PRODUCT 1019 is returned to the server 1001. The server combines a hearing profile for the customer from the hearing profile database 1018 with the PRODUCT 1019 to produce a customized audio data product as described above. The hearing profile is provided by the user in other embodiments via the network or using a portable storage device. The server includes a card writer 1010, or other resources for storing data on a portable storage device. The server uses the card writer 1010 to write the customized data product onto the portable storage device 1000.

The portable storage device 1000 is delivered to the customer, by mail or by hand delivery, or otherwise. A customer uses a playback device 1011 having a card reader 1012, or other port for a removable storage media. For example, the playback device 1011 may be a hand-held audio device like a "Walkman" style device with an interface for "Memory Stick" portable storage technology provided by Sony Corp. or other similar portable playback devices. Other portable storage media include magnetic tape, CDROM format disks, DVD format disks, magnetic disks, and a variety of media adapted for particular environments.

Fig. 22 is a schematic diagram of a hearing test and playback device according to the present invention, used for the production of hearing profiles, and for playing back customized audio data products. The device includes a headset 1100 having ear phones 1101 and 1102. The headset is coupled by a communication medium such as cable 1103, to a handheld appliance 1104. The appliance includes a port for a removable storage device 1105, and a port for a communication medium 1106. The communication medium 1106 is coupled to a computer 1107 which is coupled to a data network medium 1108. The computer 1107 includes a user interface supporting the hearing test, such as described above with respect to Figs. 9-11 and 15-18. The computer is in turn coupled to the data network medium 1108, for access to hearing test resources located remotely in the network. The computer 1107 acts as an intermediate station supporting the hearing test. In an alternative embodiment, the computer 1107 includes the resources locally sufficient to execute the test without relying on access to other resources via the network medium 1108. The appliance 1104 includes resources for playing sounds as directed by signals from the computer produced in response to the user input, and in response to the algorithms of the test. The appliance is designed so that the sounds produced on the ear phones during the test are calibrated to support accurate test results. In this embodiment, the appliance 1104 is a small device adapted to be handheld, or to be conveniently carried in a pocket or handbag, for example.

Fig. 23 illustrates an alternative embodiment of the portable test/playback appliance. In Fig. 23, the circuit components of the device in appliance 1104 are mounted on the headset 1120 along with the ear phones. Of course, Fig. 23 is a simplified diagram. In a preferred embodiment, the circuit components in the appliance 1104 are mounted using an ergonomic design within the structure the headset. In this embodiment, the appliance 1104 includes the port for portable storage device 1105, and the port 1106 for a communication media used for connection to a computer, or via a network like the internet, the wire line telephone network, the wireless pager network or mobile phone network to a remote system. The port 1106 may be a wireless connection or a cable connection as suits particular implementation.

Fig. 24 is a simplified block diagram of the circuit components of the test/playback appliance 1104. The appliance may be a mobile phone, a music play back device, a radio, a wireless appliance, a combination product or other audio product. The appliance 1104 includes an audio processor 1125. The audio processor is coupled to a removable storage media port

1126 and a communication port 1127. The battery 1128 powers the components of the appliance 1104, as well as the ear phones on the accompanying headset. The audio processor 1125 includes logic, such as software stored in a non-volatile memory 1129 for supporting the hearing test, and for supporting the decoding of customized audio data products stored in a solid state memory card 1130 or other portable storage device coupled to the port 1126. If this example, the nonvolatile memory 1129 includes a set of test sounds which are adapted for the particular ear phones used with the appliance, and test interface routines which support the communication between the appliance and the computer or other test processor on which a user interface is provided supporting the test. Also, the nonvolatile memory 1129 includes decoding resources that support the playback of the customized audio data product read from the solid state memory card 1130. The decoding resources may include logic that utilizes parameters associated with the customized audio data product for a decoding data so that only an appliance or user having these particular parameters can playback the product. In alternative embodiments, the decoding resources are adapted for industry standard audio data encoding techniques.

In alternative embodiments, the appliance 1104 includes user input devices, such as buttons or a touch screen supporting a graphical user interface in the style of a personal digital assistant (PDA), for the test process, and the communication media connects to the Internet or other networks for access to remote test processors used to generate the hearing profile.

In summary, the present invention provides a system and method for producing hearing profiles for customers to be used in the production of customized audio data products. The hearing profiles allow for the customized and optimized sound processing for each customer. The process can be optimized over time and over situations and for each modality for the delivery of the sound product. The customized audio data products are delivered via a variety of communication channels, to specific playback devices or to generic playback devices as suits a particular customer.

The system and method of the present invention provide for delivery of optimized audio products to persons that do not use hearing aids or other assistive hearing devices. Audio products from a variety of sound data sources can be customized using hearing profiles, and delivered to a customer on demand.

While the present invention is disclosed by reference to the preferred embodiments and examples detailed above, it is to be understood that these examples are intended in an illustrative

rather than in a limiting sense. It is contemplated that modifications and combinations will readily occur to those skilled in the art, which modifications and combinations will be within the spirit of the invention and the scope of the appended claims.

CLAIMS

What is claimed is:

- 1 1. A system for producing customized audio data, comprising:
2 a source of an audio data product;
3 processing resources, coupled to the source of an audio data product, configured to
4 associate the audio data product with a customer hearing profile for use in production of a
5 customized audio data product.
- 1 2. The system of claim 1, wherein the customer hearing profile comprises
2 coefficients of a transfer function to transform the audio data product according a hearing
3 characteristic of a customer.
- 1 3. The system of claim 1, wherein the customer hearing profile comprises an
2 identifier of transfer function to transform the audio data product according a hearing
3 characteristic of a customer.
- 1 4. The system of claim 1, wherein the customer hearing profile comprises an
2 identifier of a transfer function and coefficients of the identified transfer function to transform
3 the audio data product according a hearing characteristic of a customer.
- 1 5. The system of claim 1, including a machine readable registry of customer hearing
2 profiles corresponding to registered customers of the audio data product in communication with
3 data processing resources, and further including resources for reading, modifying and writing
4 particular customer hearing profiles in the plurality.
- 1 6. The system of claim 1, wherein the customer hearing profile includes a value
2 indicating listening conditions in which the customized audio data product is to be played.

1 7. The system of claim 1, wherein the customer hearing profile includes a value
2 indicating a hearing characteristic of a customer for whom the customized audio data product is
3 to be played.

1 8. The system of claim 1, wherein the customer hearing profile includes a
2 specification of psycho-acoustic characteristics of a customer for whom the customized audio
3 data product is to be played.

1 9. The system of claim 1, wherein the customer hearing profile includes an
2 audiogram characterizing a customer for whom the customized audio data product is to be
3 played.

1 10. The system of claim 1, wherein the customer hearing profile includes software
2 defining a transfer function for producing the customized audio data product.

1 11. The system of claim 1, including a source of a plurality of customer hearing
2 profiles, and wherein the data processing resources include logic to accept data concerning a
3 customer for whom the customized audio data product is to be played, and to produce a customer
4 hearing profile for the plurality of customer hearing profiles in response to the accepted data.

1 12. The system of claim 1, including a source of a plurality of customer hearing
2 profiles, and wherein the data processing resources include a network interface, and logic to
3 accept, via the network interface, data concerning a customer for whom the customized audio
4 data product is to be played, and to produce a customer hearing profile for the plurality of
5 customer hearing profiles in response to the accepted data.

1 13. The system of claim 1, including a source of a plurality of customer hearing
2 profiles, and wherein the data processing resources include a network interface, and logic to
3 accept, via the network interface, data concerning a customer for whom the customized audio
4 data product is to be played, and to modify a customer hearing profile in the plurality of
5 customer hearing profiles in response to the accepted data.

1 14. The system of claim 1, including a source of a plurality of customer hearing
2 profiles, and wherein the data processing resources include a network interface, and an interface
3 accessible to a user via the network interface to accept data concerning a customer for whom the
4 customized audio data product is to be played, and to produce a customer hearing profile for the
5 plurality of customer hearing profiles in response to the accepted data.

1 15. The system of claim 1, including a source of a plurality of customer hearing
2 profiles, and wherein the data processing resources include a network interface, and an interface
3 accessible to a user via the network interface to accept data concerning a customer for whom the
4 customized audio data product is to be played, and to modify a customer hearing profile in the
5 plurality of customer hearing profiles in response to the accepted data.

1 16. The system of claim 1, wherein the processing resources include a network
2 interface for connection to a data network, and the source of the audio data product comprises
3 the network interface.

1 17. The system of claim 1, wherein the processing resources include a network
2 interface for connection to a data network, and resources to receive the customer hearing profile
3 via the network interface.

1 18. The system of claim 1, wherein the audio data product comprises pre-recorded
2 audio tracks.

1 19. The system of claim 1, wherein the audio data product comprises pre-recorded
2 audio music tracks.

1 20. The system of claim 1, wherein the audio data product comprises live audio
2 music streams.

1 21. The system of claim 1, wherein the audio data product comprises pre-recorded
2 audio voice tracks.

1 22. The system of claim 1, wherein the audio data product comprises live audio voice
2 streams.

1 23. The system of claim 1, wherein the audio data product comprises live audio
2 telephone data.

1 24. The system of claim 1, wherein the processing resources include a network
2 interface for connection to a data network, and user input comprises an interface accessible via
3 the network interface.

1 25. The system of claim 1, wherein the user input comprises tools by which a user
2 selects an instance of the encoded audio data product, and issues a request for the selected
3 instance.

1 26. The system of claim 1, including a source of a plurality of customer hearing
2 profiles, and wherein the user input comprises tools by which a user adds a customer hearing
3 profile to the plurality of customer hearing profiles.

1 27. The system of claim 1, including a source of a plurality of customer hearing
2 profiles, and wherein the user input comprises tools by which a user modifies a particular
3 customer hearing profile in the plurality of customer hearing profiles.

1 28. The system of claim 1, wherein the processing resources include logic to produce
2 information about billing for requested audio data products for customers.

1 29. The system of claim 1, wherein the audio data product comprises a digitally
2 encoded product.

1 30. The system of claim 1, wherein the audio data product comprises an analog
2 encoded product.

1 31. The system of claim 1, wherein the audio data product comprises data encoded
2 according to a particular format suitable for playback by audio systems adapted for the particular
3 format, and the customized audio data product comprises data encoded according to the
4 particular format.

1 32. The system of claim 1, wherein the data processing resources include a processor
2 which transforms the audio data product to the customized audio data product using the
3 customer hearing profile, a network interface, and logic for transmitting the customized audio
4 data product to a remote location via the network interface.

1 33. The system of claim 1, wherein the data processing resources include a network
2 interface, and logic for transmitting the audio data product and at least a portion of the customer
3 hearing profile to a remote location via the network interface.

1 34. The system of claim 1, wherein the data processing resources include a network
2 interface, and logic for transmitting at least a portion of the customer hearing profile to a remote
3 location via the network interface for use in transforming the audio data product.

1 35. The system of claim 1, wherein the data processing resources include a processor
2 which transforms the audio data product to the customized audio data product using the
3 customer hearing profile, a memory device to store data on a machine readable medium, and
4 logic for storing the customized audio data product on the machine readable medium.

1 36. The system of claim 1, wherein the processing resources comprise a processor
2 coupled to a device for playing the customized audio data product.

1 37. The system of claim 1, wherein the processing resources comprise a processor
2 coupled to a network, and resources for transmitting the customized audio data product to the
3 customer via the network.

1 38. The system of claim 1, wherein the data processing resources include an interface
2 for reading a hearing profile from a portable data storage device.

1 39. A method for producing customized audio data, comprising:
2 providing an interface for access to an audio data product;
3 receiving a request for the audio data product from a customer;
4 receiving a customer hearing profile associated with the customer; and
5 associating the audio data product with the customer hearing profile for use in production
6 of a customized audio data product.

1 40. The method of claim 39, including:
2 producing the customized audio data product in response to the audio data product and
3 the customer hearing profile, and transmitting the customized audio data product to a remote
4 site.

1 41. The method of claim 39, including:
2 producing the customized audio data product in response to the audio data product and
3 the customer hearing profile, and storing the customized audio data product on a machine
4 readable medium.

1 42. The method of claim 39, including:
2 producing the customized audio data product in response to the audio data product and
3 the customer hearing profile, and transducing the customized audio data product to sound.

1 43. The method of claim 39, including transmitting the audio data product and the
2 customer hearing profile to a remote site.

1 44. The method of claim 39, wherein the customer hearing profile comprises
2 coefficients of a transfer function to transform the audio data product according a psycho-
3 acoustic characteristic of a customer.

1 45. The method of claim 39, wherein the customer hearing profile comprises an
2 identifier of transfer function to transform the audio data product according a hearing
3 characteristic of a customer.

1 46. The method of claim 39, wherein the customer hearing profile comprises an
2 identifier of a transfer function and coefficients of the identified transfer function to transform
3 the audio data product according a hearing characteristic of a customer.

1 47. The method of claim 39, including providing a machine readable registry of
2 customer hearing profiles corresponding to registered customers of the audio data product, and
3 further including reading, modifying and writing particular customer hearing profiles in the
4 plurality to maintain the registry.

1 48. The method of claim 39, wherein the interface for access to the audio data
2 product comprises a network interface.

1 49. The method of claim 39, including providing a source of a plurality of customer
2 hearing profiles comprising a network interface.

1 50. The method of claim 39, wherein the audio data product comprises pre-recorded
2 audio tracks.

1 51. The method of claim 39, wherein the audio data product comprises pre-recorded
2 audio music tracks.

1 52. The method of claim 39, wherein the audio data product comprises live audio
2 music streams.

1 53. The method of claim 39, wherein the audio data product comprises pre-recorded
2 audio voice tracks.

1 54. The method of claim 39, wherein the audio data product comprises live audio
2 voice streams.

1 55. The method of claim 39, wherein the audio data product comprises live audio
2 telephone data.

1 56. The method of claim 39, including providing an interface accessible via a
2 network interface adapted to receive user input, including the request for the audio data product
3 and an identifier of the customer hearing profile.

1 57. The method of claim 39, including providing tools by which a user selects an
2 instance of the audio data product, and issues a request for the selected instance.

1 58. The method of claim 39, including providing a source of a plurality of customer
2 hearing profiles, and tools by which a user adds a customer hearing profile to the plurality of
3 customer hearing profiles.

1 59. The method of claim 39, including providing a source of a plurality of customer
2 hearing profiles, and tools by which a user modifies a particular customer hearing profile in the
3 plurality of customer hearing profiles.

1 60. The method of claim 39, including providing logic to produce information about
2 billing for requested audio data products for customers.

1 61. The method of claim 39, wherein the audio data product comprises a digitally
2 encoded product.

1 62. The method of claim 39, wherein the audio data product comprises an analog
2 encoded product.

1 63. The method of claim 39, wherein the audio data product comprises data encoded
2 according to a particular format suitable for playback by audio devices adapted for the particular
3 format, and the customized audio data product comprises data encoded according to the
4 particular format.

1 64. The method of claim 39, including providing a source of a plurality of customer
2 hearing profiles, and wherein a customer hearing profile in the plurality of customer hearing
3 profiles includes a value indicating an audio device on which the customized audio data product
4 is to be played.

1 65. The method of claim 39, wherein the customer hearing profile includes a value
2 indicating a hearing characteristic type of a customer for whom the customized audio data
3 product is to be played.

1 66. The method of claim 39, wherein the customer hearing profile includes a
2 specification of psycho-acoustic characteristics of a customer for whom the customized audio
3 data product is to be played.

1 67. The method of claim 39, wherein the customer hearing profile includes an
2 audiogram of a customer for whom the customized audio data product is to be played.

1 68. The method of claim 39, wherein the customer hearing profile includes software
2 defining a transfer function for producing the customized audio data product.

1 69. The method of claim 39, including providing a source of a plurality of customer
2 hearing profiles, accepting data concerning a customer for whom the customized audio data
3 product is to be played, and producing a customer hearing profile for the plurality of customer
4 hearing profiles in response to the accepted data.

1 70. The method of claim 39, including providing a source of a plurality of customer
2 hearing profiles, accepting data via a network interface concerning a customer for whom the
3 customized audio data product is to be played, and producing a customer hearing profile for the
4 plurality of customer hearing profiles in response to the accepted data.

1 71. The method of claim 39, including providing a source of a plurality of customer
2 hearing profiles, accepting data via a network interface, concerning a customer for whom the
3 customized audio data product is to be played, and modifying a customer hearing profile in the
4 plurality of customer hearing profiles in response to the accepted data.

1 72. The method of claim 39, including providing a source of a plurality of customer
2 hearing profiles, providing an interface accessible to a user via a network interface to accept data
3 concerning a customer for whom the customized audio data product is to be played, and
4 producing a customer hearing profile for the plurality of customer hearing profiles in response to
5 the accepted data.

1 73. The method of claim 39, including providing a source of a plurality of customer
2 hearing profiles, providing an interface accessible to a user via a network interface to accept data
3 concerning a customer for whom the customized audio data product is to be played, and
4 modifying a customer hearing profile in the plurality of customer hearing profiles in response to
5 the accepted data.

1 74. A method for providing customized audio data products, comprising:
2 accepting via a data network, machine readable orders from a customer for a particular
3 audio data product;
4 associating a hearing profile for the customer with the particular audio data product;
5 modifying the particular audio data product according to the hearing profile to produce a
6 customized audio data product; and
7 transmitting via a data network, a customized audio data product to the customer.

1 75. The method of claim 74, wherein the customized audio data product comprises at
2 least a portion of the hearing profile, and the particular audio data product for transformation
3 according to the hearing profile at a remote site.

1 76. The method of claim 74, wherein the customized audio data product comprises a
2 transformation according to the hearing profile of the particular audio data product.

1 77. The method of claim 74, including maintaining a registry of hearing profiles, and
2 the step of associating a hearing profile for the customer with the particular audio data product
3 includes retrieving the hearing profile from the registry.

1 78. The method of claim 77, including providing tools accessible via a network for
2 gathering information about hearing characteristics of customers, and modifying hearing profiles
3 in the registry in response to the information.

1 79. The method of claim 77, including providing tools accessible via a network for
2 gathering information about hearing characteristics of customers, and modifying hearing profiles
3 in the registry in response to the information according to an optimization modeling process.

1 80. The method of claim 74, wherein the particular audio data product comprises pre-
2 recorded audio tracks.

1 81. The method of claim 74, wherein the particular audio data product comprises pre-
2 recorded audio music tracks.

1 82. The method of claim 74, wherein the particular audio data product comprises live
2 audio music streams.

1 83. The method of claim 74, wherein the particular audio data product comprises pre-
2 recorded audio voice tracks.

1 84. The method of claim 74, wherein the particular audio data product comprises live
2 audio voice streams.

1 85. The method of claim 74, wherein the particular audio data product comprises live
2 audio telephone data.

1 86. The method of claim 74, including providing an interface accessible via a
2 network interface adapted to receive user input, including the request for the particular audio
3 data product and an identifier of the customer hearing profile.

1 87. The method of claim 74, including providing tools by which a user selects an
2 instance of the particular audio data product, and issues a request for the selected instance.

1 88. The method of claim 74, including providing a source of a plurality of customer
2 hearing profiles, and tools by which a user adds a customer hearing profile to the plurality of
3 customer hearing profiles.

1 89. The method of claim 74, including providing a source of a plurality of customer
2 hearing profiles, and tools by which a user modifies a particular customer hearing profile in the
3 plurality of customer hearing profiles.

1 90. The method of claim 74, including providing logic to produce information about
2 billing for particular audio data products for customers.

1 91. The method of claim 74, wherein the particular audio data product comprises a
2 digitally encoded product.

1 92. The method of claim 74, wherein the particular audio data product comprises an
2 analog encoded product.

1 93. The method of claim 74, wherein the particular audio data product comprises data
2 encoded according to a particular format suitable for playback by audio devices adapted for the
3 particular format, and the customized audio data product comprises data encoded according to
4 the particular format.

1 94. The method of claim 74, wherein the hearing profile includes a value indicating
2 listening conditions in which the customized audio data product is to be played.

1 95. The method of claim 74, wherein the hearing profile includes a value indicating a
2 hearing characteristic type of a customer for whom the customized audio data product is to be
3 played.

1 96. The method of claim 74, wherein the hearing profile includes a specification of
2 psycho-acoustic characteristics of a customer for whom the customized audio data product is to
3 be played.

1 97. The method of claim 74, wherein the hearing profile includes an audiogram of a
2 customer for whom the customized audio data product is to be played.

1 98. The method of claim 74, wherein the hearing profile includes software defining a
2 transfer function for producing the customized audio data product.

1 99. A method for providing customized audio data products, comprising:
2 storing a machine readable hearing profile for a customer;
3 accepting via a data network, machine readable orders from the customer for a particular
4 audio data product;
5 associating the hearing profile for the customer with the particular audio data product;
6 modifying the particular audio data product according to the hearing profile to produce a
7 customized audio data product;
8 delivering the customized audio data product to the customer;
9 accepting feedback from the customer concerning the customized audio data product; and

10 modifying the hearing profile in response to the feedback.

1 100. The method of claim 99, including:
2 providing input tools for accepting input data concerning a hearing profile for the
3 customer, and producing the machine readable hearing profile in response to the input data.

1 101. The method of claim 99, including:
2 providing a graphical user interface, accessible by the customer, for accepting input data
3 concerning a hearing profile for the customer, and producing the machine readable hearing
4 profile in response to the input data.

1 102. The method of claim 99, including:
2 providing a graphical user interface, accessible by the customer via a data network, for
3 accepting input data concerning a hearing profile for the customer, and producing the machine
4 readable hearing profile in response to the input data.

1 103. The method of claim 99, including:
2 providing input tools for accepting input data characterizing the feedback, and modifying
3 the machine readable hearing profile in response to the input data.

1 104. The method of claim 99, including:
2 providing a graphical user interface, accessible by the customer, for accepting input data
3 characterizing the feedback, and modifying the machine readable hearing profile in response to
4 the input data.

1 105. The method of claim 99, including:
2 providing a graphical user interface, accessible by the customer via a data network, for
3 accepting input data characterizing the feedback, and modifying the machine readable hearing
4 profile in response to the input data.

1 106. The method of claim 99, wherein the step of modifying comprises applying an
2 optimization modeling process to the hearing profile.

1 107. The method of claim 99, including maintaining a database including a plurality of
2 machine readable hearing profiles for a corresponding plurality of customers, and wherein the
3 step of modifying comprises applying an optimization modeling process to the hearing profile in
4 response to the feedback and to the database.

1 108. The method of claim 99, including determining listening conditions relevant to
2 playback of the customized audio data product, and wherein the step of modifying is responsive
3 to the determined listening conditions.

1 109. The method of claim 99, including determining a type of delivery for the
2 customized audio data product, and wherein the step of delivering is responsive to the
3 determined type of delivery.

1 110. The method of claim 99, including determining a type of delivery for the
2 customized audio data product, and wherein the step of modifying is responsive to the
3 determined type of delivery.

1 111. A method for providing customized audio data products, comprising:
2 reading a particular audio data product;
3 associating a hearing profile with the particular audio data product;
4 modifying the particular audio data product according to the hearing profile to produce a
5 customized audio data product.

1 112. The method of claim 111, wherein the step of associating a hearing profile with
2 the particular audio data product includes retrieving the hearing profile from a portable memory
3 device.

1 113. The method of claim 111 including maintaining a registry of hearing profiles, and
2 the step of associating a hearing profile for the customer with the particular audio data product
3 includes retrieving the hearing profile from the registry.

1 114. The method of claim 113, including providing tools accessible via a network for
2 gathering information about hearing characteristics of customers, and modifying hearing profiles
3 in the registry in response to the information.

1 115. The method of claim 113, including providing tools accessible via a network for
2 gathering information about hearing characteristics of customers, and modifying hearing profiles
3 in the registry in response to the information according to an optimization modeling process.

1 116. The method of claim 111, wherein the particular audio data product comprises
2 pre-recorded audio tracks.

1 117. The method of claim 111, wherein the particular audio data product comprises
2 pre-recorded audio music tracks.

1 118. The method of claim 111, wherein the particular audio data product comprises
2 live audio music streams.

1 119. The method of claim 111, wherein the particular audio data product comprises
2 pre-recorded audio voice tracks.

1 120. The method of claim 111, wherein the particular audio data product comprises
2 live audio voice streams.

1 121. The method of claim 111, wherein the particular audio data product comprises
2 live audio telephone data.

1 122. The method of claim 111, including providing tools by which a user selects an
2 instance of the particular audio data product, and issues a request for the selected instance.

1 123. The method of claim 111, including providing a source of a plurality of customer
2 hearing profiles, and tools by which a user adds a customer hearing profile to the plurality of
3 customer hearing profiles.

1 124. The method of claim 111, including providing a source of a plurality of customer
2 hearing profiles, and tools by which a user modifies a particular customer hearing profile in the
3 plurality of customer hearing profiles.

1 125. The method of claim 111, wherein the particular audio data product comprises a
2 digitally encoded product.

1 126. The method of claim 111, wherein the particular audio data product comprises an
2 analog encoded product.

1 127. The method of claim 111, wherein the particular audio data product comprises
2 data encoded according to a particular format suitable for playback by audio devices adapted for
3 the particular format, and the customized audio data product comprises data encoded according
4 to the particular format.

1 128. The method of claim 111, wherein the hearing profile includes a value indicating
2 listening conditions in which the customized audio data product is to be played.

1 129. The method of claim 111, wherein the hearing profile includes a value indicating
2 a hearing characteristic type of a customer for whom the customized audio data product is to be
3 played.

1 130. The method of claim 111, wherein the hearing profile includes a specification of
2 psycho-acoustic characteristics of a customer for whom the customized audio data product is to
3 be played.

1 131. The method of claim 111, wherein the hearing profile includes an audiogram of a
2 customer for whom the customized audio data product is to be played.

1 132. The method of claim 111, wherein the hearing profile includes software defining
2 a transfer function for producing the customized audio data product.

1 133. A device for producing customized audio data, comprising:
2 data storage storing an audio data product and
3 a hearing profile of a customer for the audio data product; and
4 logic to produce a customized audio data product in response to the hearing profile and
5 the audio data product.

1 134. The device of claim 133, including:
2 an interface by which the customized audio data product is received from a remote site.

1 135. The device of claim 133, including:
2 logic to store the customized audio data product on a machine readable medium.

1 136. The device of claim 133, wherein the customized audio data product comprises at
2 least a portion of the hearing profile, and the audio data product for transformation according to
3 the hearing profile at a remote site.

1 137. The device of claim 133, wherein the customized audio data product comprises a
2 transformation according to the hearing profile of the audio data product.

1 138. The device of claim 133, wherein the customized audio data product comprises a
2 transformation according to the hearing profile of the audio data product, and a parameter used
3 for decoding the transformation.

1 139. The device of claim 133, wherein the customized audio data product comprises a
2 transformation according to the hearing profile of the audio data product, and a parameter
3 associated with the customer used for decoding the transformation.

4 140. An article of manufacture comprising:
5 a data storage medium configured for connection to, and for disconnection from, an
6 audio playback device; and
7 a customized audio data product stored in the data storage medium, the customized audio
8 data product comprising an audio data product customized in response to a hearing profile of a
9 customer.

1 141. The article of claim 140, wherein the customized audio data product comprises a
2 transformation according to the hearing profile of the audio data product, and a parameter for
3 identification of the customer.

1 142. The article of claim 140, wherein the customized audio data product comprises at
2 least a portion of the hearing profile, and the audio data product for transformation according to
3 the hearing profile.

1 143. The article of claim 140, wherein the customized audio data product comprises a
2 transformation according to the hearing profile of the audio data product.

1 144. The article of claim 140, wherein the customized audio data product comprises a
2 transformation according to the hearing profile of the audio data product, and a parameter used
3 for decoding the transformation.

1 145. The article of claim 140, wherein the customized audio data product comprises a
2 transformation according to the hearing profile of the audio data product, and a parameter
3 associated with the customer used for decoding the transformation.

4 146. An audio data playback device comprising:
5 a data processor;
6 a data storage medium, coupled to the data processor;
7 an audio transducer, coupled to the data processor; and
8 a customized audio data product stored in the data storage medium, the customized audio
9 data product comprising an audio data product customized using a hearing profile of a customer.

1 147. The audio data playback device of claim 146, wherein the audio transducer
2 comprises a speaker mounted on a headset.

1 148. The audio data playback device of claim 146, wherein the audio transducer
2 comprises stereo speakers mounted on a headset.

1 149. The audio data playback device of claim 146, wherein the customized audio data
2 product comprises the audio data product transformed according to the hearing profile, and a
3 parameter for identification of the customer.

1 150. The audio data playback device of claim 146, wherein the customized audio data
2 product comprises a transformation according to the hearing profile of the audio data product,
3 and a parameter associating the customized audio data product with the customer, and the data
4 processor includes decoding logic responsive to the parameter for playing the customized audio
5 data product.

1 151. The audio data playback device of claim 146, wherein the customized audio data
2 product comprises at least a portion of the hearing profile, and the audio data product for
3 transformation according to the hearing profile, and the data processor includes decoding logic

4 responsive to said at least a portion of the hearing profile for playing the customized audio data
5 product.

1 152. An audio testing device comprising:
2 a data processor;
3 a data storage medium, coupled to the data processor;
4 a communication port, coupled to the data processor;
5 an audio transducer, coupled to the data processor; and
6 at least a portion of a hearing test program stored in the data storage medium, the hearing
7 test program comprising routines for execution of a hearing test using the communication port
8 and the hearing test program to produce hearing profile data of a customer.

1 153. The audio testing device of claim 152, wherein the communication port
2 comprises a port for connection to an external data processing device providing a user interface
3 for the hearing test program.

1 154. The audio testing device of claim 152, wherein the audio transducer comprises a
2 speaker mounted on a headset.

1 155. The audio testing device of claim 152, wherein the audio transducer comprises
2 stereo speakers mounted on a headset.

1 156. The audio testing device of claim 152, including a port adapted to couple a
2 removable data storage device to the data processor, and resources for playing an audio data
3 product stored in the removable data storage device.

1 157. The audio testing device of claim 152, including a battery, and wherein the data
2 processor and audio transducer are coupled to the battery.

1 158. The audio testing device of claim 152, including a headset, and wherein the data
2 processor, data storage medium, communication port and audio transducer are mounted on the
3 headset.

1 159. The audio testing device of claim 152, wherein the customer hearing profile
2 comprises coefficients of a transfer function to transform an audio data product according a
3 hearing characteristic of a customer.

1 160. The audio testing device of claim 152, wherein the customer hearing profile
2 comprises an identifier of transfer function to transform an audio data product according a
3 hearing characteristic of a customer.

1 161. The audio testing device of claim 152, wherein the customer hearing profile
2 comprises an identifier of a transfer function and coefficients of the identified transfer function
3 to transform an audio data product according a hearing characteristic of a customer.

1 162. The audio testing device of claim 152, wherein the customer hearing profile
2 includes a value indicating listening conditions in which a customized audio data product is to be
3 played.

1 163. The audio testing device of claim 152, wherein the customer hearing profile
2 includes a value indicating a hearing characteristic of a customer for whom a customized audio
3 data product is to be played.

1 164. The audio testing device of claim 152, wherein the customer hearing profile
2 includes a specification of psycho-acoustic characteristics of a customer for whom a customized
3 audio data product is to be played.

1 165. The audio testing device of claim 152, wherein the customer hearing profile
2 includes an audiogram characterizing a customer for whom a customized audio data product is to
3 be played.

1 166. The audio testing device of claim 152, wherein the customer hearing profile
2 includes software defining a transfer function for producing a customized audio data product.

1 167. An audio testing and playback device comprising:
2 a data processor;
3 data memory coupled to the data processor;
4 a communication port, coupled to the data processor;
5 an audio transducer, coupled to the data processor;
6 a hearing test program stored in the data memory, the hearing test program comprising
7 logic used for execution of a hearing test using the communication port to produce hearing
8 profile data for use in production of a hearing profile of a customer; and
9 a customized audio data product stored in the data memory, the customized audio data
10 product comprising an audio data product customized using the hearing profile.

1 168. The audio testing and playback device of claim 167, wherein the communication
2 port comprises a port for connection to an external data processing device providing a user
3 interface for the hearing test program.

1 169. The audio testing and playback device of claim 167, wherein the audio transducer
2 comprises a speaker mounted on a headset.

1 170. The audio testing and playback device of claim 167, wherein the audio transducer
2 comprises stereo speakers mounted on a headset.

1 171. The audio testing and playback device of claim 167, including a port adapted to
2 couple a removable data storage device to the data processor, and resources for playing an audio
3 data product stored in the removable data storage device.

1 172. The audio testing and playback device of claim 167, including a battery, and
2 wherein the data processor and audio transducer are coupled to the battery.

1 173. The audio testing and playback device of claim 167, including a headset, and
2 wherein the data processor, data memory, communication port and audio transducer are mounted
3 on the headset.

1 174. A method for conducting a hearing test, comprising:
2 providing a headset having stored therein audio test software;
3 coupling the headset to a data processor having a user interface;
4 executing a test using the audio test software and the user interface to develop a hearing
5 profile;
6 producing a customized audio data product using the hearing profile; and
7 playing the customized audio data product on the headset.

1 175. The method of claim 174, including storing the hearing profile on the headset,
2 and wherein the step of producing a customized audio data product comprises processing an
3 audio data product using the hearing profile stored in the headset.

1 176. The method of claim 174, including storing the hearing profile in a remote site.

1 177. The method of claim 174, including producing the customized audio data product
2 in a remote site.

1 178. The method of claim 174, including storing the customized audio data product on
2 a machine readable medium, and coupling the machine readable medium to the headset.

1 179. The method of claim 174, including storing the customized audio data product on
2 a portable data storage device, and coupling the portable data storage device to the headset.

1 180. An article of manufacture comprising:
2 a data storage medium configured for connection to, and for disconnection from, an
3 audio playback device; and

4 a customer hearing profile stored in the data storage medium, the hearing profile
5 comprising data generated based on hearing characteristics of a particular customer.

1 181. The article of claim 180, wherein the customer hearing profile comprises
2 coefficients of a transfer function to transform an audio data product according a hearing
3 characteristic of a customer.

1 182. The article of claim 180, wherein the customer hearing profile comprises an
2 identifier of a transfer function to transform an audio data product according a hearing
3 characteristic of a customer.

1 183. The article of claim 180, wherein the customer hearing profile comprises an
2 identifier of a transfer function and coefficients of the identified transfer function to transform an
3 audio data product according a hearing characteristic of a customer.

1 184. The article of claim 180, wherein the customer hearing profile includes a value
2 indicating listening conditions in which a customized audio data product is to be played.

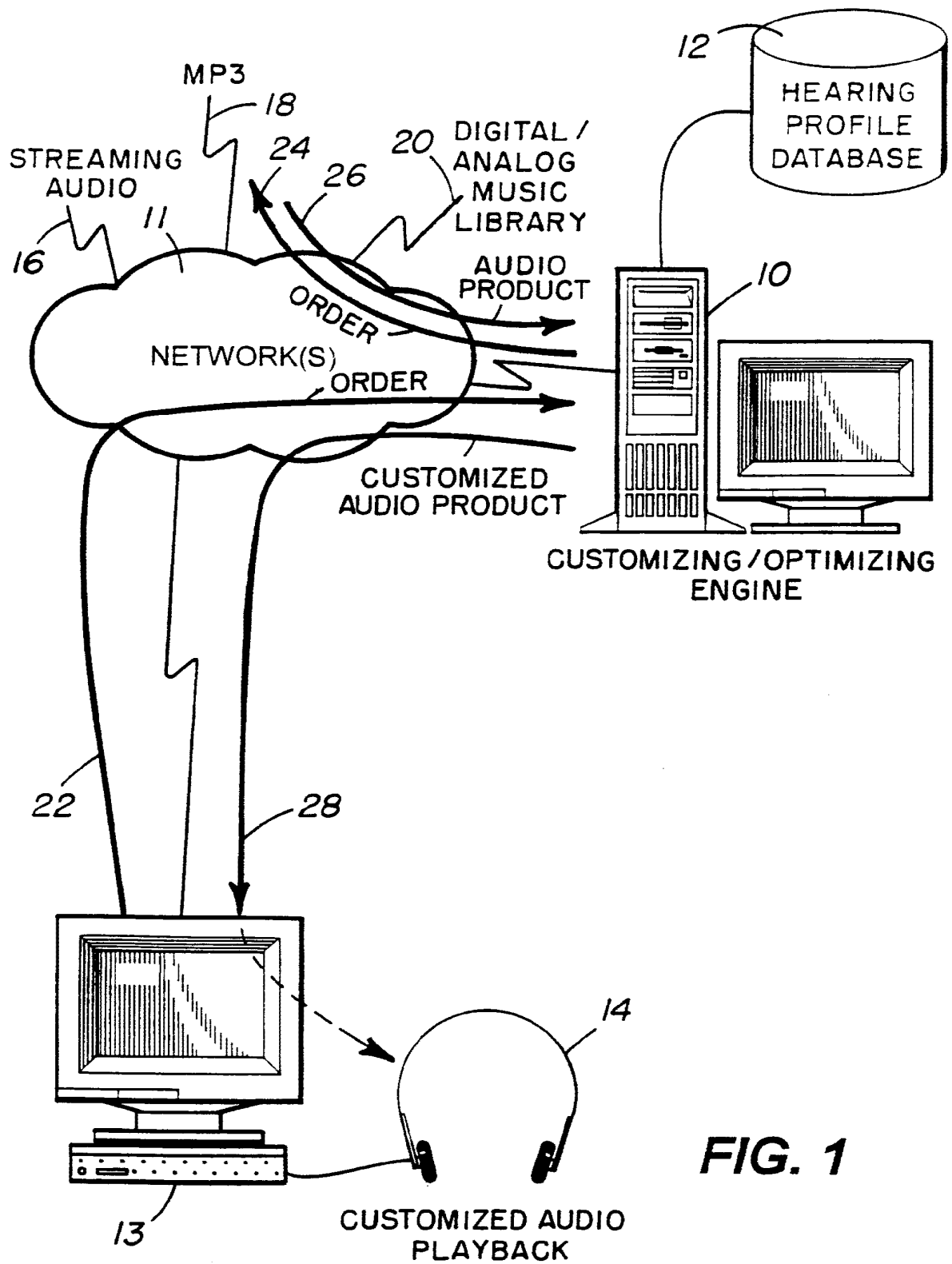
1 185. The article of claim 180, wherein the customer hearing profile includes a value
2 indicating a hearing characteristic of a customer for whom a customized audio data product is to
3 be played.

1 186. The article of claim 180, wherein the customer hearing profile includes a
2 specification of psycho-acoustic characteristics of a customer for whom a customized audio data
3 product is to be played.

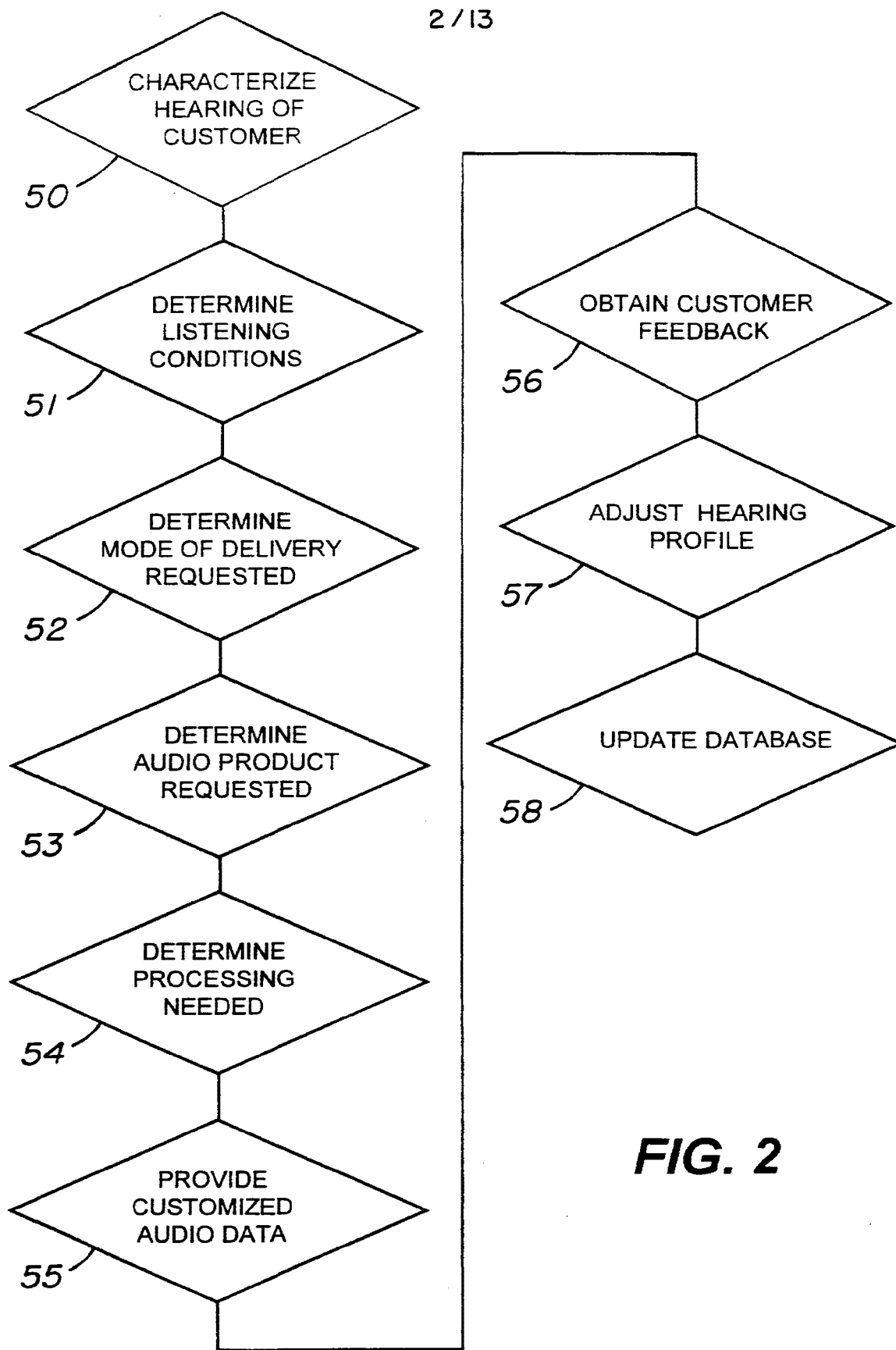
1 187. The article of claim 180, wherein the customer hearing profile includes an
2 audiogram characterizing a customer for whom a customized audio data product is to be played.

1 188. The article of claim 180, wherein the customer hearing profile includes software
2 defining a transfer function for producing a customized audio data product.

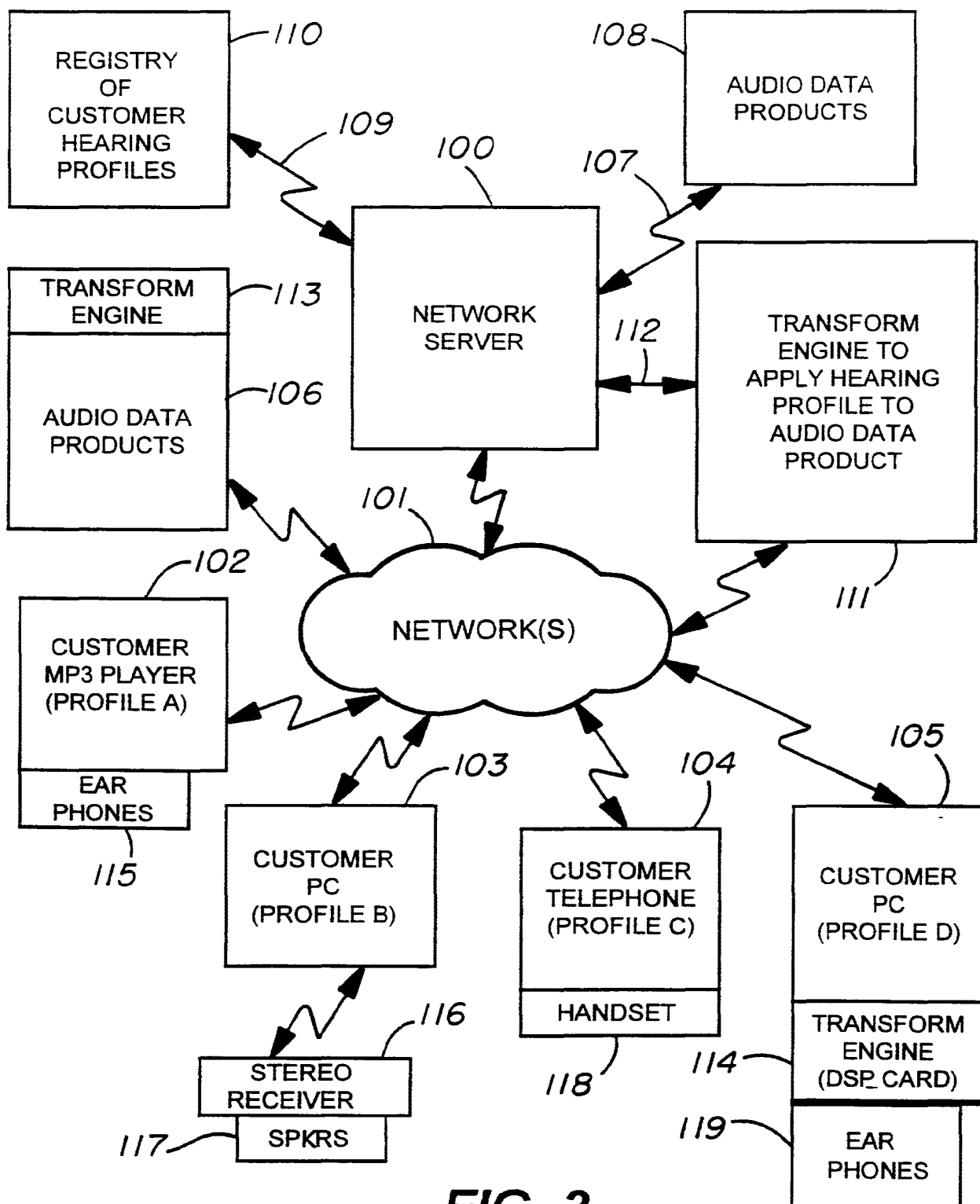
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**FIG. 1**

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**FIG. 2**

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**FIG. 3**

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FIG. 4

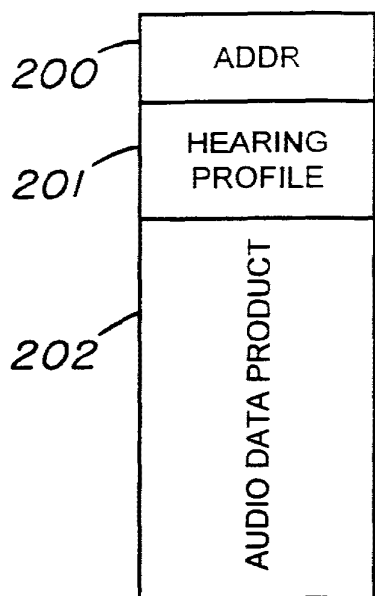


FIG. 5

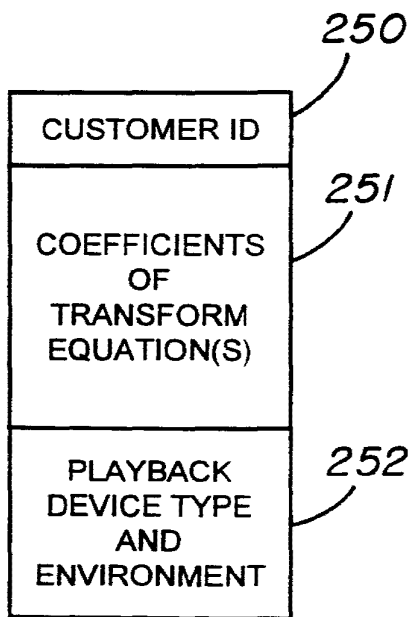
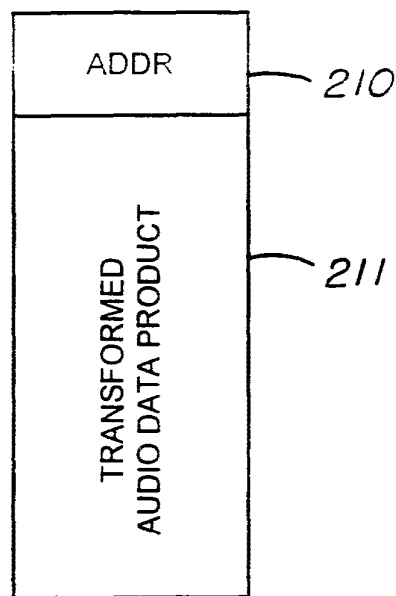


FIG. 6

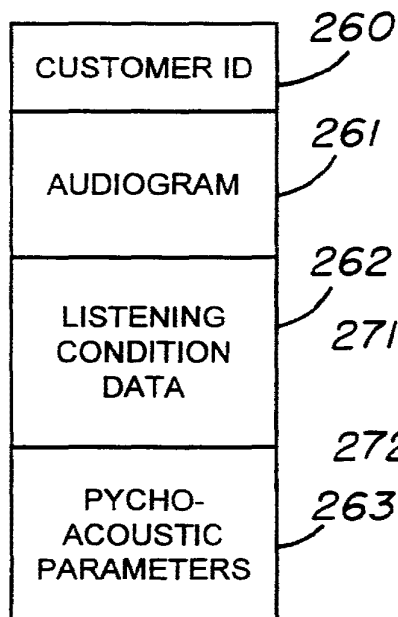


FIG. 7

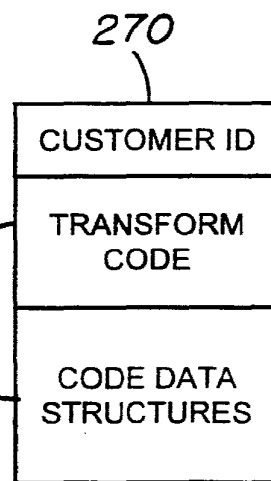


FIG. 8

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SELECT AUDIO PRODUCT PAGE 300

MP3 MUSIC FILE	☐ 301
STREAMING AUDIO (e.g. RADIO FORMAT)	☐ 302
LIVE AUDIO (e.g. WEB BROADCAST PERFORMANCE)	☐ 303

FIG. 9

PROFILE SET UP PAGE 310

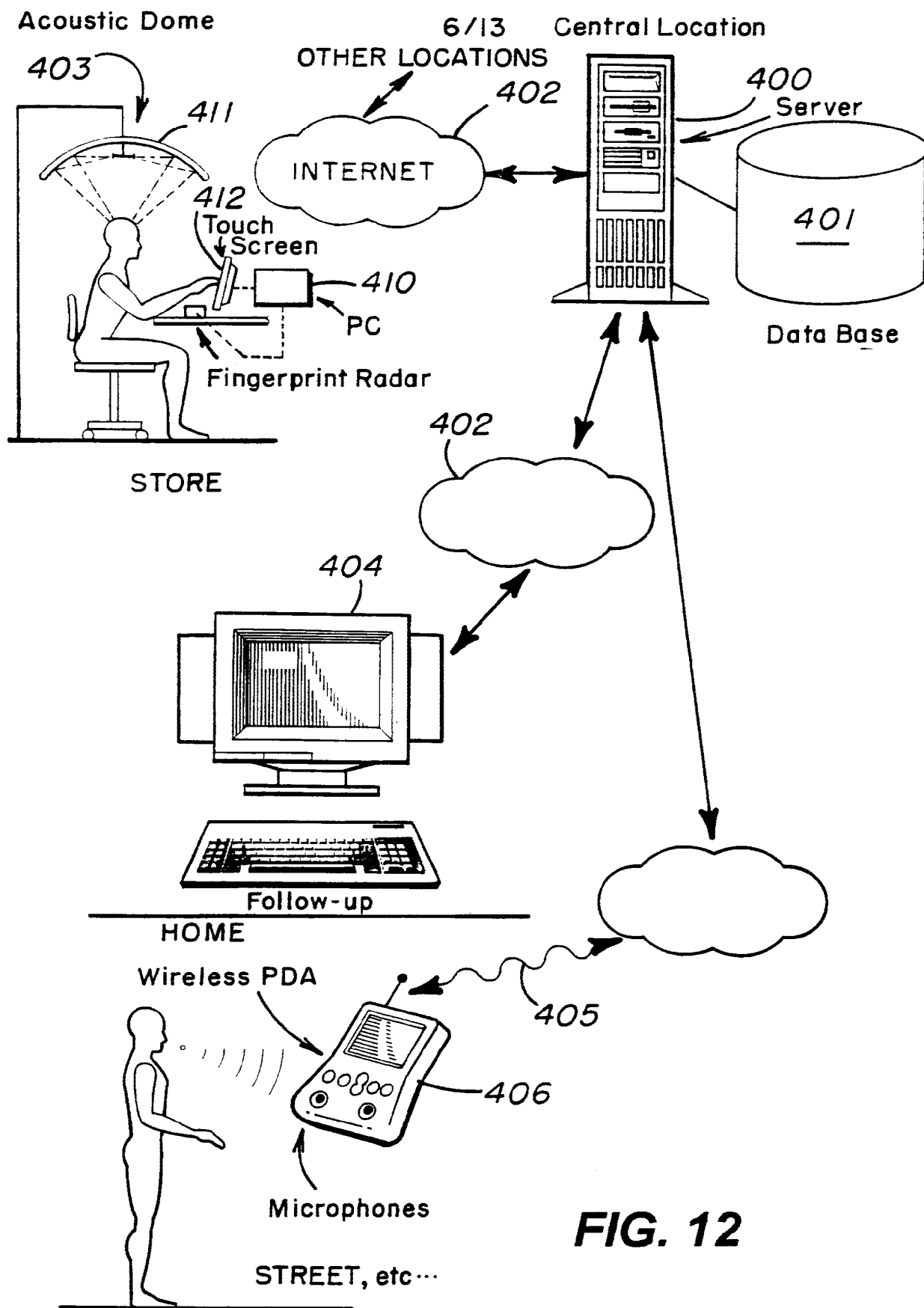
ENTER AUDIOLOGICAL DATA	☐ 311
ENTER PLAYBACK DEVICE TYPE(S)	☐ 312
ENTER ENVIRONMENTAL PARAMETERS	☐ 313

FIG. 10

PROFILE FEEDBACK PAGE 320

ENTER SUBJECTIVE PERFORMANCE DATA	☐ 321
ENTER PLAYBACK DEVICE TYPE(S)	☐ 322
ENTER ENVIRONMENTAL PARAMETERS	☐ 323

FIG. 11

**FIG. 12**

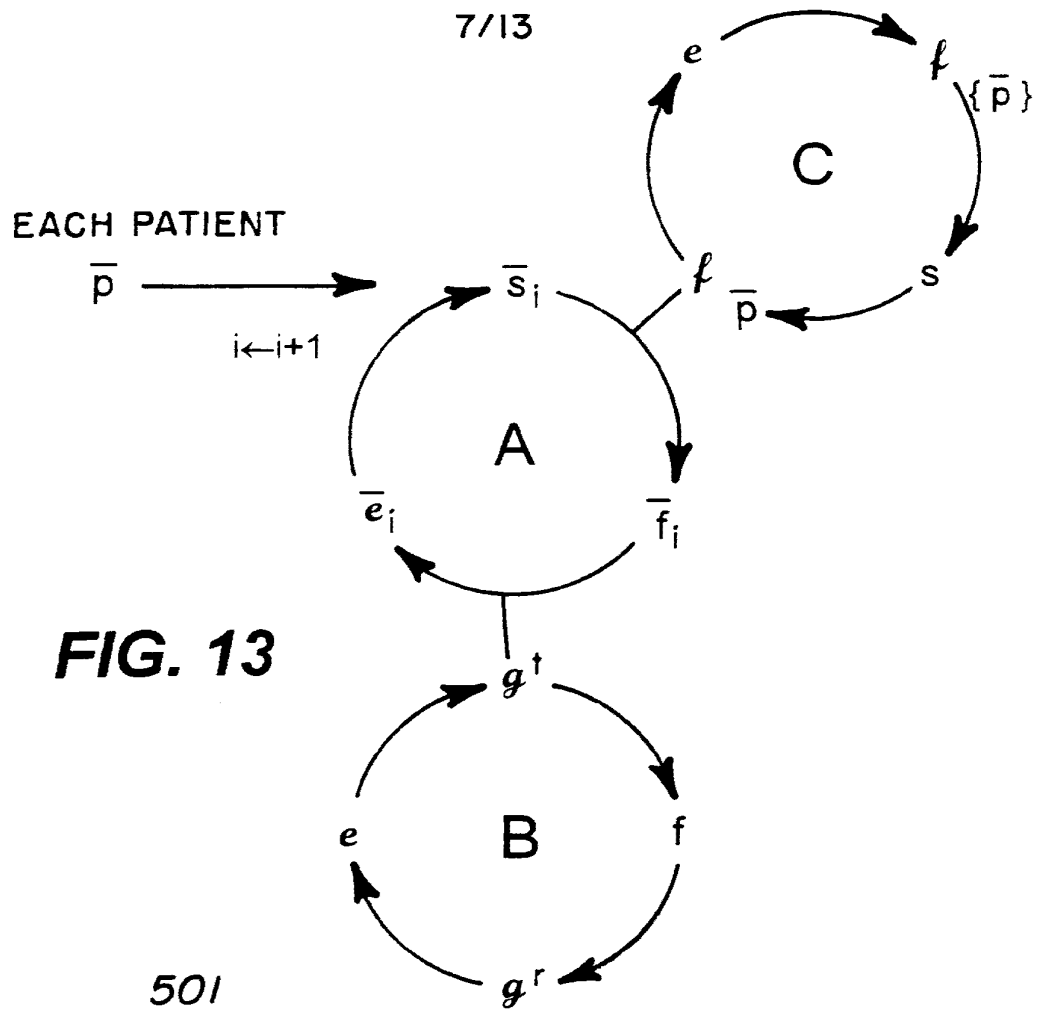


FIG. 13

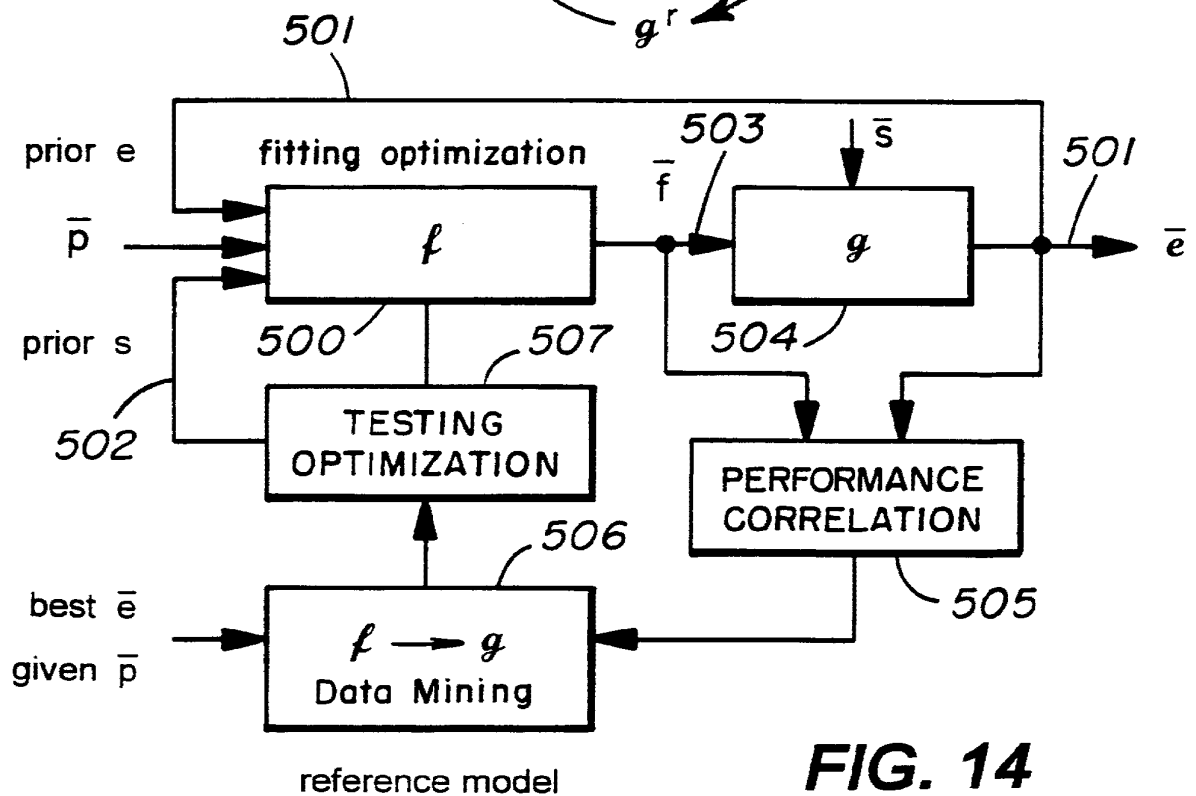
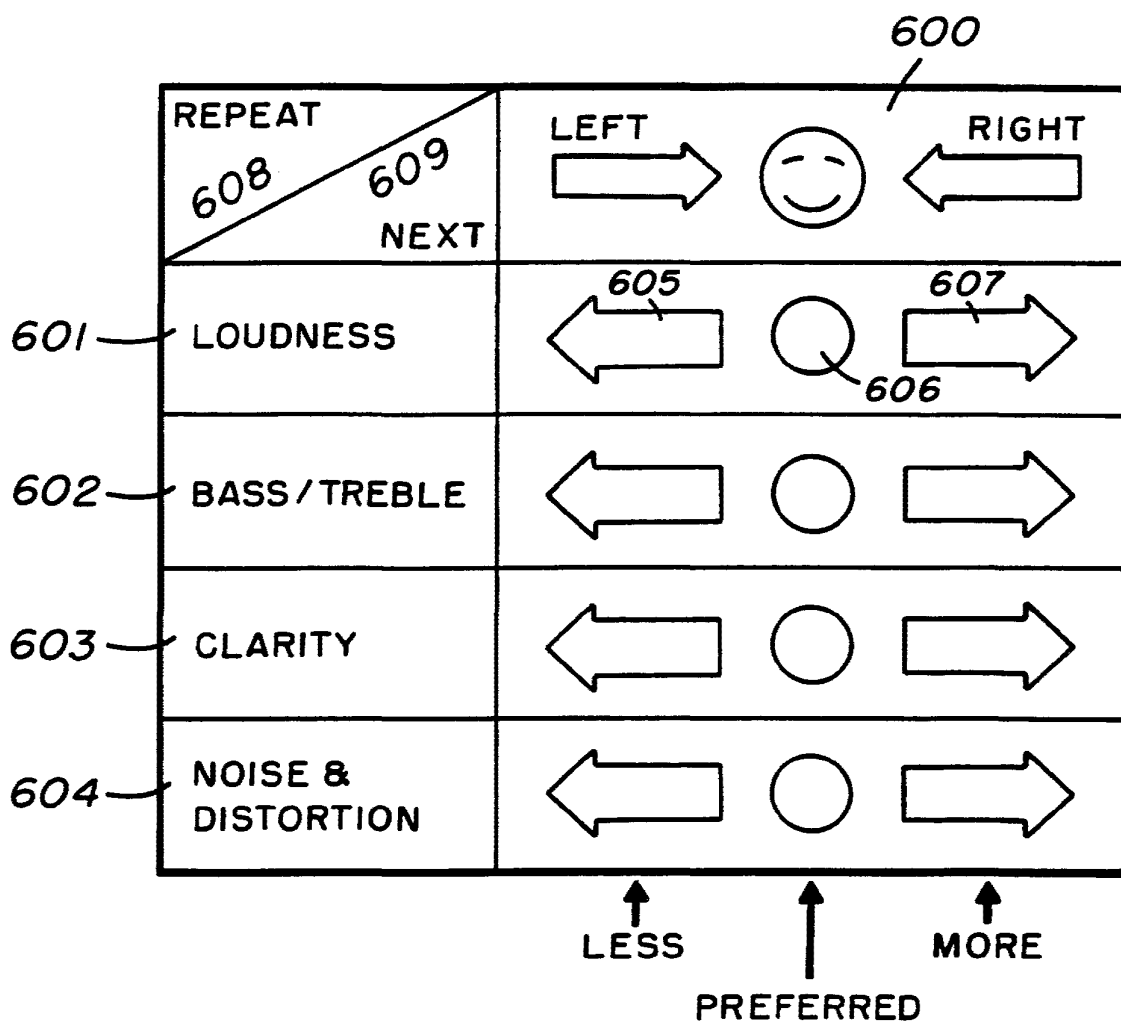
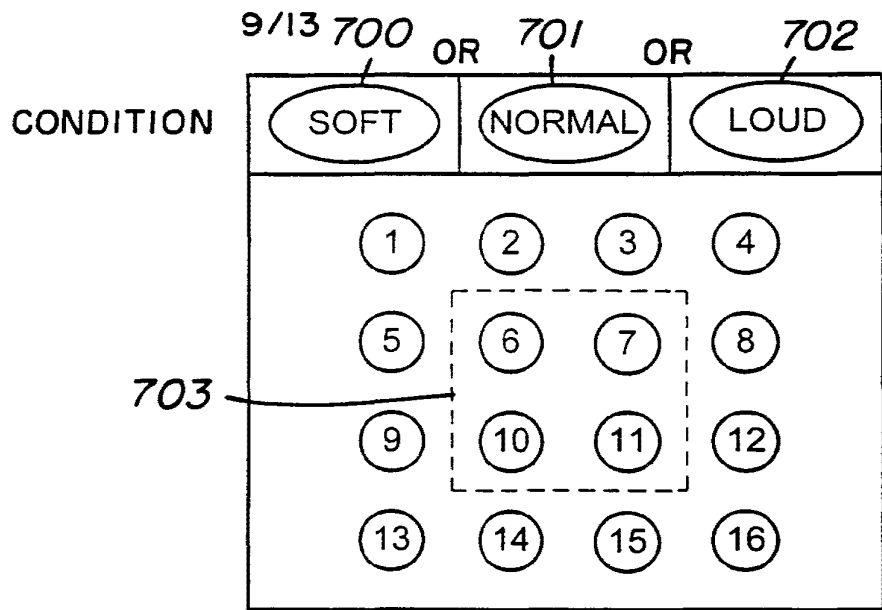


FIG. 14

8/13

**FIG. 15**



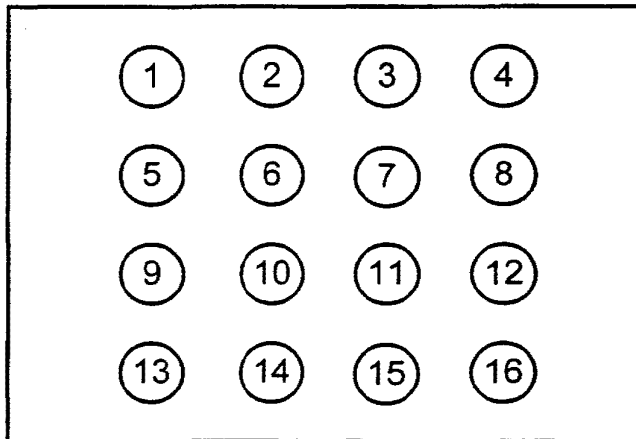
EVALUATING

PREFERRED

(A)

FIG. 16

LOUDNESS



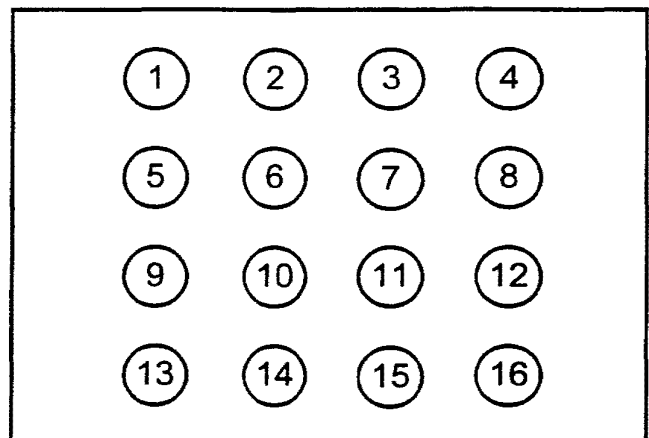
BALANCE

FIG. 17

PREFERRED

(B)

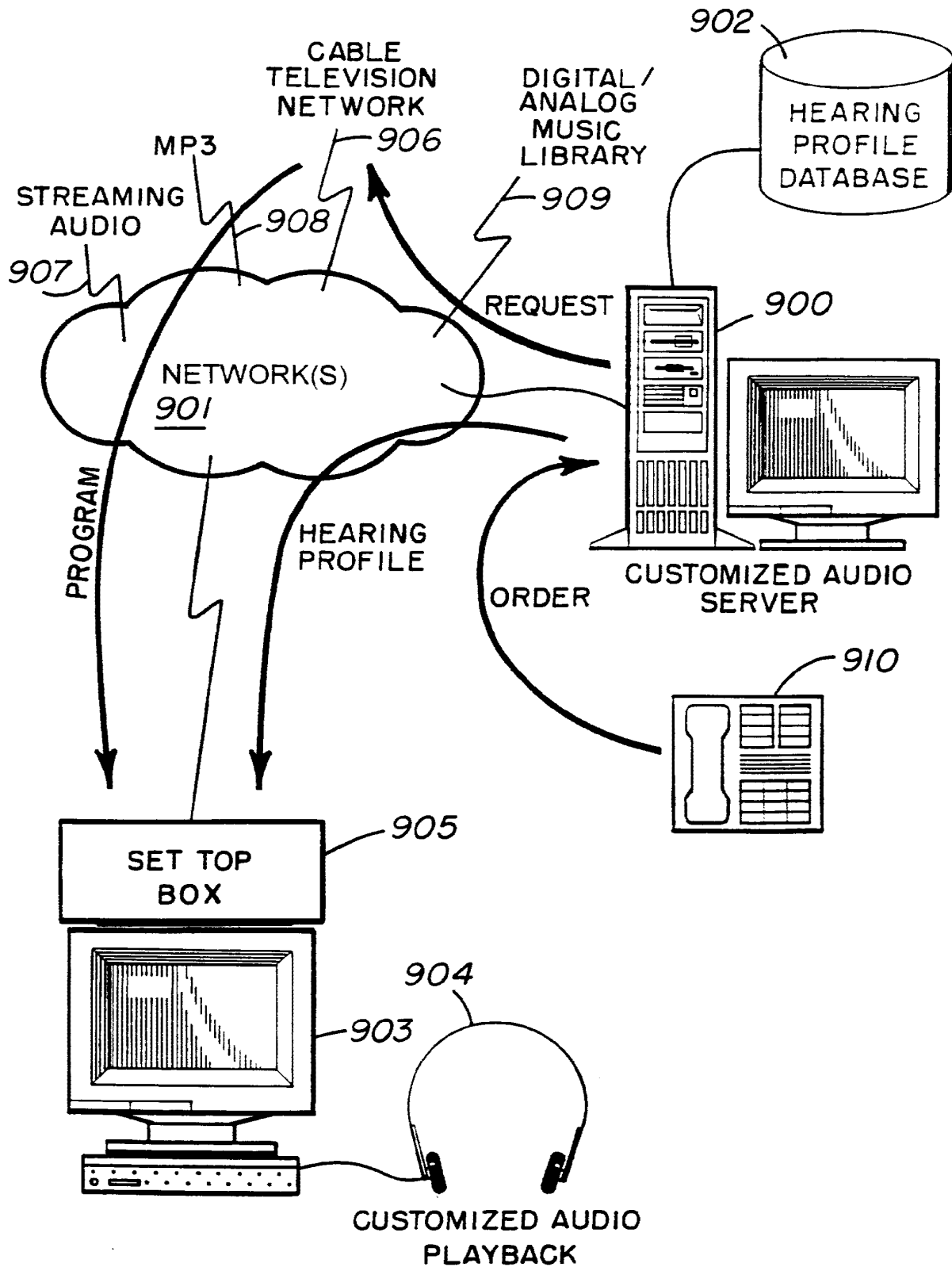
CLARITY



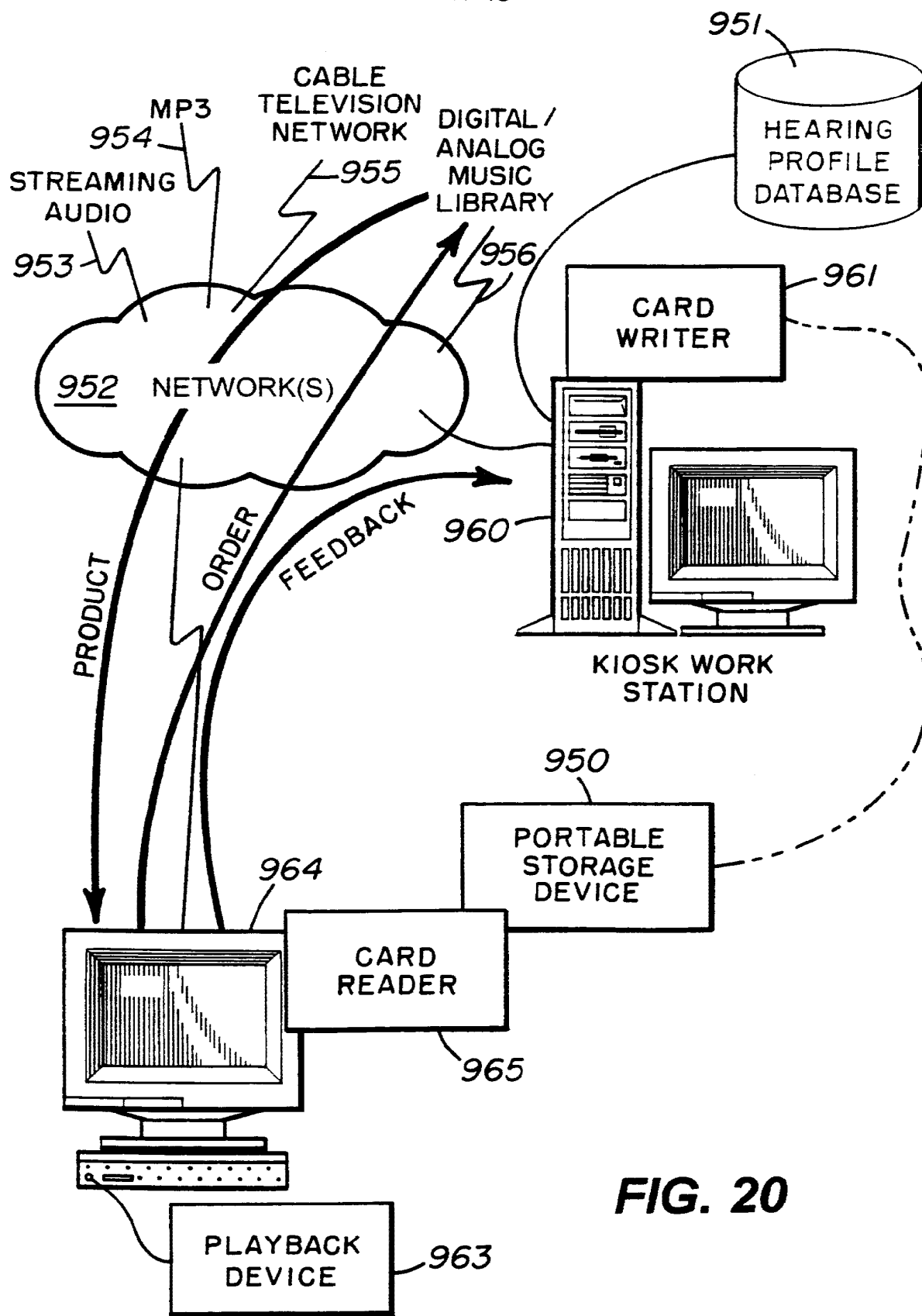
NOISE / DISTORTION

FIG. 18

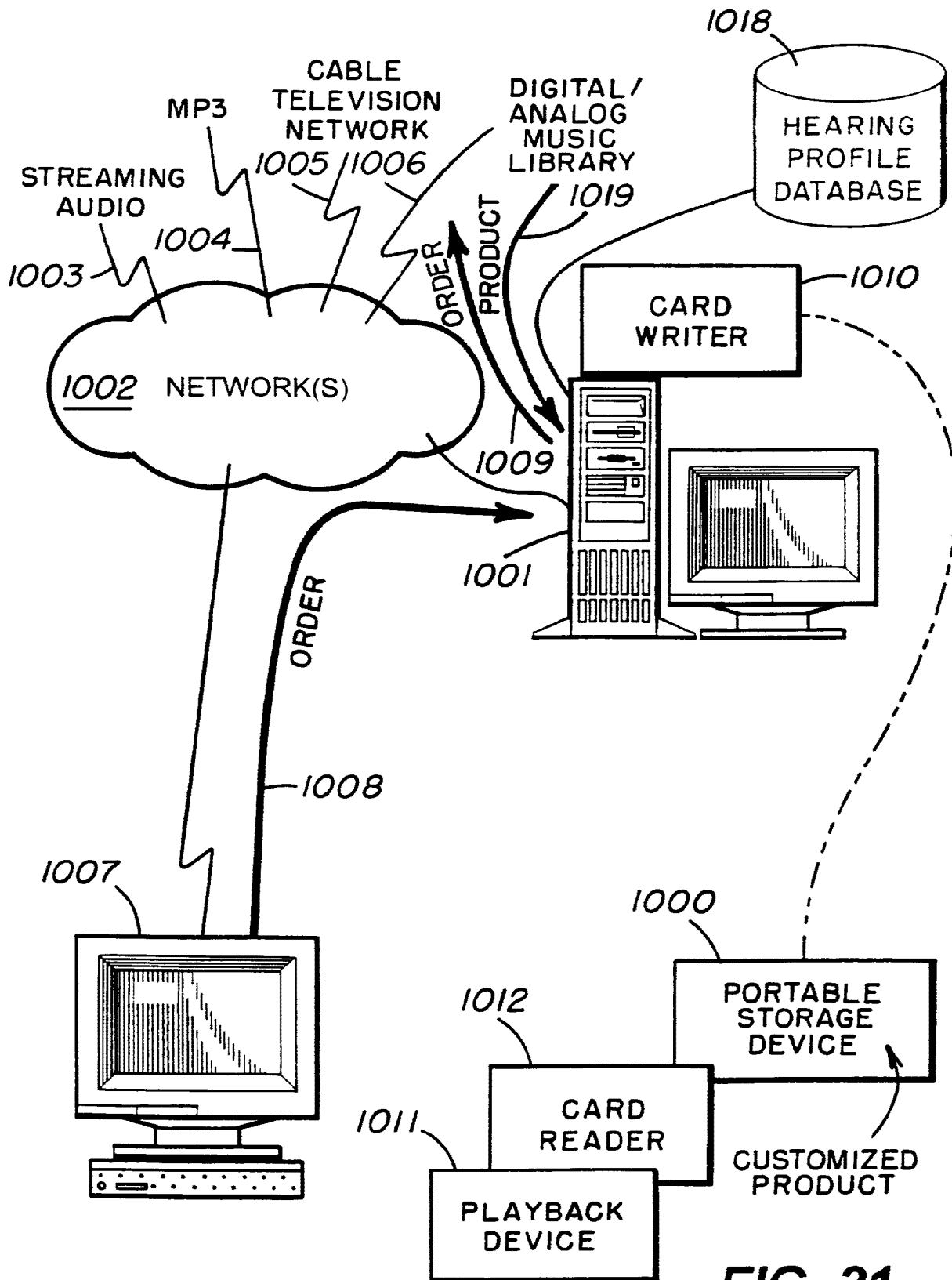
10/13

**FIG. 19**

11/13

**FIG. 20**

12/13

**FIG. 21**

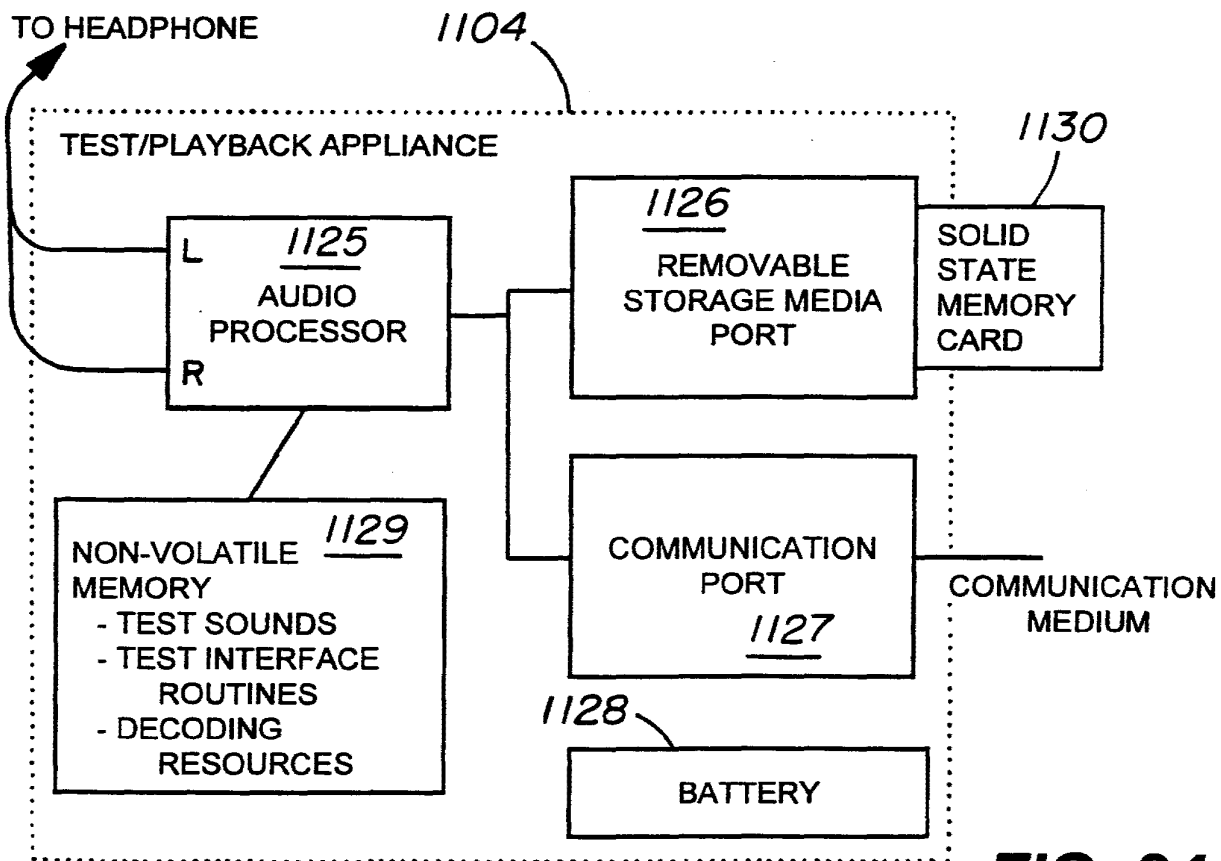
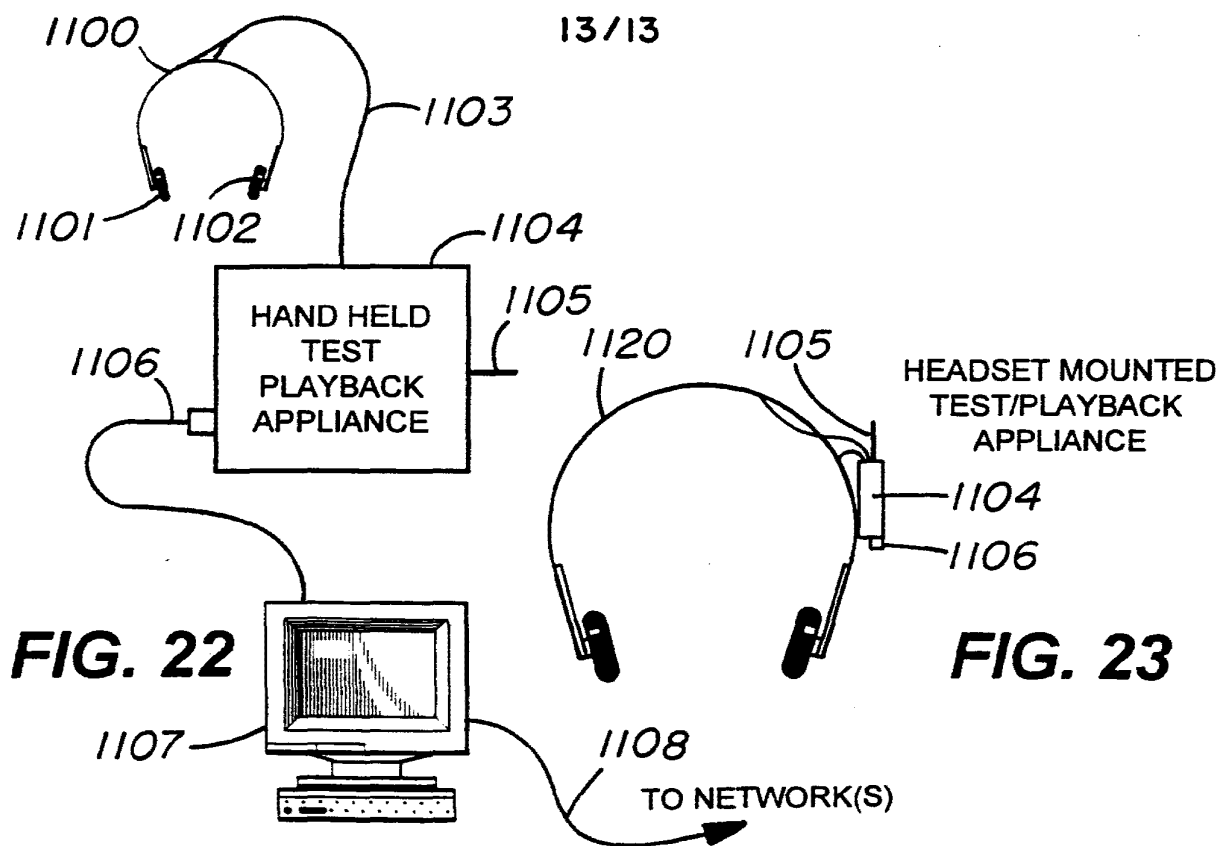


FIG. 24

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/26231

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :H04R 5/00, 1/10, 5/02

US CL :381/1, 310, 74, 303, 304, 305,

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 381/1, 310, 74, 303, 304, 305,

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONEElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)
NONE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,371,799 A (LOWE et al) 06 December 1994, figs. 3-11.	1-188
Y	US 5,854,843 A (JACKNIN et al) 29 December 1998, fig. 1.	1-188
Y	US 5,495,534 A (INANAGA et al) 27 February 1996, figs. 1-6.	1-188
Y	US 5,452,359 A (INANAGA et al) 19 September 1995, figs. 1-6.	1-188

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
E earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*G* document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 15 NOVEMBER 2000	Date of mailing of the international search report 26 JAN 2001
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer MINSUN OH HARVEY Telephone No. (703) 308-6741

SCORE Placeholder Sheet for IFW Content

Application Number: 14148752

Document Date: 01/07/2014

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

- Drawings – Other than Black and White Line Drawings

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

To access the documents in the SCORE database, refer to instructions below.

At the time of document entry (noted above):

- Examiners may access SCORE content via the eDAN interface.
- Other USPTO employees can bookmark the current SCORE URL (<http://Score.uspto.gov/ScoreAccessWeb/>).
- External customers may access SCORE content via the Public and Private PAIR interfaces.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 14/148,752	
APPLICATION AS FILED - PART I							
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(j))	20	minus 20 = *	x 40	= 0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *	x 210	= 0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	730		TOTAL	
APPLICATION AS AMENDED - PART II							
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	x	=	OR
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x	=	OR
	Application Size Fee (37 CFR 1.16(s))						OR
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						OR
			TOTAL ADD'L FEE			OR	TOTAL ADD'L FEE
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	x	=	OR
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x	=	OR
	Application Size Fee (37 CFR 1.16(s))						OR
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						OR
			TOTAL ADD'L FEE			OR	TOTAL ADD'L FEE
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.							



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
14/148,752	01/07/2014	3764	730	PRS-110US2	20	3

CONFIRMATION NO. 2918

117822

Personics Holdings Inc.
4800 N Federal Hwy. Ste A205
Boca Raton, FL 33431

FILING RECEIPT



OC000000066195281

Date Mailed: 01/24/2014

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Steven Wayne Goldstein, Delray Beach, FL;

Applicant(s)

Personics Holdings, Inc., Boca Raton, FL

Assignment For Published Patent Application

Personics Holdings, Inc., Boca Raton, FL

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 11/774,965 07/09/2007
which claims benefit of 60/806,769 07/08/2006

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 01/22/2014

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/148,752**

Projected Publication Date: 05/08/2014

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

PERSONAL AUDIO ASSISTANT DEVICE AND METHOD

Preliminary Class

482

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No**PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES**

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

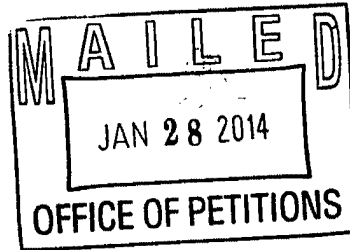
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Boca Raton FL 33431



Commissioner for Patents
United States Patent and Trademark Office
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Alexandria, VA 22313-1450
www.uspto.gov

Doc Code: TRACK1.GRANT

**Decision Granting Request for
Prioritized Examination
(Track I or After RCE)**

Application No.: 14/148,752

1. THE REQUEST FILED January 7, 2014 IS **GRANTED**.

The above-identified application has met the requirements for prioritized examination

- A. ☒ for an original nonprovisional application (Track I).
B. ☐ for an application undergoing continued examination (RCE).

2. **The above-identified application will undergo prioritized examination.** The application will be accorded special status throughout its entire course of prosecution until one of the following occurs:

- A. filing a **petition for extension of time** to extend the time period for filing a reply;
B. filing an **amendment to amend the application to contain more than four independent claims, more than thirty total claims**, or a multiple dependent claim;
C. filing a **request for continued examination**;
D. filing a notice of appeal;
E. filing a request for suspension of action;
F. mailing of a notice of allowance;
G. mailing of a final Office action;
H. completion of examination as defined in 37 CFR 41.102; or
I. abandonment of the application.

Telephone inquiries with regard to this decision should be directed to Brian W. Brown at 571-272-5338.

/Brian W. Brown/
[Signature]

Petitions Examiner, Office of Petitions
(Title)



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/148,752	01/07/2014	Steven Wayne Goldstein	PRS-110US2	2918
117822	7590	02/24/2014		
Personics Holdings Inc. 4800 N Federal Hwy. Ste A205 Boca Raton, FL 33431			EXAMINER	
			ABEBE, DANIEL DEMELASH	
			ART UNIT	PAPER NUMBER
			2657	
			NOTIFICATION DATE	DELIVERY MODE
			02/24/2014	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

iepstein@personicslabs.com
personics_docketing@cardinal-ip.com

Office Action Summary	Application No. 14/148,752	Applicant(s) GOLDSTEIN, STEVEN WAYNE	
	Examiner DANIEL ABEBE	Art Unit 2657	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/7/2014.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

- 5) ☒ Claim(s) 1-20 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-20 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) ☐ All b) ☐ Some** c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☒ Notice of References Cited (PTO-892) | 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date ____. | 4) ☐ Other: ____. |

The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of 35 U.S.C. 112(b):

(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7 and 11 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

Claims 7 and 11 recite the limitation "personal audio assistant" in line. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2657

Claims 1, 2, 4, 6-11, 14 and 18-20 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Tanaka et al. (2003/0130852).

As to claim 1, Tanaka teaches a wearable device (Figs.1-2), comprising:

a housing for the wearable device;

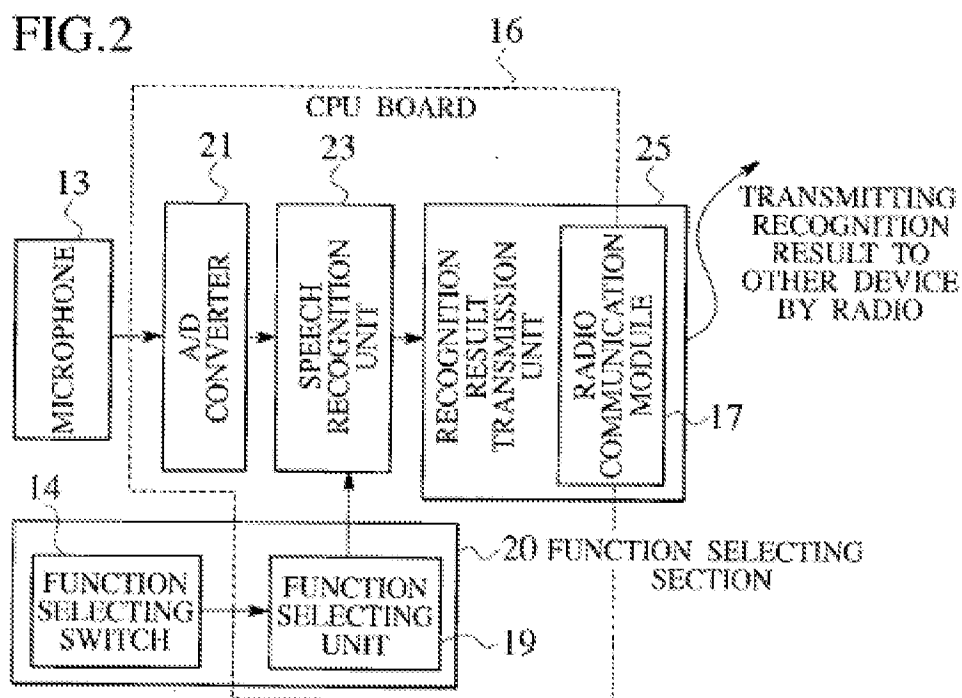
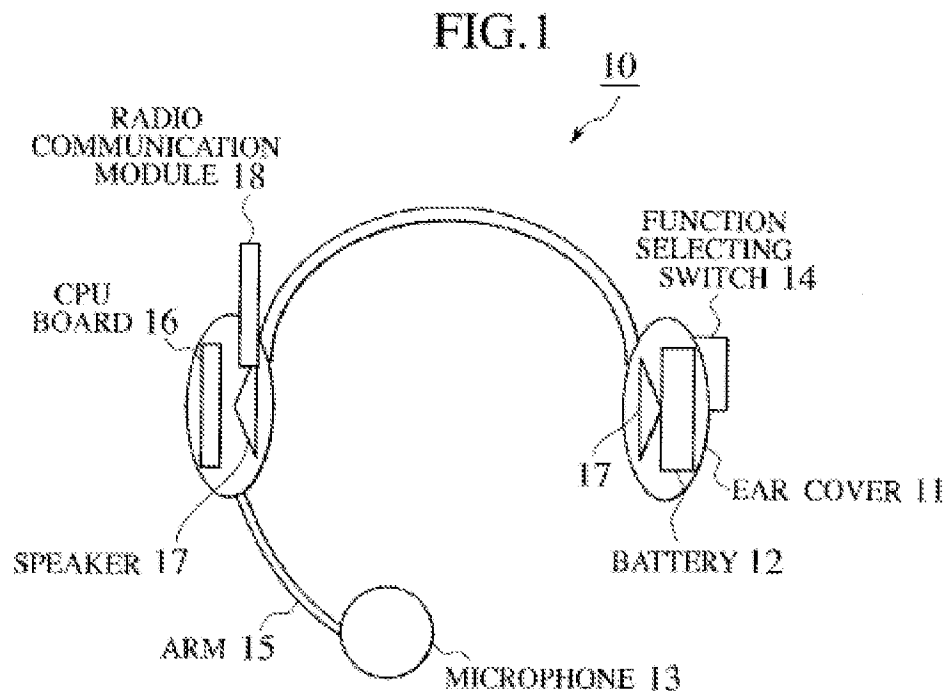
a first microphone within or on the housing (13);

a communication module within or on the housing (18);

a logic circuit communicatively coupled to the first microphone (16);

a memory storage unit communicatively coupled to the logic circuit (47); and

an interaction element, the interaction element and logic circuit cooperatively initiate control of media content or initiate operations of the wearable device (14).



As to claims 2 and 4, Tanaka teaches, wherein the interaction element and logic circuit are configured to initiate control of access to the media content stored in the

memory storage unit remote from the housing (Fig.11B)

As to claim 6, Tanaka teaches wherein the interaction element comprises a voice controlled user interface (Fig.2).

As to claims 7-8, Tanaka teaches wherein the wearable device further comprises a button with multiple contacts coupled to the logic circuit that forms a portion of the interaction element (Fig.1).

As to claims 9 and 11, Tanaka teaches wherein the wearable device comprises a speaker (Fig.1).

As to claim 10, Tanaka teaches wherein the wearable device comprises at least a portion of a personal computer system, a personal music player system, a personal monitoring system (Figs 10-11)

As to claim 14, Tanaka teaches where the headset incorporates a microphone configured for capturing audio signals, processing circuitry, which is configured for analyzing digitized representations of audio signals captured by the microphone and speech detection circuitry (Pars.0025-0027).

Claims 18-20 are analogous to claim 1 and therefore are rejected as being anticipated by Tanaka for the foregoing reasons.

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2657

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 12-13 and 15-17 are rejected under pre-AIA 35 U.S.C. 103(a) as being un-patentable over Tanaka in view of Black et al. (2010/0311390).

With regard to claims 5 and 12, Tanaka doesn't explicitly teach where the headset comprises eye-wear and GPS, however Black teaches a wearable mobile communication device comprising, a housing, audio receiver, audio processor, memory and both eye-wear and GPS devices (Fig.1). the combination of the eye-wear and the GPS would be obvious in Tanaka's headset for a plurality of purposes including locating the user as well as incorporating the wearable devices into eye glasses.

FIGURE 1C
EYE-COVERING
COMMUNICATION DEVICE

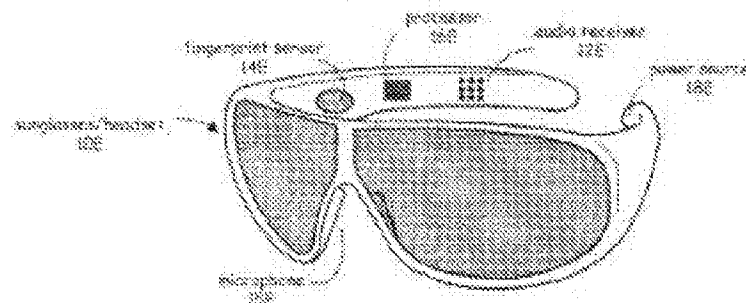
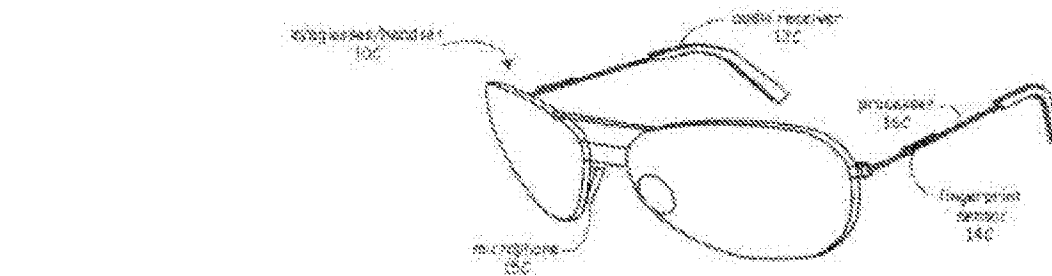


FIGURE 1E
EYE-COVERING
COMMUNICATION DEVICE

As to claim 13, Black teaches where the wearable device is configured to perform a search of the web in response to a voice command received by the voice controlled interface (Figs.2, 4A, 11A, 16A).

As to claim 15, Black teaches wherein some of the operations comprises commercial transactional operations (Figs.8, 13A, 16).

As to claims 16-17, Black teaches where medial contents are converted to speech and display (Par.0024; Fig.1).

Claims 3 and 12 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Rezvani et al. (2007/0165875).

As to claim 3, while Tanaka teaches memory within the headset, he doesn't explicitly teach media content being stored in the memory of the headset. Rezvani however teaches a wireless headset unit comprising a multimedia storage (Fig.1). combining the Rezvani's teaching to Tanaka's would be obvious to one of ordinary skill in the art for the purpose of improving the wearable device functions.

As to claim 12, Rezvani teaches wherein the wearable device further comprises a GPS receiver and wherein the communication module forms a peer- to-peer networking capability (Par.0015).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL ABEBE whose telephone number is (571)272-7615. The examiner can normally be reached on monday-friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2657

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIEL ABEBE/
Primary Examiner, Art Unit 2657

Notice of References Cited	Application/Control No. 14/148,752		Applicant(s)/Patent Under Reexamination GOLDSTEIN, STEVEN WAYNE	
	Examiner DANIEL ABEBE		Art Unit 2657	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-8,260,618	09-2012	Mahlbacher, James Christopher	704/275
*	B	US-2013/0289986	10-2013	GRAYLIN, WILL WANG	704/235
*	C	US-2010/0311390	12-2010	Black et al.	455/410
*	D	US-2003/0130852	07-2003	Tanaka et al.	704/275
*	E	US-2007/0165875	07-2007	Rezvani et al.	381/074
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

WEST Search History for Application 14148752

Creation Date: 2014021717:52

Prior Art Searches

Query	DB	Op.	Plur.	Thes.	Date
(headphone or earpiece) near2 (memory or housing)	PGPB, USPT	ADJ	YES		02-14-2014
(headphone or earpiece) near2 (combin\$5) near2(memory or housing)	PGPB, USPT	ADJ	YES		02-14-2014
'7110801'.pn.	USPT	ADJ	YES		02-14-2014
'7542787'.pn.	USPT	ADJ	YES		02-14-2014
'7555315'.pn.	USPT	ADJ	YES		02-14-2014
'20030182132'.pn.	PGPB	ADJ	YES		02-14-2014
'20080037727'.pn.	PGPB	ADJ	YES		02-14-2014
'20080059193'.pn.	PGPB	ADJ	YES		02-14-2014
(headphone or earpiece) near2 (media near storage)	PGPB, USPT	ADJ	YES		02-14-2014
8260618.pn. and (abebe and (during telephone))	PGPB, USPT	ADJ	YES		02-14-2014
(headphone same dictat\$4 same control\$4) and abebe	PGPB, USPT	ADJ	YES		02-14-2014
(headset same dictat\$4 same control\$4) and abebe	PGPB, USPT	ADJ	YES		02-14-2014
(headset same dictat\$4 same control\$4)	PGPB, USPT	ADJ	YES		02-14-2014
((headset same dictat\$4 same control\$4)) and 704/\$5	PGPB, USPT	ADJ	YES		02-14-2014
((headset same dictat\$4 same control\$4) and 704/\$5) and (control\$4 near3 medi\$3)	PGPB, USPT	ADJ	YES		02-14-2014
(personal audio assistan\$3) near4 (headset or headphone)	PGPB, USPT	ADJ	YES		02-14-2014
(personal audio assistan\$3) and (headset or headphone)	PGPB, USPT	ADJ	YES		02-14-2014
(personal audio assistan\$3)		ADJ	YES		02-14-2014

	PGPB, USPT				
8260618.pn. or 201302899986.pn. or 20030130852.pn. or 20100311390.pn. or 20070165875.pn.	PGPB, USPT	ADJ	YES		02-17-2014
((voice) near2 (detect\$4 or activat\$5)) and (8260618.pn. or 201302899986.pn. or 20030130852.pn. or 20100311390.pn. or 20070165875.pn.)	PGPB, USPT	ADJ	YES		02-17-2014
((voice) near2 (initiat\$4 or listen\$6 or detect\$4 or activat\$5)) and (8260618.pn. or 201302899986.pn. or 20030130852.pn. or 20100311390.pn. or 20070165875.pn.)	PGPB, USPT	ADJ	YES		02-17-2014
((initiat\$4 or listen\$6 or detect\$4 or activat\$5)) and (8260618.pn. or 201302899986.pn. or 20030130852.pn. or 20100311390.pn. or 20070165875.pn.)	PGPB, USPT	ADJ	YES		02-17-2014
(shop\$4 or purchas\$5 or transaction) and (8260618.pn. or 201302899986.pn. or 20030130852.pn. or 20100311390.pn. or 20070165875.pn.)	PGPB, USPT	ADJ	YES		02-17-2014
(Synthes\$6) and (8260618.pn. or 201302899986.pn. or 20030130852.pn. or 20100311390.pn. or 20070165875.pn.)	PGPB, USPT	ADJ	YES		02-17-2014
(text near3 speech) and (8260618.pn. or 201302899986.pn. or 20030130852.pn. or 20100311390.pn. or 20070165875.pn.)	PGPB, USPT	ADJ	YES		02-17-2014
(speaker) and (8260618.pn. or 201302899986.pn. or 20030130852.pn. or 20100311390.pn. or 20070165875.pn.)	PGPB, USPT	ADJ	YES		02-17-2014
(speaker or audibl\$5) and (8260618.pn. or 201302899986.pn. or 20030130852.pn. or 20100311390.pn. or 20070165875.pn.)	PGPB, USPT	ADJ	YES		02-17-2014
((conver\$5 near3 information near3 audio) or ((generat\$4 near3 audio representation) near3 (information)) and (retriev\$4 near3 information) and (704/\$5) and ((send\$4 or transmi\$6) near3 (audio) near4 (client or user)) and (speech or voice or audio) near2 (command or query or request\$4) and ((H04M3/4936 G10L13/043 G10L15/30 G10L13/047 G10L15/265 G10L15/22 G10L19/0018 G10L13/08 G10L15/18 G10L17/00 G06Q20/16).CPC.)) and (704/\$5)) AND @pd>20140212	PGPB, USPT, USOC	ADJ	YES		02-17-2014
(headset near5 memory) and (((conver\$5 near3 information near3 audio) or ((generat\$4 near3 audio representation) near3 (information)) and (retriev\$4 near3 information) and (704/\$5) and ((send\$4 or	PGPB, USPT	ADJ	YES		02-17-2014

transmi\$6) near3 (audio) near4 (client or user)) and (speech or voice or audio) near2 (command or query or request\$4) and ((H04M3/4936 G10L13/043 G10L15/30 G10L13/047 G10L15/265 G10L15/22 G10L19/0018 G10L13/08 G10L15/18 G10L17/00 G06Q20/16).CPC.)))					
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14/148,752
	Filing Date		
	First Named Inventor	Goldstein, Steven Wayne	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	PRS-110-US(X)	

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6965770		2005-11-15	Walsh et al.	
	2	7546144		2009-06-09	de Leon et al	
	3	7206429		2007-04-17	Vossler, Stephan P.	
	4	6661901		2003-12-09	Svean et al.	
	5	6840908		2011-01-11	Edwards	
	6	6379314		2002-04-30	Horn	
	7	7558529		2009-07-07	Seshadri et al.	
	8	4539439		1985-09-03	Strothmann et al.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number			
	Filing Date			
	First Named Inventor	Goldstein, Steven Wayne		
	Art Unit			
	Examiner Name			
	Attorney Docket Number	PRS-110-US(X)		

	9	3865998		1975-02-11	Weiss et al.	
	10	5694475		1997-12-02	Boyden	
	11	5751820		1998-05-12	Taenzer	
	12	7149319		2006-12-12	Hans-Ueli Roeck	

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	1	20070025194		2007-02-01	Morse et al	
	2	20070079692		2007-04-12	Glatt, Raoul	
	3	20030069854		2003-04-10	Hsu et al	
	4	20050078843		2005-04-14	Bauman	
	5	20050251224		2005-11-10	Berg, Christian	

If you wish to add additional U.S. Published Application citation information please click the Add button.

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STATEMENT BY APPLICANT**
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Application Number		
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First Named Inventor	Goldstein, Steven Wayne	
Art Unit		
Examiner Name		
Attorney Docket Number	PRS-110-US(X)	

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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	WO2001024576	WO		2001-04-05	Pluvinae et al		☐

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.						T ⁵
	1	Elias Pampalk, Tim Pohle, and Gerhard Widmer, "Dynamic Playlist Generation Based On Skipping Behavior", Published in: Proc. of the 6th International Society for Music Information Retrieval (ISMIR) Conference, 2005						☐
	2	Provisional Patent Application for U.S. Serial No. 60/805,985, filed June 28, 2006.						☐
	3	Zotkin et al., "Creation of Virtual Auditory Spaces", Acoustics Speech and Signal Processing (ICASSP), May, 2002.						☐
	4	Begault et al., "Direct Comparison of the Impact of Head Tracking, Reverberation, and Individualized Head-Related Transfer Functions on the Spatial Perception of a Virtual Speech Source", J. Audio Eng. Soc., Vol. 49, No. 10, October, 2001.						☐

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EXAMINER SIGNATURE			
Examiner Signature	/Daniel Abebe/ (02/14/2014)	Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		
First Named Inventor	Goldstein, Steven Wayne	
Art Unit		
Examiner Name		
Attorney Docket Number	PRS-110-US(X)	

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

- ☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).
- OR**
- ☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).
- ☐ See attached certification statement.
- ☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.
- ☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/PABLO MELES/	Date (YYYY-MM-DD)	
Name/Print	PABLO MELES	Registration Number	33739

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Search Notes 	Application/Control No. 14148752	Applicant(s)/Patent Under Reexamination GOLDSTEIN, STEVEN WAYNE
	Examiner DANIEL ABEBE	Art Unit 2657

CPC- SEARCHED		
Symbol	Date	Examiner
text search in G10L 15/265		
text search in H04M 1/05, 1/6066	2/17/2014	DA

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
704	270, 275		
455	575.2	2/17/2014	DA

SEARCH NOTES		
Search Notes	Date	Examiner

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

	/DANIEL ABEBE/ Primary Examiner.Art Unit 2657
--	--



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BIB DATA SHEET

CONFIRMATION NO. 2918

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.	
14/148,752	01/07/2014	704	2657	PRS-110US2	
RULE					
APPLICANTS Personics Holdings, Inc., Boca Raton, FL, Assignee (with 37 CFR 1.172 Interest); INVENTORS Steven Wayne Goldstein, Delray Beach, FL; ** CONTINUING DATA ***** This application is a CON of 11/774,965 07/09/2007 which claims benefit of 60/806,769 07/08/2006 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED *** SMALL ENTITY ** 01/22/2014					
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☐ No Verified and /DANIEL DEMELASH ABEBE/ Acknowledged Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY FL	SHEETS DRAWINGS 5	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 3
ADDRESS Personics Holdings Inc. 4800 N Federal Hwy. Ste A205 Boca Raton, FL 33431 UNITED STATES					
TITLE PERSONAL AUDIO ASSISTANT DEVICE AND METHOD					
FILING FEE RECEIVED 730	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit		

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appln. No.	:	14/148752	Confirmation No. 2918
Applicant	:	Steven Wayne Goldstein	
Filed	:	01/17/2014	
TC/A.U.	:	2657	
Examiner	:	Abebe, Daniel Demelash	
Docket No.	:	PRS-110US2	

RESPONSE TO NON-FINAL OFFICE ACTION

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In response to the Final Office Action mailed February 24, 2014, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page **2** of this submission.

Remarks/Arguments begin on page **8** of this submission.

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the immediate application:

Listing of Claims:

1. (Currently Amended) A wearable device, comprising:

a housing for the wearable device;

~~an ambient first~~ microphone within or on the housing;

a communication module within or on the housing;

a logic circuit communicatively coupled to the ~~first-ambient~~ microphone;

a memory storage unit communicatively coupled to the logic circuit; and

an interaction element, the interaction element and logic circuit cooperatively initiate control of media content ~~from the wearable device~~ or initiate operations of the wearable device.

2. (Currently Amended) The wearable device of claim 1, wherein the interaction element and

logic circuit are configured to initiate control of access to the media content ~~stored in the memory storage unit~~ played back at the wearable device or mobile device coupled thereto.

3. (Currently Amended) The wearable device of claim 2, wherein the memory storage unit ~~or~~ ~~and logic circuit or both~~ are ~~within remote from~~ the housing.

4. (Original) The wearable device of claim 2, wherein the memory storage unit or logic circuit or both are remote from the housing.

5. (Original) The wearable device of claim 1, wherein the wearable device comprises eye-wear.

6. (Original) The wearable device of claim 1, wherein the interaction element comprises a voice controlled user interface.

7. (Currently Amended) The wearable device of claim 1, wherein the ~~personal-audio assistant~~wearable device further comprises a button with multiple contacts coupled to the logic circuit that forms a portion of the interaction element.

8. (Original) The wearable device of claim 1, wherein the initiating of the operations of the wearable device is in response to a trigger of a predetermined alert condition.

9. (Original) The wearable device of claim 1, wherein the wearable device comprises an earphone.

10. (Original) The wearable device of claim 1, wherein the wearable device comprises at least a portion of a personal computer system, a personal music player system, a personal monitoring system, an automotive audio system, a home audio system, an avionics audio system, a personal video system, a mobile cell phone system, a personal digital assistant system, a standalone accessory, or an advanced eye-wear system with acoustical transducers.

11. (Currently Amended) The wearable device of claim 1, wherein the ~~personal-audio assistantwearable device~~ further comprises speaker for providing an audible output.

12. (Original) The wearable device of claim 1, wherein the wearable device further comprises a GPS receiver and wherein the communication module forms a peer-to-peer network using location information from the GPS receiver.

13. (Currently Amended) The wearable device of claim ~~6~~1, wherein the logic circuit is configured to perform a search of the web in response to a voice command ~~received-by-the-voice controlled-interfaceand provide a result to the wearable device.~~

14. (Currently Amended) The wearable device of claim 1, wherein the logic circuit is configured to cooperatively initiate control of media content or initiate operations of the wearable device in response to ~~detection-or-analysis of audio~~ captured at the wearable device at the ambient microphone or-atand analyzed at a remote server or-at both-the-wearable-device-and-the-remote serverin response to instructions received from the remote server.

15. (Original) The wearable device of claim 1, wherein the initiating of operations comprises commercial transactional operations.

16. (Currently Amended) The wearable device of claim 1, wherein the logic circuit is configured to retrieve specific media content in response to voice commands ~~captured at the wearable device using the ambient microphone, and the personal-audio-assistant wearable device~~ receives results from a remote server in response to speech recognition processing of ~~to the voice command via text-to-speech-synthesis at the remote server.~~

17. (Currently Amended) The wearable device of claim 1, wherein the wearable device further comprises a presentation device operatively coupled to the wearable device for presenting one or more of text, images, webpages, location information, scheduling information, or audible outputs to complement detected voice commands ~~at the wearable device and speech recognition results received at the wearable device from a remote server in response to analysis of the detected voice commands at the remote server.~~

18. (Currently Amended) A wearable device, comprising:

a housing for the wearable device;

an ambient ~~first~~-microphone mounted on or within the housing;

a communication module communicatively coupled to the ~~first-ambient~~ microphone;

one or more processors communicatively coupled to the ~~first-ambient~~ microphone;

and

a computer readable medium communicatively coupled to the one or more processors and containing instructions which when executed by the one or more processors, cause the one or more processors to perform functions comprising initiating control of audio content or initiating at least one operation of the wearable device.

19. (Currently Amended) The wearable device of claim 18, wherein the one or more processors initiates control of audio content or initiates control of operations of the wearable device in response to a voice command received and processed by a voice controlled user interface, wherein a remote server receives and analyzes the processed voice command and sends results back to the wearable device.

20. (Currently Amended) A wearable device, comprising:

a wearable structure having at least an ambient first-microphone;
a communication module communicatively coupled to the at least first ambient
microphone;
one or more processors communicatively coupled to the at least first ambient microphone;
and
a computer readable medium communicatively coupled to one or more processors and
containing instructions which when executed by the one or more processors, cause the one or
more processors to perform functions comprising initiating control of audio content accessed at
the wearable device in response to detected voice commands in the captured audio.

REMARKS/ARGUMENTS

These remarks are made in response to the Office Action dated February 24, 2014.

Applicant has amended independent claims 1, 18, and 20, and dependent claims 2, 3, 7, 11, 13, 14, 16, 17, and 19. The claims have been amended for clarifying distinguishing features. The amendments, as discussed below, are fully supported throughout the Specification. No new matter has been introduced.

Claim Rejections – 35 USC § 112

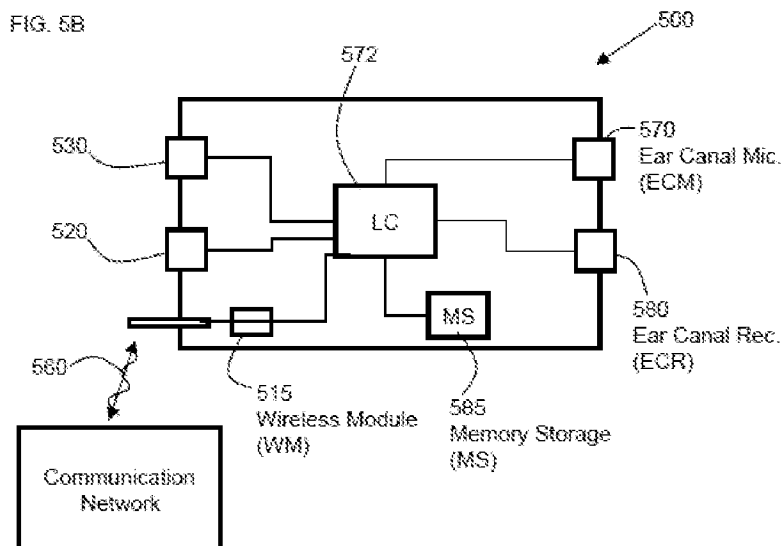
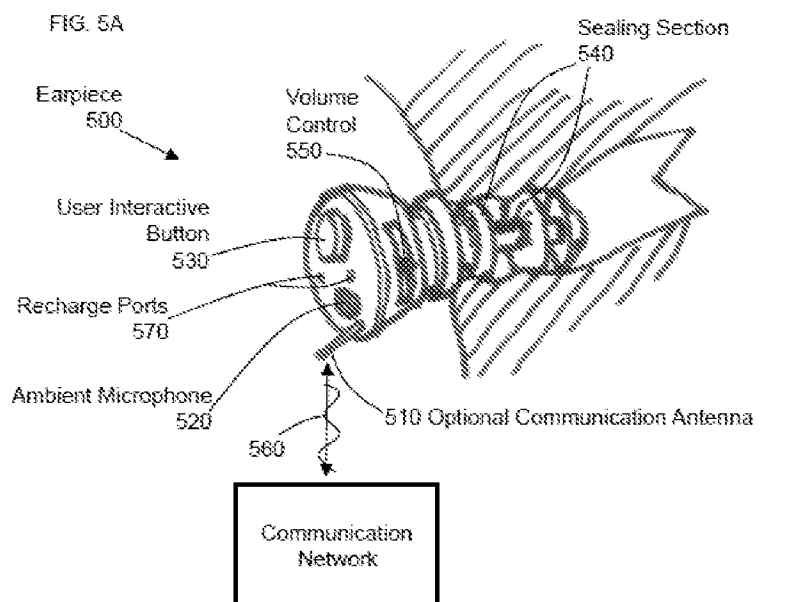
Claims 7 and 11 have been amended to recited “the wearable device” to provide antecedent basis. Accordingly, claims 7 and 11 as amended overcome the rejection based on 35 USC § 112 and are believed allowable.

Claim Rejections – 35 USC § 102(b)

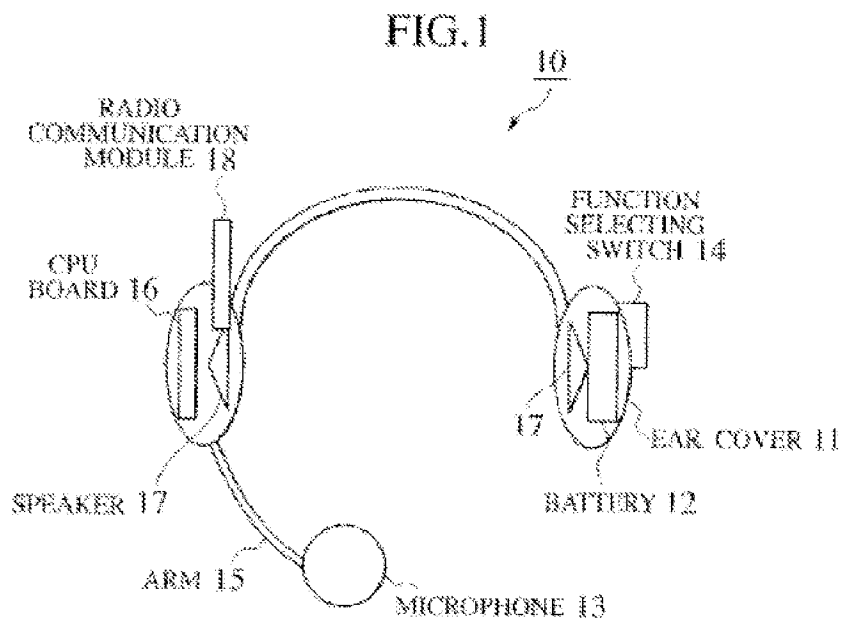
On page 3 of the Office Action, claims 1, 2, 4, 6-11, 14 and 18-20 were rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Publication No. 2003/0130852 by Tanaka et al. (hereinafter “Tanaka”). With respect to amended claim 1, Tanaka fails to disclose or suggest a wearable device and an ambient microphone within or on the housing for the wearable device and a logic circuit communicatively coupled to the ambient microphone. Support for the ambient microphone can be found in paragraph [0069] of the applicant's specification and FIGs. 5A and 5B, which describes (emphasis added):

[0069] Figure 5A illustrates an earpiece 500 having sealing section 540 in an ear canal that can store and download audio content 560 in accordance with at least one exemplary embodiment. The earpiece 500, can include a first user interaction element 530 (e.g., a button) , that can be used to turn the earpiece 500 on, or if on then activate an audio play command to start playing saved audio content. The earpiece 500 can also include a second user interaction element 550 (e.g., a slide control) that can be used for example to control the volume. The earpiece 500 can also include recharge ports 570, that can accept two wires of

varying voltage that can be inserted into the recharge ports 570 to recharge any batteries in the earpiece 500. The earpiece 500 can include an ambient microphone 520 and an optional communication antenna 510, that if needed can aid in the communication between the earpiece 500 and a communication network.



In contrast, the cited portions of Tanaka disclose and illustrate a boom microphone that is a directional and not an ambient microphone:



The microphone 13 in the headphones of FIG. 1 is clearly a boom microphone that is directional and intended to be close to a user's mouth. More particularly, Tanaka in numerous instances teaches away from using an ambient microphone since Tanaka readily concedes that noises would be "superposed onto the speech signal detected by the microphone and the recognition performance is lowered." See paragraphs 0009 and 0010 where a "close-talking type microphone" is disclosed rather than an ambient microphone:

[0009] In the speech recognition device, in the case where the microphone is provided in the device itself, if the user utters the speech at a position distanced from the device, the noises are superposed onto the speech signal detected by the microphone and the recognition performance is lowered. Consequently, in order to realize the recognition at high

precision, the user must utter the speech by coming to a position close to the device. In the case where the microphone is connected to the device by a cable, when the microphone is located at a position distanced from the user, the user must utter the speech by coming to a position close to the microphone.

[0010] There can be cases where the microphone connected to the device is a close-talking type microphone arranged near the mouth of the user, but there is a problem that the cable connecting the device and the microphone can restrict the user's movable range. In the case of using a wireless type close-talking microphone, the action of the user is not restricted, but the electric noises are superposed onto the speech signal detected by the microphone so that the speech recognition performance is lowered.

Furthermore, Tanaka describes the microphone as being arranged to be near the mouth of the user when the headset is worn by the user to detect the speech with little surrounding noise so that high recognition performance can be realized at a time of recognizing that speech.

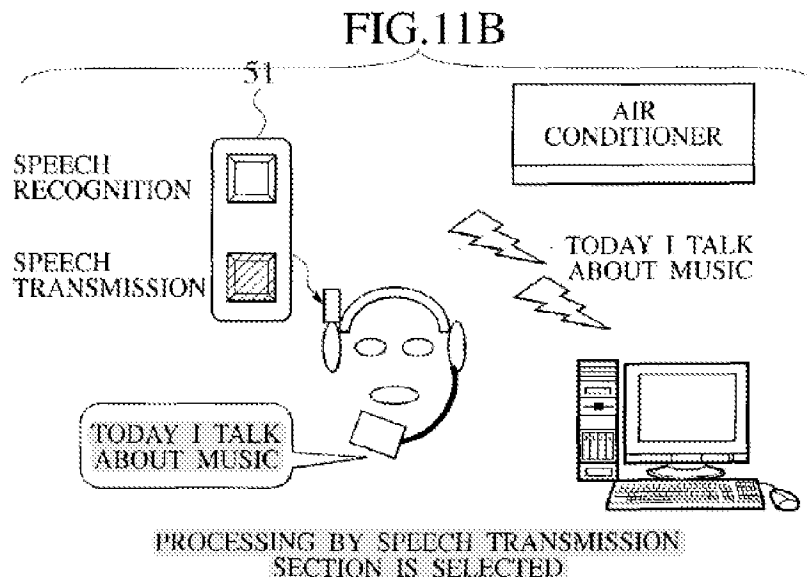
[0068] The headset **10** with the radio communication function (which will also be simply referred to as "headset" in the following) has a shape in which left and right ear covers **11** are connected by a flexible frame, and is used by being worn on the head of the user. An arm **15** is extending from one ear cover **11**, and the microphone **13** is provided at an end of the arm **15**. The microphone **13** is arranged to be near the mouth of the user when the headset **10** is worn by the user, so as to detect the speech with little surrounding noise superposed thereon.

[0095] In the above described headset 10 with the radio communication function, the user's speech is detected by using the microphone 13 associated with the headset. This microphone 13 is arranged near the mouth of the user so that the speech signal detected by the microphone 13 is superposed with little surrounding noise, such that the high recognition performance can be realized at a time of recognizing that speech.

An ambient microphone detects sound from the ambient or from the environment including "surrounding noise." Essentially, if one were to implement an ambient microphone in the embodiments of Tanaka, Tanaka teaches that such a microphone would not be effective, but would rather "superpose" surrounding noise which is contrary to the teachings of Tanaka. In other words, Tanaka teaches away from using an ambient microphone.

Tanaka fails to disclose or even suggest an ambient microphone as recited and claimed in amended claim 1. Tanaka "teaches away" from using an ambient microphone by clearly describing what is generally known as a directional microphone or boom type microphone that is suited for capturing speech and not capturing surrounding sound. Tanaka fails to disclose an ambient microphone and therefore fails to anticipate claim 1 as amended. Accordingly, Claim 1 is allowable and claims 2-17 are allowable as being dependent on an allowable base claim.

With respect to amended claim 2, the cited portion of Tanaka, namely FIG. 11B fails to disclose or suggest an interaction element and logic circuit configured to initiate control of access to the media content played back at the wearable device. Instead, FIG. 11B of Tanaka discloses a speech recognition device that merely records speech that has been recognized onto a hard disk of a PC. It does not control access to the media content played back at the wearable device. See FIG. 11B:



Also see paragraphs 0117 and 0118 describing the function and purpose of the stored speech.

[0117] On the other hand, the digital signal inputted into the speech transmission section 53 is inputted into the transmission target signal breaker 55. As the function selecting unit 19 outputs the speech transmission operation signal, the recognition target signal breaker 55 is closed. Consequently, the digital signal is encoded at the speech coding unit 57, and transmitted by radio from the speech transmission unit 59 to the PC through the radio communication module 18.

[0118] The PC decodes the coded speech transmitted from the headset into the digital speech signal, and records it into the hard disk. Namely, the content uttered by the user is recorded in the PC by using the radio communication from the headset. The PC has a sufficient capacity so that the content uttered by the user can be stored either as the speech or in a state after the text conversion. Also, the recorded speech can be retrieved and reproduced whenever necessary.

As described above, the cited portions of Tanaka describe merely storing decoded speech transmitted from the headset. Although in FIG. 11A, Tanaka describes controlling an air conditioner using coded speech, again, this is not the same as

initiating control of access to the media content played back at the wearable device as currently recited in amended claim 2. Accordingly, Tanaka fails to anticipate claim 2 and therefore claim 2 is further allowable. Support for the amendments in claim 2 can be found throughout the specification including, but not limited to paragraphs 0017, 0018, 0037 and 0053 of Applicant's specification among others. Claims 3 and 4 are allowable, among other reasons, as being dependent on an allowable base claim (claim 1) and further dependent on an allowable dependent claim 2.

With respect to claim 18, Tanaka fails to disclose or suggest a wearable device having an ambient microphone mounted on or within the housing for the wearable device, a communication module and one or more processors communicatively coupled to the ambient microphone. Simply put, Tanaka does not have an ambient microphone and therefore Tanaka fails to anticipate claim 18. Accordingly, claim 18 is allowable and claim 19 is allowable as being dependent on an allowable base claim. Claim 20 is similarly allowable for including a wearable structure having at least an ambient microphone which is not disclosed or suggested by Tanaka. Accordingly, claim 20 is allowable as being novel and non-obvious over Tanaka.

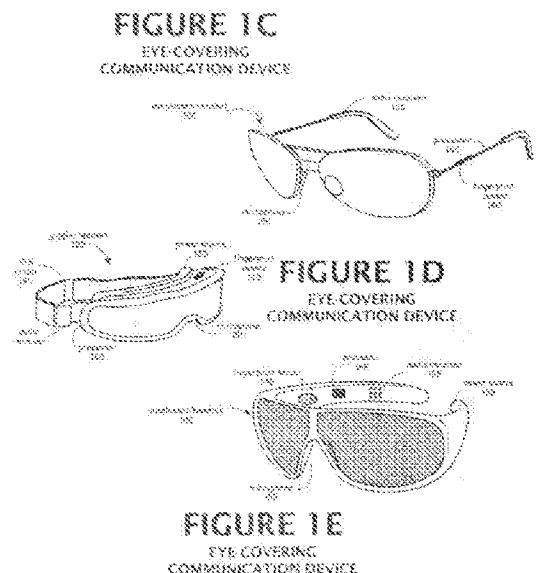
Claim Rejections – 35 USC § 103(a)

On Page 6 of the Office Action, claims 5, 12-13 and 15-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Tanaka and US Patent Publication No. 2010/0311390 to Black (hereinafter Black). With respective amendments to the claims as further explained below, it is respectfully submitted that this rejection has been overcome.

In addition to the deficiencies of Tanaka discussed above, the Office concedes that Tanaka fails to disclose a headset that comprises eye-wear and GPS and relies on Black. Although Black discloses eye-wear and GPS, Black however fails to overcome the deficiencies of Tanaka since Black fails to disclose or suggest an interaction element and logic circuit that cooperatively initiates control of media content from the

wearable device or initiate operations of the wearable device. Furthermore, with respect to claim 13, for example, the combination of Tanaka and Black fail to disclose or suggest wearable device having a logic circuit configured to perform a search of the web in response to a voice command received by the voice controlled interface and provide a result to the wearable device where the wearable device includes an interaction element and logic circuit that cooperatively initiate control of media content from the wearable device or initiate operations of the wearable device.

With respect to claim 17, the cited portions of Black in paragraphs 24 and FIG. 1 of Black fail to overcome the deficiencies of Tanaka since the cited portions of Black fail to disclose a presentation device operatively coupled to the wearable device for presenting one or more of text, images, webpages, location information, scheduling information, or audible outputs to complement detected voice commands at the wearable device and speech recognition results received at the wearable device from a remote server in response to analysis of the detected voice commands at the remote server. Paragraph 24 and FIG. 1 of Black describe:



[0024] To make a call using the mobile communication device of the present invention, the user needs to speak into the microphone the name or number that is sought. Speech-recognition technology is used, much the same as deployed in vehicles. For example, U.S. Publication No. 20050143134 (Harwood et al.) discloses a vehicular, hands-free telephone system. The appliance uses text-to-speech to transfer phone-book entries from the cell phone to memory of the appliance. The appliance uses text-to-speech to read and display text messages incoming to the cell phone for the operator to hear and view. The appliance initiates connecting and disconnecting of the cell phone with the appliance in response to voice commands of the operator.

The cited portions of Black above describes using “text-to-speech to read and display text message incoming to the cell phone for the operator to hear and view.” Black, alone or in combination with Tanaka fails to disclose or suggest a wearable device that includes a presentation device that presents information to complement detected voice commands at the wearable device and speech recognition results received at the wearable device from a remote server in response to analysis of the detected voice commands at the remote server. Thus, the cited portions of Tanaka and Black fail to render claim 17 obvious and therefore claim 17 is allowable.

On Page 8 of the Office Action, claims 3 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Tanaka and US Patent Publication No. 2007/0165875 to Rezvani et al (hereinafter Rezvani). With respect to claim 3, although Rezvani describes storing MP3 data in a headset, the cited portions of Rezvani fails to overcome the deficiencies of Tanaka since Tanaka and Rezvani fail to disclose or suggest a wearable device having an ambient microphone within or on the housing and an interaction element and logic circuit that cooperatively initiate control of media content from the wearable device or initiate operations of the wearable device. Furthermore, Tanaka and Rezvani alone or in combination fail to disclose or suggest an interaction element and logic circuit configured to initiate control of access to the media content played back at the wearable device or mobile device coupled thereto where the

memory storage unit and logic unit are remote from the housing. With respect to claim 12, although Rezvani discloses a GPS receiver, Rezvani in view of Tanaka still fails to disclose or suggest an interaction element and logic circuit configured to initiate control of access to the media content played back at the wearable device or mobile device coupled thereto where the communication module forms a peer-to-peer network using location information from a GPS receiver. Thus, the cited portions of Tanaka and Rezvani fail to render claims 3 and 12 obvious and therefore claims 3 and 12 are likewise allowable.

The claim amendments above have been made in view of the rejections and in review of the cited prior art to overcome a prima facie case of obviousness. To establish the prima facie case of obviousness three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)

The prior art references themselves must suggest combination. Failing explicit self-suggestion, the prior art must provide the motivation for obviousness in combination. In this case, when considering the references holistically, such motivation is not found.

When viewed holistically, Applicant's invention, as embodied by amended independent claim 1 and with expanded features of dependent claims 1-17 (and similarly for claims 18-20), it can be seen that the independent claim limitations when considered together are not puzzle pieces to be matched to atomized prior art reference suggestions, and thus examined out of context. As with obviousness in combining prior art references, only if the prior art aligns with the claimed invention in principles of

operation may a prior art reference be considered anticipatory. Applicant respectfully contends that some suggestion of the desirability of doing what the inventor has done must be provided to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

CONCLUSION

Applicant respectfully asserts, that the cited art fails to provide any suggestion or motivation for modifying what is taught in one or more references within the teachings of another, and furthermore fails to expressly teach each feature of the amended independent claims, and that the claims thus define over the cited art. Applicant, moreover, respectfully asserts that whereas each of the remaining claims each depend from one of the amended independent claims, the dependent claims likewise define over the prior art.

The Applicant believes that this application is now in full condition for allowance. Allowance of the application, accordingly, is respectfully requested. The Applicant request that the Examiner call the undersigned if clarification is needed on any matter within this Response, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

Date: April 2, 2014

/Pablo Meles/

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Electronic Acknowledgement Receipt	
EFS ID:	18650915
Application Number:	14148752
International Application Number:	
Confirmation Number:	2918
Title of Invention:	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD
First Named Inventor/Applicant Name:	Steven Wayne Goldstein
Customer Number:	117822
Filer:	Pablo Meles
Filer Authorized By:	
Attorney Docket Number:	PRS-110US2
Receipt Date:	02-APR-2014
Filing Date:	07-JAN-2014
Time Stamp:	13:57:02
Application Type:	Utility under 35 USC 111(a)

Payment information:					
Submitted with Payment			no		
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		PRS-110US2_NFOAR_2April2014.pdf	557241 91a37b142a0be029edb41f59c269c7ae86427972	yes	18

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	7
	Applicant Arguments/Remarks Made in an Amendment	8	18
Warnings:			
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Total Files Size (in bytes):		557241	
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 14/148,752	Filing Date 01/07/2014	☐ To be Mailed
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ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO**APPLICATION AS FILED – PART I**

(Column 1)

(Column 2)

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

(Column 1)

(Column 2)

(Column 3)

	04/02/2014	CLAIMS REMAINING AFTER AMENDMENT	Minus	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X \$40 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X \$210 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
	TOTAL ADD'L FEE						0

(Column 1)

(Column 2)

(Column 3)

		CLAIMS REMAINING AFTER AMENDMENT	Minus	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
	TOTAL ADD'L FEE						

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/LAWANDA MILTON/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/148,752	01/07/2014	Steven Wayne Goldstein	PRS-110US2

CONFIRMATION NO. 2918

PUBLICATION NOTICE



OC000000068319294

117822
Personics Holdings, LLC.
4800 N Federal Hwy. Ste A205
Boca Raton, FL 33431

Title:PERSONAL AUDIO ASSISTANT DEVICE AND METHOD

Publication No.US-2014-0129229-A1

Publication Date:05/08/2014

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/148,752	01/07/2014	Steven Wayne Goldstein	PRS-110US2	2918
117822	7590	05/21/2014		
Personics Holdings, LLC. 4800 N Federal Hwy. Ste A205 Boca Raton, FL 33431			EXAMINER	
			ABEBE, DANIEL DEMELASH	
			ART UNIT	PAPER NUMBER
			2657	
			NOTIFICATION DATE	DELIVERY MODE
			05/21/2014	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

iepstein@personicslabs.com
personics_docketing@cardinal-ip.com
pmeles@personicslabs.com

Office Action Summary	Application No. 14/148,752	Applicant(s) GOLDSTEIN, STEVEN WAYNE	
	Examiner DANIEL ABEDE	Art Unit 2657	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/2/14.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

- 5) ☒ Claim(s) 1-20 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-20 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) ☐ All b) ☐ Some** c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) ☐ Notice of References Cited (PTO-892) | 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date ____. | 4) ☐ Other: ____. |

The present application is being examined under the pre-AIA first to invent provisions.

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2-4, 6-12, 14 and 18-20 are rejected under pre-AIA 35 U.S.C. 103(a) as being un-patentable over Tanaka et al. (2003/0130852) in view of Rezvani et al. (2007/0165875).

As to claim 1, Tanaka teaches a wearable device (Figs.1-2), comprising:
a housing for the wearable device;
a first microphone within or on the housing (13);
a communication module within or on the housing (18);
a logic circuit communicatively coupled to the first microphone (16);
a memory storage unit communicatively coupled to the logic circuit (47); and
an interaction element, the interaction element and logic circuit cooperatively initiate control of media content or initiate operations of the wearable device (14).

Tanaka doesn't teach where the microphone is ambient microphone.

Rezvani teaches a multimedia wireless headset comprising speech recognition system with a microphone for operating the wireless headset, where the microphone comprises ambient microphone (Fig.4; Par.0026).

Art Unit: 2657

The use of ambient microphone in Tanaka's teaching would be obvious, to one of ordinary skill in the art, for the purpose of cancelling background noise as disclosed by Rezvani.

FIG. 1

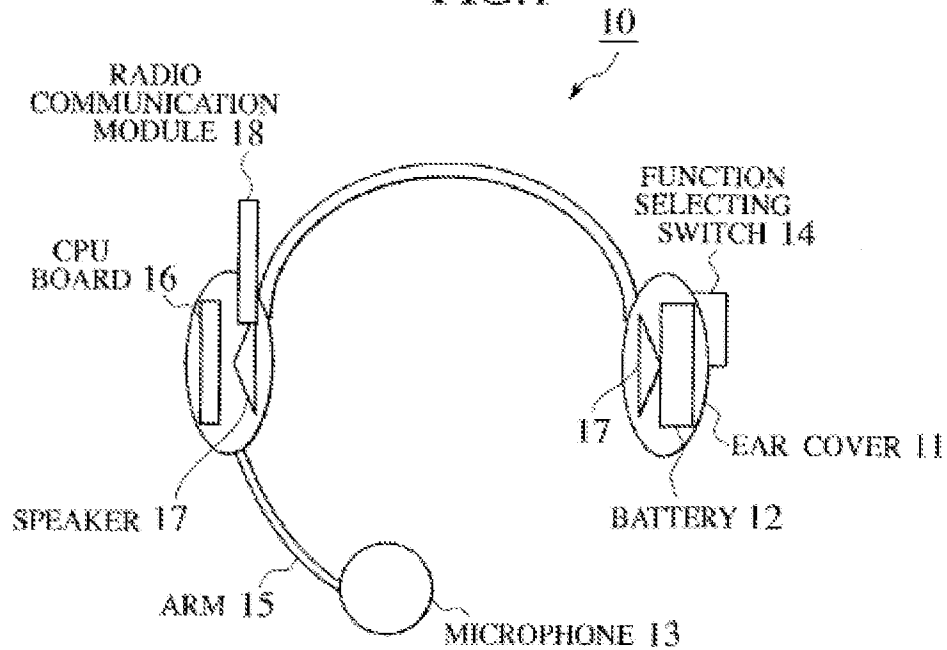
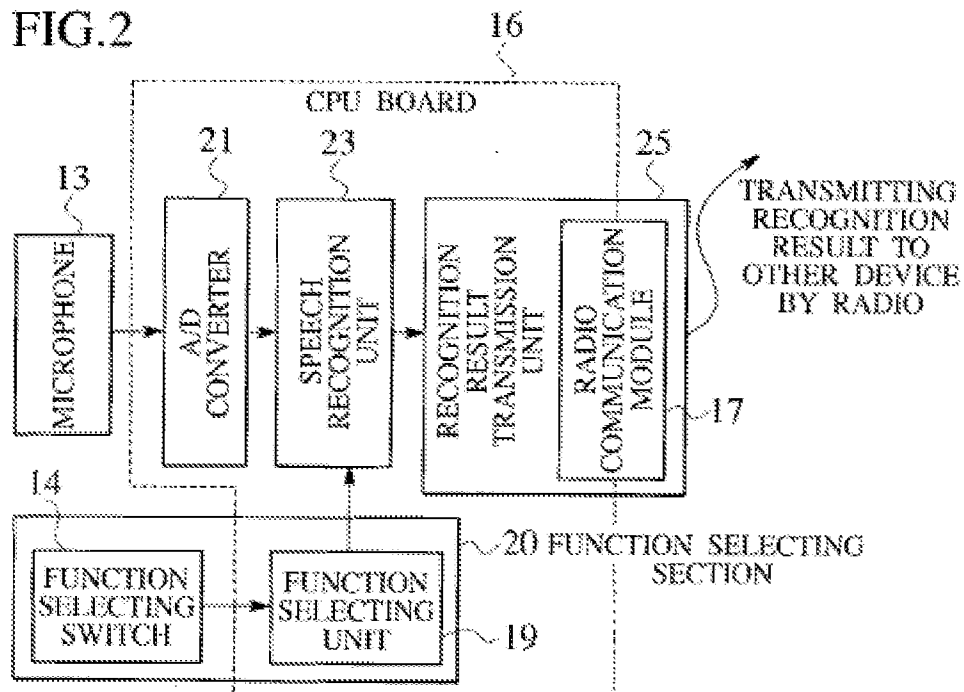


FIG. 2



As to claims 2-4, Tanaka teaches, wherein the interaction element and logic circuit are configured to initiate control of access to the media content stored in the memory storage unit remote from the housing (Fig.11B) and Rezvani teaches where the wireless headset includes storage for multimedia file and where it is configured to control units comprising a multimedia storage or mobile devices coupled to the headset (Fig.1; Pars.0034, 0040).

As to claim 12, Rezvani teaches wherein the wearable device further comprises a GPS receiver and wherein the communication module forms a peer- to-peer networking capability (Par.0015).

As to claim 6, Tanaka teaches wherein the interaction element comprises a voice controlled user interface (Fig.2).

As to claims 7-8, Tanaka teaches wherein the wearable device further comprises a button with multiple contacts coupled to the logic circuit that forms a portion of the interaction element (Fig.1).

As to claims 9 and 11, Tanaka teaches wherein the wearable device comprises a speaker (Fig.1).

As to claim 10, Tanaka teaches wherein the wearable device comprises at least a portion of a personal computer system, a personal music player system, a personal monitoring system (Figs 10-11)

As to claim 14, Tanaka teaches where the headset incorporates a microphone configured for capturing audio signals, processing circuitry, which is configured for analyzing digitized representations of audio signals captured by the microphone and speech detection circuitry (Pars.0025-0027).

Claims 18-20 are analogous to claim 1 and therefore are rejected by Tanaka and in view of Rezvani for the foregoing reasons.

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 13 and 15-17 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Rezvani and further in view of Black et al. (2010/0311390).

With regard to claim 5, Tanaka and Rezvani do not explicitly teach where the headset comprises eye-wear and GPS, however Black teaches a wearable mobile communication device comprising, a housing, audio receiver, audio processor, memory and both eye-wear and GPS devices (Fig.1). the combination of the eye-wear and the GPS would be obvious in Tanaka's or Rezvani's headset for a plurality of purposes including locating the user as well as incorporating the wearable devices into eye glasses.

FIGURE 1C
EYE-COVERING
COMMUNICATION DEVICE

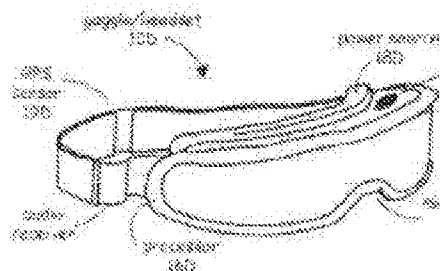
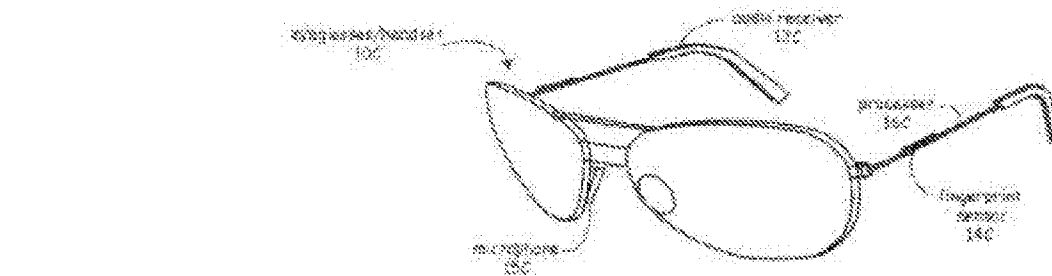


FIGURE 1D
EYE-COVERING
COMMUNICATION DEVICE

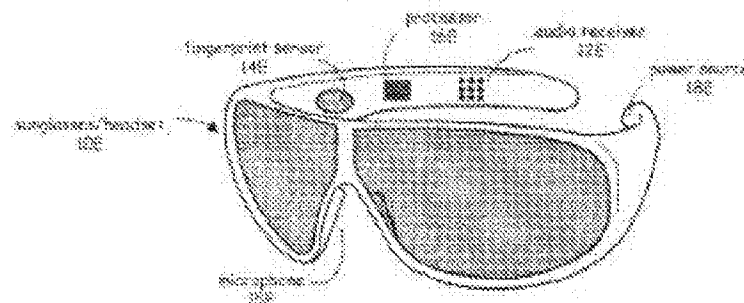


FIGURE 1E
EYE-COVERING
COMMUNICATION DEVICE

As to claim 13, Black teaches where the wearable device is configured to perform a search of the web in response to a voice command received by the voice controlled interface (Figs.2, 4A, 11A, 16A).

As to claim 15, Black teaches wherein some of the operations comprises commercial transactional operations (Figs.8, 13A, 16).

As to claims 16-17, Black teaches where medial contents are converted to speech and display (Par.0024; Fig.1).

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.

Regarding claim 1 and the corresponding independent claims, the use of ambient microphone is a newly added feature forcing the examiner to make changes. However, the examiner disagrees with applicant's assertion that Tanaka teaches away from using ambient microphone. the examiner submits Tanaka simply chooses to use different kind of microphone that could simply be replaced with the well known ambient microphone as shown by Rezvani.

With respect to claim 2, the examiner submits that Rezvani teaches where the headset is configured to control different kind of devices as addressed now.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL ABEBE whose telephone number is (571)272-7615. The examiner can normally be reached on monday-friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2657

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIEL ABEBE/
Primary Examiner, Art Unit 2657

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appln. No.	:	14/148752	Confirmation No. 2918
Applicant	:	Steven Wayne Goldstein	
Filed	:	01/17/2014	
TC/A.U.	:	2657	
Examiner	:	Abebe, Daniel Demelash	
Docket No.	:	PRS-110US2	

Amendment in response to Final Office Action

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In response to the Final Office Action mailed May 21, 2014, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page **2** of this submission.

Remarks/Arguments begin on page **8** of this submission.

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the immediate application:

Listing of Claims:

1. (Currently Amended) A wearable device, comprising:

a housing for the wearable device;

an ambient microphone within or on the housing;

a communication module within or on the housing;

a logic circuit communicatively coupled to the ambient microphone;

a memory storage unit communicatively coupled to the logic circuit; and

an interaction element, the interaction element and logic circuit cooperatively initiate

control of media content from the wearable device or initiate operations of the wearable device;

wherein the logic circuit is configured to cooperatively initiate control of media content of the wearable device in response to analysis of audio captured at the wearable device at the ambient microphone and analyzed at a remote server in response to instructions received from the remote server.

2. (Previously Presented) The wearable device of claim 1, wherein the interaction element and logic circuit are configured to initiate control of access to the media content played back at the wearable device or mobile device coupled thereto.

3. (Previously Presented) The wearable device of claim 2, wherein the memory storage unit and logic circuit are remote from the housing.

4. (Original) The wearable device of claim 2, wherein the memory storage unit or logic circuit or both are remote from the housing.

5. (Original) The wearable device of claim 1, wherein the wearable device comprises eye-wear.

6. (Original) The wearable device of claim 1, wherein the interaction element comprises a voice controlled user interface.

7. (Previously Presented) The wearable device of claim 1, wherein the wearable device further comprises a button with multiple contacts coupled to the logic circuit that forms a portion of the interaction element.

8. (Original) The wearable device of claim 1, wherein the initiating of the operations of the wearable device is in response to a trigger of a predetermined alert condition.

9. (Original) The wearable device of claim 1, wherein the wearable device comprises an earphone.

10. (Original) The wearable device of claim 1, wherein the wearable device comprises at least a portion of a personal computer system, a personal music player system, a personal monitoring system, an automotive audio system, a home audio system, an avionics audio system, a personal video system, a mobile cell phone system, a personal digital assistant system, a standalone accessory, or an advanced eye-wear system with acoustical transducers.

11. (Previously Presented) The wearable device of claim 1, wherein the wearable device further comprises speaker for providing an audible output.

12. (Original) The wearable device of claim 1, wherein the wearable device further comprises a GPS receiver and wherein the communication module forms a peer-to-peer network using location information from the GPS receiver.

13. (Currently Amended) The wearable device of claim 1, wherein the logic circuit is configured to perform a search of the web in response to a voice command and provide a web search result to the wearable device.

14. (Currently Amended) The wearable device of claim 1, wherein the logic circuit is configured to cooperatively initiate control of the media content of the wearable device ~~or~~ and initiate operations of the wearable device in response to analysis of the audio captured at the wearable device at the ambient microphone and analyzed at ~~a~~ the remote server in response to instructions received from the remote server.

15. (Original) The wearable device of claim 1, wherein the initiating of operations comprises commercial transactional operations.

16. (Currently Amended) The wearable device of claim 1, wherein the logic circuit is configured to retrieve specific media content in response to voice commands captured at the wearable device using the ambient microphone, and the wearable device receives results from ~~a the~~ remote server in response to speech recognition processing of the voice command at the remote server.

17. (Currently Amended) The wearable device of claim 1, wherein the wearable device further comprises a presentation device operatively coupled to the wearable device for presenting one or more of text, images, webpages, location information, scheduling information, or audible outputs to complement detected voice commands at the wearable device and speech recognition results received at the wearable device from ~~a the~~ remote server in response to analysis of the detected voice commands at the remote server.

18. (Currently Amended) A wearable device, comprising:

a housing for the wearable device;

an ambient microphone mounted on or within the housing;

a communication module communicatively coupled to the ambient microphone;

one or more processors communicatively coupled to the ambient microphone; and

a computer readable medium communicatively coupled to the one or more processors and containing instructions which when executed by the one or more processors, cause the one or more processors to perform functions comprising initiating control of audio content or initiating at least one operation of the wearable device; and

~~wherein the one or more processors is configured to cooperatively initiate control of media content of the wearable device in response to analysis of audio captured at the wearable device at the ambient microphone and analyzed at a remote server in response to instructions received from the remote server.~~

19. (Currently Amended) The wearable device of claim 18, wherein the one or more processors

~~initiates control of audio-the media content or initiates control of operations of the wearable~~

~~device in response to a voice command received and processed by a voice controlled user~~

interface, wherein a remote server receives and analyzes the processed voice command and sends results back to the wearable device.

20. (Previously Presented) A wearable device, comprising:

a wearable structure having at least an ambient microphone;
a communication module communicatively coupled to the ambient microphone;
one or more processors communicatively coupled to the ambient microphone; and
a computer readable medium communicatively coupled to one or more processors and
containing instructions which when executed by the one or more processors, cause the one or
more processors to perform functions comprising initiating control of audio content accessed at
the wearable device in response to detected voice commands in the captured audio.

REMARKS/ARGUMENTS

These remarks are made in response to the Office Action dated May 21, 2014.

Applicant has amended independent claims 1 and 18, and dependent claims 13, 14, 16, 17, and 19. The claims have been amended for clarifying distinguishing features. The amendments, as discussed below, are fully supported throughout the Specification. No new matter has been introduced.

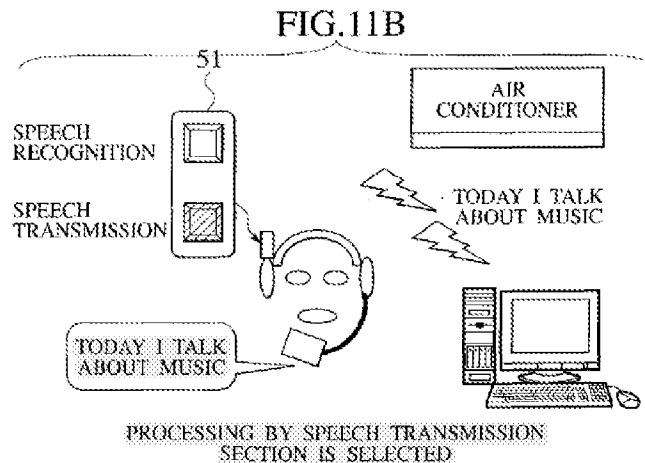
Claim Rejections – 35 USC § 102(b)

On page 2 of the Office Action, claims 1, 2-4, 6-12, 14 and 18-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over by US Patent Publication No. 2003/0130852 by Tanaka et al. (hereinafter “Tanaka”) in view of US Patent Publication No. 2003/0130852 to Rezvani et al (hereinafter “Rezvani”). With respect to amended claim 1, as the Office previously conceded, Tanaka fails to disclose or suggest a wearable device and an ambient microphone within or on the housing for the wearable device and a logic circuit communicatively coupled to the ambient microphone. Furthermore, Tanaka and Rezvani fail to disclose or suggest wherein the logic circuit is configured to cooperatively initiate control of media content of the wearable device in response to analysis of audio captured at the wearable device at the ambient microphone and analyzed at a remote server in response to instructions received from the remote server.

The Office relies on FIG. 4 and paragraph 0026 of Rezvani for disclosing an ambient microphone. Although Rezvani discloses an ambient microphone, the combination of Rezvani and Tanaka fails to disclose or suggest a logic circuit configured to cooperatively initiate control of media content of the wearable device in response to analysis of audio captured at the wearable device at the ambient microphone and analyzed at a remote server in response to instructions received from the remote server. As previously noted, the cited portions of Tanaka disclose and illustrate a boom microphone that is a directional and not an ambient microphone. Furthermore, Tanaka describes the microphone as being arranged to be near the mouth of the user when the

headset is worn by the user to detect the speech with little surrounding noise so that high recognition performance can be realized at a time of recognizing that speech. In addition to Tanaka “teaching away” from using an ambient microphone by clearly describing what is generally known as a directional microphone or boom type microphone that is suited for capturing speech and not capturing surrounding sound, Tanaka and Rezvani further fail to disclose or suggest initiating control of media content of the wearable device in response to analysis of audio captured at the ambient microphone and analyzed at a remote server, the initiation of control of the media content of the wearable device being in response to instructions to instructions received from the remote server. Rezvani clearly fails to show this and Tanaka only discloses control of a remote device such as an air conditioner. Although Tanaka does analyze a voice command at a remote device, it fails to provide a response back to the wearable device. Accordingly, Claim 1 is allowable and claims 2-17 are allowable as being dependent on an allowable base claim.

With respect to amended claim 2, the cited portion of Tanaka, namely FIG. 11B and the cited portions of Revani at FIG. 1 and at paragraphs 34 and 40 fail to disclose or suggest an interaction element and logic circuit configured to initiate control of access to the media content played back at the wearable device. Instead, FIG. 11B of Tanaka discloses a speech recognition device that merely records speech that has been recognized onto a hard disk of a PC. It does not control access to the media content played back at the wearable device. See FIG. 11B:



Also see paragraphs 0117 and 0118 describing the function and purpose of the stored speech.

[0117] On the other hand, the digital signal inputted into the speech transmission section 53 is inputted into the transmission target signal breaker 55. As the function selecting unit 19 outputs the speech transmission operation signal, the recognition target signal breaker 55 is closed. Consequently, the digital signal is encoded at the speech coding unit 57, and transmitted by radio from the speech transmission unit 59 to the PC through the radio communication module 18.

[0118] The PC decodes the coded speech transmitted from the headset into the digital speech signal, and records it into the hard disk. Namely, the content uttered by the user is recorded in the PC by using the radio communication from the headset. The PC has a sufficient capacity so that the content uttered by the user can be stored either as the speech or in a state after the text conversion. Also, the recorded speech can be retrieved and reproduced whenever necessary.

As described above, the cited portions of Tanaka describe merely storing decoded speech transmitted from the headset. Although in FIG. 11A, Tanaka describes controlling an air conditioner using coded speech, again, this is not the same as initiating control of access to the media content played back at the wearable device as currently recited in amended claim 2. Paragraph 34 of Rezvani only describes adding tags to files such as music files and paragraph 40 of Rezvani describes supporting different wireless interfaces which again fails to disclose initiating control of access to media content played back at the wearable device, particularly in response to analysis of the audio captured at the wearable device at the ambient microphone and analyzed at a remote server in response to instructions received from the remote server. Accordingly, the cited portions of Tanaka and Rezvani fail to disclose or suggest the cited elements of claim 2 and therefore claim 2 is further allowable.

With respect to claim 18, the cited portions of Rezvani and Tanaka fail to disclose or suggest a wearable device having an ambient microphone mounted on or within the housing for the wearable device, a communication module and one or more processors communicatively coupled to the ambient microphone wherein the one or more processors is configured to cooperatively initiate control of media content of the wearable device in response to analysis of audio captured at the wearable device at the ambient microphone and analyzed at a remote server in response to instructions received from the remote server. Accordingly, claim 18 is allowable and claim 19 is allowable as being dependent on an allowable base claim. Claim 20 is similarly allowable for including a wearable structure having at least an ambient microphone and one or more processors and containing instructions which when executed by the one or more processors, cause the one or more processors to perform functions comprising initiating control of audio content accessed at the wearable device in response to detected voice commands in the captured audio which are not disclosed or suggested by the combination of Tanaka and Rezvani. Accordingly, claim 20 is allowable as being novel and non-obvious over Tanaka and Rezvani.

Claim Rejections – 35 USC § 103(a)

On Page 6 of the Office Action, claims 5, 13 and 15-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Tanaka and US Patent Publication No. 2010/0311390 to Black (hereinafter Black). With respective amendments to the claims as further explained below, it is respectfully submitted that this rejection has been overcome.

In addition to the deficiencies of Tanaka and Rezvani discussed above, the Office concedes that Tanaka fails to disclose a headset that comprises eye-wear and GPS and relies on Black. Although Black discloses eye-wear and GPS, Black however fails to overcome the deficiencies of Tanaka since Black fails to disclose or suggest an interaction element and logic circuit that cooperatively initiates control of media content of the wearable device in response to analysis of audio captured at the wearable device

at the ambient microphone and analyzed at a remote server. Furthermore, with respect to claim 13, for example, the combination of Tanaka and Black fail to disclose or suggest wearable device having a logic circuit configured to perform a search of the web in response to a voice command received by the voice controlled interface and provide a web search result to the wearable device where the wearable device includes an interaction element and logic circuit that cooperatively initiate control of media content from the wearable device or initiate operations of the wearable device.

With respect to claim 17, the cited portions of Black in paragraphs 24 and FIG. 1 of Black fail to overcome the deficiencies of Tanaka since the cited portions of Black fail to disclose a presentation device operatively coupled to the wearable device for presenting one or more of text, images, webpages, location information, scheduling information, or audible outputs to complement detected voice commands at the wearable device and speech recognition results received at the wearable device from the remote server in response to analysis of the detected voice commands at the remote server. Paragraph 24 and FIG. 1 of Black describe:

FIGURE 1C
EYE-COVERING
COMMUNICATION DEVICE



FIGURE 1D
EYE-COVERING
COMMUNICATION DEVICE

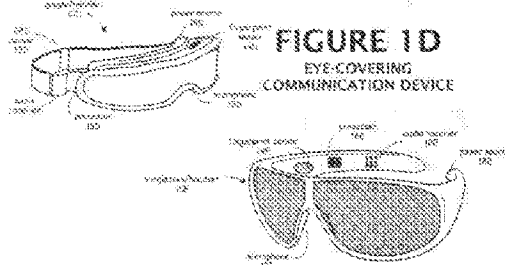


FIGURE 1E
EYE-COVERING
COMMUNICATION DEVICE

[0024] To make a call using the mobile communication device of the present invention, the user needs to speak into the microphone the name or number that is sought. Speech-recognition technology is used, much the same as deployed in vehicles. For example, U.S. Publication No. 20050143134 (Harwood et al.) discloses a vehicular, hands-free telephone system. The appliance uses text-to-speech to transfer phone-book entries from the cell phone to memory of the appliance. The appliance uses text-to-speech to read and display text messages incoming to the cell phone for the operator to hear and view. The appliance initiates connecting and disconnecting of the cell phone with the appliance in response to voice commands of the operator.

The cited portions of Black above describes using “text-to-speech to read and display text message incoming to the cell phone for the operator to hear and view.” Black, alone or in combination with Tanaka fails to disclose or suggest a wearable device that includes a presentation device that presents information to complement detected voice commands at the wearable device and speech recognition results received at the wearable device from a remote server in response to analysis of the detected voice commands at the remote server. Thus, the cited portions of Tanaka and Black fail to render claim 17 obvious and therefore claim 17 is allowable.

The claim amendments above have been made in view of the rejections and in review of the cited prior art to overcome a prima facie case of obviousness. To establish the prima facie case of obviousness three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)

The prior art references themselves must suggest combination. Failing explicit self-suggestion, the prior art must provide the motivation for obviousness in combination. In this case, when considering the references holistically, such motivation is not found.

When viewed holistically, Applicant's invention, as embodied by amended independent claim 1 and with expanded features of dependent claims 2-17 (and similarly for claims 18-20), it can be seen that the independent claim limitations when considered together are not puzzle pieces to be matched to atomized prior art reference suggestions, and thus examined out of context. As with obviousness in combining prior art references, only if the prior art aligns with the claimed invention in principles of operation may a prior art reference be considered anticipatory. Applicant respectfully contends that some suggestion of the desirability of doing what the inventor has done must be provided to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

CONCLUSION

Applicant respectfully asserts, that the cited art fails to provide any suggestion or motivation for modifying what is taught in one or more references within the teachings of another, and furthermore fails to expressly teach each feature of the amended independent claims, and that the claims thus define over the cited art. Applicant, moreover, respectfully asserts that whereas each of the remaining claims each depend from one of the amended independent claims, the dependent claims likewise define over the prior art.

The Applicant believes that this application is now in full condition for allowance. Allowance of the application, accordingly, is respectfully requested. The Applicant request that the Examiner call the undersigned if clarification is needed on any matter

Application No. 14/148752
Response to Office Action dated 5/21/14
Docket No.: PRS-110US2

within this Response, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

Date: May 27, 2014

/Pablo Meles/
Pablo Meles, Registration No.: 33,739
4800 N Federal Highway Suite A 205
Boca Raton, FL 33431
Telephone (954) 389.4846

Electronic Acknowledgement Receipt

EFS ID:	19129962
Application Number:	14148752
International Application Number:	
Confirmation Number:	2918
Title of Invention:	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD
First Named Inventor/Applicant Name:	Steven Wayne Goldstein
Customer Number:	117822
Filer:	Pablo Meles
Filer Authorized By:	
Attorney Docket Number:	PRS-110US2
Receipt Date:	27-MAY-2014
Filing Date:	07-JAN-2014
Time Stamp:	14:21:26
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		PRS-110US2_AmAF27May2014.pdf	348442 02453e0e079810a674dbd54690d20c520ec92af3	yes	15

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Response After Final Action	1	1
	Claims	2	7
	Applicant Arguments/Remarks Made in an Amendment	8	15

Warnings:

Information:

Total Files Size (in bytes):	348442
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 14/148,752		Filing Date 01/07/2014		☐ To be Mailed	
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ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	NUMBER FILED (Column 1)	NUMBER EXTRA (Column 2)	RATE (\$)	FEE (\$)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))			If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).	
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

	(Column 1)	(Column 2)	(Column 3)	RATE (\$)	ADDITIONAL FEE (\$)	
AMENDMENT	05/27/2014	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X \$40 = 0
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0	X \$210 = 0
	☐ Application Size Fee (37 CFR 1.16(s))					
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
				TOTAL ADD'L FEE		
				0		

	(Column 1)	(Column 2)	(Column 3)	RATE (\$)	ADDITIONAL FEE (\$)	
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =
	☐ Application Size Fee (37 CFR 1.16(s))					
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
				TOTAL ADD'L FEE		

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/BONNIE COLE/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/148,752	01/07/2014	Steven Wayne Goldstein	PRS-110US2	2918
117822	7590	06/10/2014		
Personics Holdings, LLC. 4800 N Federal Hwy. Ste A205 Boca Raton, FL 33431			EXAMINER	
			ABEBE, DANIEL DEMELASH	
			ART UNIT	PAPER NUMBER
			2657	
			NOTIFICATION DATE	DELIVERY MODE
			06/10/2014	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

iepstein@personicslabs.com
personics_docketing@cardinal-ip.com
pmeles@personicslabs.com

Advisory Action Before the Filing of an Appeal Brief	Application No. 14/148,752	Applicant(s) GOLDSTEIN, STEVEN WAYNE	
	Examiner DANIEL ABEBE	Art Unit 2657	AIA (First Inventor to File) Status No

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 27 May 2014 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. ☒ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance;
 (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.

b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires _____ months from the mailing date of the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.

Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because

a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);

b) ☐ They raise the issue of new matter (see NOTE below);

c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☒ Applicant's reply has overcome the following rejection(s): claims 1-19.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☐ For purposes of appeal, the proposed amendment(s): (a) ☐ will not be entered, or (b) ☐ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

9. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

10. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

11. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: claims 1-19 are allowable, however claim 20 is rejected for same reason set forth in the preceding office actions.

13. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____

14. ☐ Other: _____.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: _____.

Claim(s) withdrawn from consideration: _____.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appln. No.	:	14/148752	Confirmation No. 2918
Applicant	:	Steven Wayne Goldstein	
Filed	:	01/17/2014	
TC/A.U.	:	2657	
Examiner	:	Abebe, Daniel Demelash	
Docket No.	:	PRS-110US2	

Amendment in response to Final Office Action

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In response to the Advisory Action mailed June 10, 2014, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page **2** of this submission.

Remarks/Arguments begin on page **8** of this submission.

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the immediate application:

Listing of Claims:

1. (Currently Amended) A wearable device, comprising:

a housing for the wearable device;

an ambient microphone within or on the housing;

a communication module within or on the housing;

a logic circuit communicatively coupled to the ambient microphone;

a memory storage unit communicatively coupled to the logic circuit; and

an interaction element, the interaction element and logic circuit cooperatively initiate

control of media content from the wearable device or initiate operations of the wearable device;

wherein the logic circuit is configured to cooperatively initiate control of media content of the wearable device in response to analysis of audio captured at the wearable device at the ambient microphone and analyzed at a remote server in response to instructions received from the remote server.

2. (Previously Presented) The wearable device of claim 1, wherein the interaction element and logic circuit are configured to initiate control of access to the media content played back at the wearable device or mobile device coupled thereto.

3. (Previously Presented) The wearable device of claim 2, wherein the memory storage unit and logic circuit are remote from the housing.
4. (Original) The wearable device of claim 2, wherein the memory storage unit or logic circuit or both are remote from the housing.
5. (Original) The wearable device of claim 1, wherein the wearable device comprises eye-wear.
6. (Original) The wearable device of claim 1, wherein the interaction element comprises a voice controlled user interface.
7. (Previously Presented) The wearable device of claim 1, wherein the wearable device further comprises a button with multiple contacts coupled to the logic circuit that forms a portion of the interaction element.
8. (Original) The wearable device of claim 1, wherein the initiating of the operations of the wearable device is in response to a trigger of a predetermined alert condition.
9. (Original) The wearable device of claim 1, wherein the wearable device comprises an earphone.

10. (Original) The wearable device of claim 1, wherein the wearable device comprises at least a portion of a personal computer system, a personal music player system, a personal monitoring system, an automotive audio system, a home audio system, an avionics audio system, a personal video system, a mobile cell phone system, a personal digital assistant system, a standalone accessory, or an advanced eye-wear system with acoustical transducers.

11. (Previously Presented) The wearable device of claim 1, wherein the wearable device further comprises speaker for providing an audible output.

12. (Original) The wearable device of claim 1, wherein the wearable device further comprises a GPS receiver and wherein the communication module forms a peer-to-peer network using location information from the GPS receiver.

13. (Currently Amended) The wearable device of claim 1, wherein the logic circuit is configured to perform a search of the web in response to a voice command and provide a web search result to the wearable device.

14. (Currently Amended) The wearable device of claim 1, wherein the logic circuit is configured to cooperatively initiate control of the media content of the wearable device ~~or~~ and initiate operations of the wearable device in response to analysis of the audio captured at the wearable device at the ambient microphone and analyzed at ~~a~~ the remote server in response to instructions received from the remote server.

15. (Original) The wearable device of claim 1, wherein the initiating of operations comprises commercial transactional operations.

16. (Currently Amended) The wearable device of claim 1, wherein the logic circuit is configured to retrieve specific media content in response to voice commands captured at the wearable device using the ambient microphone, and the wearable device receives results from ~~a the~~ remote server in response to speech recognition processing of the voice command at the remote server.

17. (Currently Amended) The wearable device of claim 1, wherein the wearable device further comprises a presentation device operatively coupled to the wearable device for presenting one or more of text, images, webpages, location information, scheduling information, or audible outputs to complement detected voice commands at the wearable device and speech recognition results received at the wearable device from ~~a the~~ remote server in response to analysis of the detected voice commands at the remote server.

18. (Currently Amended) A wearable device, comprising:

a housing for the wearable device;

an ambient microphone mounted on or within the housing;

a communication module communicatively coupled to the ambient microphone;

one or more processors communicatively coupled to the ambient microphone; and

a computer readable medium communicatively coupled to the one or more processors and containing instructions which when executed by the one or more processors, cause the one or more processors to perform functions comprising initiating control of audio content or initiating at least one operation of the wearable device; and

~~wherein the one or more processors is configured to cooperatively initiate control of media content of the wearable device in response to analysis of audio captured at the wearable device at the ambient microphone and analyzed at a remote server in response to instructions received from the remote server.~~

19. (Currently Amended) The wearable device of claim 18, wherein the one or more processors

~~initiates control of audio-the media content or initiates control of operations of the wearable device in response to a voice command received and processed by a voice controlled user~~

interface, wherein a remote server receives and analyzes the processed voice command and sends results back to the wearable device.

20. (Currently Amended) A wearable device, comprising:

a wearable structure having at least an ambient microphone;

a communication module communicatively coupled to the ambient microphone;

one or more processors communicatively coupled to the ambient microphone; and

a computer readable medium communicatively coupled to one or more processors and containing instructions which when executed by the one or more processors, cause the one or more processors to perform functions comprising initiating control of audio content accessed at the wearable device in response to detected voice commands in the captured audio; and

..... wherein the one or more processors is configured to cooperatively initiate control of media content of the wearable device in response to analysis of audio captured at the wearable device at the ambient microphone and analyzed at a remote server in response to instructions received from the remote server.

REMARKS/ARGUMENTS

These remarks are made in response to the Advisory Action dated June 10, 2014.

Applicant has amended independent claims 1, 18 and 20, and dependent claims 13, 14, 16, 17, and 19. The claims have been amended for clarifying distinguishing features. The amendments, as discussed below, are fully supported throughout the Specification. No new matter has been introduced.

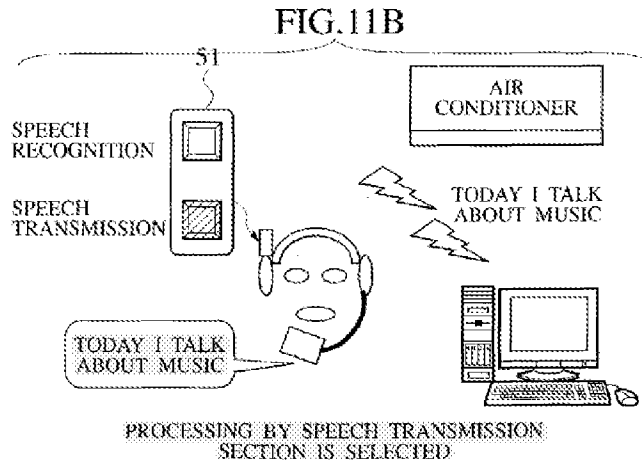
Claim Rejections – 35 USC § 102(b)

On page 2 of the Office Action, claims 1, 2-4, 6-12, 14 and 18-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over by US Patent Publication No. 2003/0130852 by Tanaka et al. (hereinafter “Tanaka”) in view of US Patent Publication No. 2003/0130852 to Rezvani et al (hereinafter “Rezvani”). With respect to amended claim 1, as the Office previously conceded, Tanaka fails to disclose or suggest a wearable device and an ambient microphone within or on the housing for the wearable device and a logic circuit communicatively coupled to the ambient microphone. Furthermore, Tanaka and Rezvani fail to disclose or suggest wherein the logic circuit is configured to cooperatively initiate control of media content of the wearable device in response to analysis of audio captured at the wearable device at the ambient microphone and analyzed at a remote server in response to instructions received from the remote server.

The Office relies on FIG. 4 and paragraph 0026 of Rezvani for disclosing an ambient microphone. Although Rezvani discloses an ambient microphone, the combination of Rezvani and Tanaka fails to disclose or suggest a logic circuit configured to cooperatively initiate control of media content of the wearable device in response to analysis of audio captured at the wearable device at the ambient microphone and analyzed at a remote server in response to instructions received from the remote server. As previously noted, the cited portions of Tanaka disclose and illustrate a boom microphone that is a directional and not an ambient microphone. Furthermore, Tanaka

describes the microphone as being arranged to be near the mouth of the user when the headset is worn by the user to detect the speech with little surrounding noise so that high recognition performance can be realized at a time of recognizing that speech. In addition to Tanaka “teaching away” from using an ambient microphone by clearly describing what is generally known as a directional microphone or boom type microphone that is suited for capturing speech and not capturing surrounding sound, Tanaka and Rezvani further fail to disclose or suggest initiating control of media content of the wearable device in response to analysis of audio captured at the ambient microphone and analyzed at a remote server, the initiation of control of the media content of the wearable device being in response to instructions to instructions received from the remote server. Rezvani clearly fails to show this and Tanaka only discloses control of a remote device such as an air conditioner. Although Tanaka does analyze a voice command at a remote device, it fails to provide a response back to the wearable device. Accordingly, Claim 1 is allowable and claims 2-17 are allowable as being dependent on an allowable base claim.

With respect to amended claim 2, the cited portion of Tanaka, namely FIG. 11B and the cited portions of Revani at FIG. 1 and at paragraphs 34 and 40 fail to disclose or suggest an interaction element and logic circuit configured to initiate control of access to the media content played back at the wearable device. Instead, FIG. 11B of Tanaka discloses a speech recognition device that merely records speech that has been recognized onto a hard disk of a PC. It does not control access to the media content played back at the wearable device. See FIG. 11B:



Also see paragraphs 0117 and 0118 describing the function and purpose of the stored speech.

[0117] On the other hand, the digital signal inputted into the speech transmission section **53** is inputted into the transmission target signal breaker **55**. As the function selecting unit **19** outputs the speech transmission operation signal, the recognition target signal breaker **55** is closed. Consequently, the digital signal is encoded at the speech coding unit **57**, and transmitted by radio from the speech transmission unit **59** to the PC through the radio communication module **18**.

[0118] The PC decodes the coded speech transmitted from the headset into the digital speech signal, and records it into the hard disk. Namely, the content uttered by the user is recorded in the PC by using the radio communication from the headset. The PC has a sufficient capacity so that the content uttered by the user can be stored either as the speech or in a state after the text conversion. Also, the recorded speech can be retrieved and reproduced whenever necessary.

As described above, the cited portions of Tanaka describe merely storing decoded speech transmitted from the headset. Although in FIG. 11A, Tanaka describes controlling an air conditioner using coded speech, again, this is not the same as initiating control of access to the media content played back at the wearable device as currently recited in amended claim 2. Paragraph 34 of Rezvani only describes adding

tags to files such as music files and paragraph 40 of Rezvani describes supporting different wireless interfaces which again fails to disclose initiating control of access to media content played back at the wearable device, particularly in response to analysis of the audio captured at the wearable device at the ambient microphone and analyzed at a remote server in response to instructions received from the remote server. Accordingly, the cited portions of Tanaka and Rezvani fail to disclose or suggest the cited elements of claim 2 and therefore claim 2 is further allowable.

With respect to claim 18, the cited portions of Rezvani and Tanaka fail to disclose or suggest a wearable device having an ambient microphone mounted on or within the housing for the wearable device, a communication module and one or more processors communicatively coupled to the ambient microphone wherein the one or more processors is configured to cooperatively initiate control of media content of the wearable device in response to analysis of audio captured at the wearable device at the ambient microphone and analyzed at a remote server in response to instructions received from the remote server. Accordingly, claim 18 is allowable and claim 19 is allowable as being dependent on an allowable base claim. Claim 20 is similarly allowable. Accordingly, claim 20 is allowable as being novel and non-obvious over Tanaka and Rezvani.

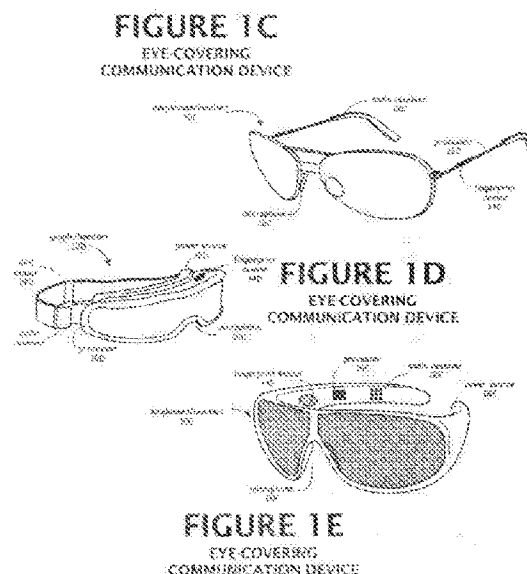
Claim Rejections – 35 USC § 103(a)

On Page 6 of the Office Action, claims 5, 13 and 15-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Tanaka and US Patent Publication No. 2010/0311390 to Black (hereinafter Black). With respective amendments to the claims as further explained below, it is respectfully submitted that this rejection has been overcome.

In addition to the deficiencies of Tanaka and Rezvani discussed above, the Office concedes that Tanaka fails to disclose a headset that comprises eye-wear and GPS and relies on Black. Although Black discloses eye-wear and GPS, Black however fails to overcome the deficiencies of Tanaka since Black fails to disclose or suggest an

interaction element and logic circuit that cooperatively initiates control of media content of the wearable device in response to analysis of audio captured at the wearable device at the ambient microphone and analyzed at a remote server. Furthermore, with respect to claim 13, for example, the combination of Tanaka and Black fail to disclose or suggest wearable device having a logic circuit configured to perform a search of the web in response to a voice command received by the voice controlled interface and provide a web search result to the wearable device where the wearable device includes an interaction element and logic circuit that cooperatively initiate control of media content from the wearable device or initiate operations of the wearable device.

With respect to claim 17, the cited portions of Black in paragraphs 24 and FIG. 1 of Black fail to overcome the deficiencies of Tanaka since the cited portions of Black fail to disclose a presentation device operatively coupled to the wearable device for presenting one or more of text, images, webpages, location information, scheduling information, or audible outputs to complement detected voice commands at the wearable device and speech recognition results received at the wearable device from the remote server in response to analysis of the detected voice commands at the remote server. Paragraph 24 and FIG. 1 of Black describe:



[0024] To make a call using the mobile communication device of the present invention, the user needs to speak into the microphone the name or number that is sought. Speech-recognition technology is used, much the same as deployed in vehicles. For example, U.S. Publication No. 20050143134 (Harwood et al.) discloses a vehicular, hands-free telephone system. The appliance uses text-to-speech to transfer phone-book entries from the cell phone to memory of the appliance. The appliance uses text-to-speech to read and display text messages incoming to the cell phone for the operator to hear and view. The appliance initiates connecting and disconnecting of the cell phone with the appliance in response to voice commands of the operator.

The cited portions of Black above describes using “text-to-speech to read and display text message incoming to the cell phone for the operator to hear and view.” Black, alone or in combination with Tanaka fails to disclose or suggest a wearable device that includes a presentation device that presents information to complement detected voice commands at the wearable device and speech recognition results received at the wearable device from a remote server in response to analysis of the detected voice commands at the remote server. Thus, the cited portions of Tanaka and Black fail to render claim 17 obvious and therefore claim 17 is allowable.

The claim amendments above have been made in view of the rejections and in review of the cited prior art to overcome a prima facie case of obviousness. To establish the prima facie case of obviousness three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)

The prior art references themselves must suggest combination. Failing explicit self-suggestion, the prior art must provide the motivation for obviousness in combination. In this case, when considering the references holistically, such motivation is not found.

When viewed holistically, Applicant's invention, as embodied by amended independent claim 1 and with expanded features of dependent claims 2-17 (and similarly for claims 18-20), it can be seen that the independent claim limitations when considered together are not puzzle pieces to be matched to atomized prior art reference suggestions, and thus examined out of context. As with obviousness in combining prior art references, only if the prior art aligns with the claimed invention in principles of operation may a prior art reference be considered anticipatory. Applicant respectfully contends that some suggestion of the desirability of doing what the inventor has done must be provided to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

CONCLUSION

Applicant respectfully asserts, that the cited art fails to provide any suggestion or motivation for modifying what is taught in one or more references within the teachings of another, and furthermore fails to expressly teach each feature of the amended independent claims, and that the claims thus define over the cited art. Applicant, moreover, respectfully asserts that whereas each of the remaining claims each depend from one of the amended independent claims, the dependent claims likewise define over the prior art.

The Applicant believes that this application is now in full condition for allowance. Allowance of the application, accordingly, is respectfully requested. The Applicant request that the Examiner call the undersigned if clarification is needed on any matter

Application No. 14/148752
Response to Advisory Action dated 6/10/14
Docket No.: PRS-110US2

within this Response, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

Date: June 23, 2014

/Pablo Meles/
Pablo Meles, Registration No.: 33,739
4800 N Federal Highway Suite A 205
Boca Raton, FL 33431
Telephone (954) 389.4846

Electronic Acknowledgement Receipt

EFS ID:	19387851
Application Number:	14148752
International Application Number:	
Confirmation Number:	2918
Title of Invention:	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD
First Named Inventor/Applicant Name:	Steven Wayne Goldstein
Customer Number:	117822
Filer:	Pablo Meles
Filer Authorized By:	
Attorney Docket Number:	PRS-110US2
Receipt Date:	23-JUN-2014
Filing Date:	07-JAN-2014
Time Stamp:	23:28:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		PRS-110US2_AmAF_23June2014.pdf	347825 80f8fddd45e3e9e25f52b19e17b2cd24da62c4b3	yes	15

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Supplemental Response or Supplemental Amendment	1	1
	Claims	2	7
	Applicant Arguments/Remarks Made in an Amendment	8	15
Warnings:			
Information:			
Total Files Size (in bytes):		347825	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.			

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 14/148,752	Filing Date 01/07/2014	☐ To be Mailed
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 ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

(Column 1)

(Column 2)

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	06/23/2014	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X \$40 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X \$210 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
TOTAL ADD'L FEE						0	

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =
	☐ Application Size Fee (37 CFR 1.16(s))					
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
TOTAL ADD'L FEE						

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/EVELYN NIMMONS/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

117822 7590 06/30/2014
Personics Holdings, LLC.
4800 N Federal Hwy. Ste A205
Boca Raton, FL 33431

EXAMINER

ABEBE, DANIEL DEMELASH

ART UNIT

PAPER NUMBER

2657

DATE MAILED: 06/30/2014

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

14/148,752

01/07/2014

Steven Wayne Goldstein

PRS-110US2

2918

TITLE OF INVENTION: PERSONAL AUDIO ASSISTANT DEVICE AND METHOD

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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nonprovisional

SMALL

\$480

\$0

\$0

\$480

09/30/2014

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or **Fax** (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

117822 7590 06/30/2014
Personics Holdings, LLC.
4800 N Federal Hwy. Ste A205
Boca Raton, FL 33431

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/148,752	01/07/2014	Steven Wayne Goldstein	PRS-110US2	2918

TITLE OF INVENTION: PERSONAL AUDIO ASSISTANT DEVICE AND METHOD

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	09/30/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
ABEBE, DANIEL DEMELASH	2657	704-275000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/148,752	01/07/2014	Steven Wayne Goldstein	PRS-110US2	2918
117822	7590	06/30/2014	EXAMINER	
Personics Holdings, LLC. 4800 N Federal Hwy. Ste A205 Boca Raton, FL 33431			ABEBE, DANIEL DEMELASH	
			ART UNIT	PAPER NUMBER
			2657	
DATE MAILED: 06/30/2014				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 14/148,752	Applicant(s) GOLDSTEIN, STEVEN WAYNE	
	Examiner DANIEL ABEBE	Art Unit 2657	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 6/23/14.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are 1-20. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
Certified copies:
a) ☐ All b) ☐ Some *c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)	5. ☐ Examiner's Amendment/Comment
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____	6. ☐ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material	7. ☐ Other _____
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____	

/DANIEL ABEBE/ Primary Examiner, Art Unit 2657	
---	--

Search Notes

Application/Control No.

14/148,752

Applicant(s)/Patent under
ReexaminationGOLDSTEIN, STEVEN
WAYNE

Examiner

DANIEL ABEBE

Art Unit

2657

SEARCHED

Class	Subclass	Date	Examiner
704	275	6/25/2014	DA

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner
704	275	6/25/2014	DA

**SEARCH NOTES
(INCLUDING SEARCH STRATEGY)**

	DATE	EXMR

Issue Classification 	Application/Control No.	Applicant(s)/Patent under Reexamination	
	14/148,752	GOLDSTEIN, STEVEN WAYNE	
	Examiner	Art Unit	
	DANIEL ABEBE	2657	

ISSUE CLASSIFICATION												
ORIGINAL					CROSS REFERENCE(S)							
CLASS		SUBCLASS			CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)						
704		275			704	270						
INTERNATIONAL CLASSIFICATION					455	575.2						
G	1	0	L	15/00								
				/								
				/								
				/								
				/								
					/Daniel D Abebe/ 6/25/14					Total Claims Allowed: 20		
(Assistant Examiner) (Date)										O.G. Print Claim(s)		
(Legal Instruments Examiner) (Date)					(Primary Examiner) (Date)					1 2		

☒ Claims renumbered in the same order as presented by applicant												☐ CPA		☐ T.D.		☐ R.1.47	
Final	Original		Final	Original		Final	Original		Final	Original		Final	Original		Final	Original	
	1			31			61			91			121			151	
	2			32			62			92			122			152	
	3			33			63			93			123			153	
	4			34			64			94			124			154	
	5			35			65			95			125			155	
	6			36			66			96			126			156	
	7			37			67			97			127			157	
	8			38			68			98			128			158	
	9			39			69			99			129			159	
	10			40			70			100			130			160	
	11			41			71			101			131			161	
	12			42			72			102			132			162	
	13			43			73			103			133			163	
	14			44			74			104			134			164	
	15			45			75			105			135			165	
	16			46			76			106			136			166	
	17			47			77			107			137			167	
	18			48			78			108			138			168	
	19			49			79			109			139			169	
	20			50			80			110			140			170	
	21			51			81			111			141			171	
	22			52			82			112			142			172	
	23			53			83			113			143			173	
	24			54			84			114			144			174	
	25			55			85			115			145			175	
	26			56			86			116			146			176	
	27			57			87			117			147			177	
	28			58			88			118			148			178	
	29			59			89			119			149			179	
	30			60			90			120			150			180	
																210	

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appln. No.	:	14/148752	Confirmation No. 2918
Applicant	:	Steven Wayne Goldstein	
Filed	:	01/17/2014	
TC/A.U.	:	2657	
Examiner	:	Abebe, Daniel Demelash	
Docket No.	:	PRS-110US2	

Amendment in response to Final Office Action

MAIL STOP AMENDMENT

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

OK to enter

D.A

In response to the Advisory Action mailed June 10, 2014, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page **2** of this submission.

Remarks/Arguments begin on page **8** of this submission.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

117822 7590 06/30/2014
Personics Holdings, LLC.
4800 N Federal Hwy. Ste A205
Boca Raton, FL 33431

EXAMINER

ABEBE, DANIEL DEMELASH

ART UNIT

PAPER NUMBER

2657

DATE MAILED: 06/30/2014

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

14/148,752

01/07/2014

Steven Wayne Goldstein

PRS-110US2

2918

TITLE OF INVENTION: PERSONAL AUDIO ASSISTANT DEVICE AND METHOD

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	09/30/2014

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or **Fax** **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

117822 7590 06/30/2014
Personics Holdings, LLC.
4800 N Federal Hwy. Ste A205
Boca Raton, FL 33431

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/148,752	01/07/2014	Steven Wayne Goldstein	PRS-110US2	2918

TITLE OF INVENTION: PERSONAL AUDIO ASSISTANT DEVICE AND METHOD

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	09/30/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
ABEBE, DANIEL DEMELASH	2657	704-275000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Pablo Meles

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Personics Holdings, LLC.

Boca Raton, Florida

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 504284 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /pablo meles/

Typed or printed name Pablo Meles

Date _____

Registration No. 33739

Electronic Patent Application Fee Transmittal				
Application Number:		14148752		
Filing Date:		07-Jan-2014		
Title of Invention:		PERSONAL AUDIO ASSISTANT DEVICE AND METHOD		
First Named Inventor/Applicant Name:		Steven Wayne Goldstein		
Filer:		Pablo Meles		
Attorney Docket Number:		PRS-110US2		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	2501	1	480	480
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				480

Electronic Acknowledgement Receipt	
EFS ID:	19456840
Application Number:	14148752
International Application Number:	
Confirmation Number:	2918
Title of Invention:	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD
First Named Inventor/Applicant Name:	Steven Wayne Goldstein
Customer Number:	117822
Filer:	Pablo Meles
Filer Authorized By:	
Attorney Docket Number:	PRS-110US2
Receipt Date:	30-JUN-2014
Filing Date:	07-JAN-2014
Time Stamp:	17:02:15
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 480
RAM confirmation Number	4928
Deposit Account	504284
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Issue Fee Payment (PTO-85B)	PRS-110US2_14148752_Issue_Fee_Payment.pdf	161393 c31df432644e43747b92c8ee9b7163793b307433	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	29890 1a930ccdb6bb5659c8104c28e7856305177d99	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			191283		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14/148,752
	Filing Date		
	First Named Inventor	Goldstein, Steven Wayne	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	PRS-110-US(X)	

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6965770		2005-11-15	Walsh et al.	
	2	7546144		2009-06-09	de Leon et al	
	3	7206429		2007-04-17	Vossler, Stephan P.	
	4	6661901		2003-12-09	Svean et al.	
Change(s) applied to document, /C.L./ 7/3/2014	5	6840908		2005 ~~2011~~ -01-11	Edwards	
	6	6379314		2002-04-30	Horn	
	7	7558529		2009-07-07	Seshadri et al.	
	8	4539439		1985-09-03	Strothmann et al.	



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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/148,752	08/12/2014	8805692	PRS-110US2	2918

117822 7590 07/23/2014
Personics Holdings, LLC.
4800 N Federal Hwy. Ste A205
Boca Raton, FL 33431

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Personics Holdings, Inc., Boca Raton, FL, Assignee (with 37 CFR 1.172 Interest);
Steven Wayne Goldstein, Delray Beach, FL;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT - POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS	Patent Number	8,805,692
	Issue Date	08-12-2014
	First Named Inventor	Steven Wayne Goldstein
	Title	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD
	Attorney Docket No.	PRS-110U62

I hereby revoke all previous powers of attorney given in the above-identified patent.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint Practitioner(s) associated with the Customer Number identified in the box at right as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

150139

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

Please recognize or change the correspondence address for the above-identified patent to:

☒ The address associated with the above-identified Customer Number.

OR

☐ The address associated with the Customer Number identified in the box at right:

OR

☐ Firm or☐ Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the:

☐ Applicant.

OR

☒ Patent owner.

Statement under 37 CFR 1.73(c) (Form PTO/AIA/96) submitted herewith or filed on _____

SIGNATURE of Applicant or Patent Owner

Signature

Name

Date

Telephone

Title and Company

NOTE: Signatures of all the applicants or patent owners of the entire interest or their representative(s) are required. If more than one signature is required, submit multiple forms, check the box below, and identify the total number of forms submitted in the blank below.

☐ A total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public, which is to update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-5199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: STATON TECHIYA, LLCApplication No./Patent No.: 8805692Filed/Issue Date: 08/12/2014Titled: PERSONAL AUDIO ASSISTANT DEVICE AND METHODSTATON TECHIYA, LLC, a corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose one of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose one of options A or B below):

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.
- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:
1. From: 01/06/2013 To: 12/31/2013
- The document was recorded in the United States Patent and Trademark Office at
Reel 031959, Frame 0640, or for which a copy thereof is attached.
2. From: 12/31/2013 To: 12/31/2013
- The document was recorded in the United States Patent and Trademark Office at
Reel 032189, Frame 0304, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: 12/31/2013 To: 10/17/2014

The document was recorded in the United States Patent and Trademark Office at
Reel 034170, Frame 0771, or for which a copy thereof is attached.

4. From: 10/17/2014 To: 06/20/2017

The document was recorded in the United States Patent and Trademark Office at
Reel 034170, Frame 0933, or for which a copy thereof is attached.

5. From: 06/20/2017 To: 06/20/2017

The document was recorded in the United States Patent and Trademark Office at
Reel 043392, Frame 0961, or for which a copy thereof is attached.

6. From: 06/20/2017 To: 06/21/2017

The document was recorded in the United States Patent and Trademark Office at
Reel 042992, Frame 0493, or for which a copy thereof is attached.

☒ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Gary Hoshizaki/

10/11/2017

Signature

Gary Hoshizaki

Date

Patent Agent

Printed or Typed Name

Title or Registration Number

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Supplemental Sheet - additional documents in the chain of title are listed below.

A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

7. From: 06/21/2017 To: 06/21/2017
The document was recorded in the United States Patent and Trademark Office at
Reel 043393 , Frame 0001 , or for which
a copy thereof is attached.
8. From: 06/21/2017 To: Present
The document was recorded in the United States Patent and Trademark Office at
Reel 042992 , Frame 0524 , or for which
a copy thereof is attached.
9. From: To:
The document was recorded in the United States Patent and Trademark Office at
Reel , Frame , or for which
a copy thereof is attached.

Electronic Acknowledgement Receipt	
EFS ID:	30634999
Application Number:	14148752
International Application Number:	
Confirmation Number:	2918
Title of Invention:	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD
First Named Inventor/Applicant Name:	Steven Wayne Goldstein
Customer Number:	117822
Filer:	Gary Wesley Hoshizaki
Filer Authorized By:	
Attorney Docket Number:	PRS-110US2
Receipt Date:	12-OCT-2017
Filing Date:	07-JAN-2014
Time Stamp:	11:47:23
Application Type:	Utility under 35 USC 111(a)

Payment information:					
Submitted with Payment			no		
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	POA_Issued3V1.pdf	447599	no	1
			4a5dd79ec4c6339cc86752cf496d97a6c9de5e35		
Warnings:					

Information:					
2	Assignee showing of ownership per 37 CFR 3.73	aia0096_373_after_V1.pdf	96974	no	3
			739fb8305ee3f524749128fab6b41c42f6c5c02d		
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73	SupplementalSheetAfter2V1.pdf	28848	no	1
			48b5c5048e9ff7f57c8c81791c040f801dd4fdc		
Warnings:					
Information:					
Total Files Size (in bytes):			573421		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/148,752	01/07/2014	Steven Wayne Goldstein	PRS-110US2

117822
Personics Holdings, LLC.
4800 N Federal Hwy. Ste A205
Boca Raton, FL 33431

CONFIRMATION NO. 2918
MISCELLANEOUS NOTICE



Date Mailed: 10/17/2017

A communication which cannot be delivered in electronic form has been mailed to the applicant.



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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/148,752	01/07/2014	Steven Wayne Goldstein	PRS-110US2

CONFIRMATION NO. 2918

117822
 Personics Holdings, LLC.
 4800 N Federal Hwy. Ste A205
 Boca Raton, FL 33431



Cc: STATON TECHIYA LLC
 16193 BRIDLEWOOD CIRCLE
 DELRAY BEACH, FL 33445

Date Mailed: 10/17/2017

DENIAL OF REQUEST FOR POWER OF ATTORNEY

The request for Power of Attorney filed 10/12/2017 is acknowledged. However, the request cannot be granted at this time for the reason stated below.

- ☐ The Power of Attorney you provided did not comply with the new Power of Attorney rules that became effective on June 25, 2004. See 37 CFR 1.32.
- ☐ The revocation is not signed by the applicant, the assignee of the entire interest, or one particular principal attorney having the authority to revoke.
- ☒ The Power of Attorney is from an assignee and the Certificate required by 37 CFR 3.73(c) has not been received.
- ☐ The person signing for the assignee has omitted their empowerment to sign on behalf of the assignee.
- ☐ The inventor(s) is without authority to appoint attorneys since the assignee has intervened as provided by 37 CFR 3.71.
- ☐ The signature(s) of _____, a co-inventor in this application, has been omitted. The Power of Attorney will be entered upon receipt of confirmation signed by said co-inventor(s).
- ☐ The person(s) appointed in the Power of Attorney is not registered to practice before the U.S. Patent and Trademark Office.
- ☐ Only one Customer Number can be designated for the Power of Attorney in an application. The Customer Number that was captured is the first Customer Number provided on the Power of Attorney document.
- ☐ A request under 37 CFR 1.48 to add an inventor was granted in this application, however, no power of attorney consistent with the power of attorney granted by the originally named inventive entity has been



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received. Thus, the addition of the inventor has resulted in the loss of power of attorney in the application. See 37 CFR 1.32(e).

- ☐ The power of attorney has not been accepted because the party who is giving power of attorney has not been identified. Power of attorney may only be signed by the applicant for patent (37 CFR 1.42) or the patent owner. A patent owner who was not the applicant must appoint any power of attorney in compliance with 37 CFR 3.71 and 3.73. See 37 CFR 1.32(b)(4).
- ☐ The power of attorney from the inventors has not been accepted because it is a copy from a prior national application for which benefit is claimed and the continuing application names an inventor who was not named as an inventor in the prior application.
- ☐ The power of attorney from the inventors has not been accepted because the power of attorney must be signed by the applicant for patent. See 37 CFR 1.32(b)(4).
- ☐ Any request to correct or update the name of the applicant must include an application data sheet (ADS) in compliance with 37 CFR 1.76 specifying the correct or updated name of the applicant in the applicant information section. Any request to change the applicant after an original applicant has been specified under 37 CFR 1.46(b) must include a new ADS in compliance with 37 CFR 1.76 specifying the applicant in the applicant information section and comply with 37 CFR 3.71 and 3.73. See 37 CFR 1.46(c).

Any inquiries regarding this notice should be directed to the Application Assistance Unit at 571-272-4200.

A handwritten signature, likely of an official from the Application Assistance Unit, is written over a horizontal line.

Application Assistance Unit
571-272-4200

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT - POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS	Patent Number	8,805,692
	Issue Date	08-12-2014
	First Named Inventor	Steven Wayne Goldstein
	Title	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD
	Attorney Docket No.	PRS-110U62

I hereby revoke all previous powers of attorney given in the above-identified patent.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint Practitioner(s) associated with the Customer Number identified in the box at right as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

150139

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

Please recognize or change the correspondence address for the above-identified patent to:

☒ The address associated with the above-identified Customer Number.

OR

☐ The address associated with the Customer Number identified in the box at right:

OR

☐ Firm or

Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the:

☐ Applicant.

OR

☒ Patent owner.

Statement under 37 CFR 1.73(c) (Form PTO/AIA/96) submitted herewith or filed on _____

SIGNATURE of Applicant or Patent Owner

Signature

Name

Date

Telephone

Title and Company

NOTE: Signatures of all the applicants or patent owners of the entire interest or their representative(s) are required. If more than one signature is required, submit multiple forms, check the box below, and identify the total number of forms submitted in the blank below.

☐ A total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public, which is to update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-5199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: STATON TECHIYA, LLCApplication No./Patent No.: 8805692Filed/Issue Date: 08/12/2014Titled: PERSONAL AUDIO ASSISTANT DEVICE AND METHODSTATON TECHIYA, LLC, a corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose one of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose one of options A or B below):

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.
- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:
1. From: 01/06/2013 To: 12/31/2013
- The document was recorded in the United States Patent and Trademark Office at
Reel 031959, Frame 0640, or for which a copy thereof is attached.
2. From: 12/31/2013 To: 12/31/2013
- The document was recorded in the United States Patent and Trademark Office at
Reel 032189, Frame 0304, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: 12/31/2013 To: 10/17/2014

The document was recorded in the United States Patent and Trademark Office at
Reel 034170, Frame 0771, or for which a copy thereof is attached.

4. From: 10/17/2014 To: 06/20/2017

The document was recorded in the United States Patent and Trademark Office at
Reel 034170, Frame 0933, or for which a copy thereof is attached.

5. From: 06/20/2017 To: 06/20/2017

The document was recorded in the United States Patent and Trademark Office at
Reel 043392, Frame 0961, or for which a copy thereof is attached.

6. From: 06/20/2017 To: 06/21/2017

The document was recorded in the United States Patent and Trademark Office at
Reel 042992, Frame 0493, or for which a copy thereof is attached.

☒ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Gary Hoshizaki/

10/11/2017

Signature

Gary Hoshizaki

Date

Patent Agent

Printed or Typed Name

Title or Registration Number

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Supplemental Sheet - additional documents in the chain of title are listed below.

A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

7. From: 06/21/2017 To: 06/21/2017
The document was recorded in the United States Patent and Trademark Office at
Reel 043393 , Frame 0001 , or for which
a copy thereof is attached.
8. From: 06/21/2017 To: Present
The document was recorded in the United States Patent and Trademark Office at
Reel 042992 , Frame 0524 , or for which
a copy thereof is attached.
9. From: To:
The document was recorded in the United States Patent and Trademark Office at
Reel , Frame , or for which
a copy thereof is attached.

Electronic Acknowledgement Receipt

EFS ID:	30703267
Application Number:	14148752
International Application Number:	
Confirmation Number:	2918
Title of Invention:	PERSONAL AUDIO ASSISTANT DEVICE AND METHOD
First Named Inventor/Applicant Name:	Steven Wayne Goldstein
Customer Number:	117822
Filer:	Gary Wesley Hoshizaki
Filer Authorized By:	
Attorney Docket Number:	PRS-110US2
Receipt Date:	19-OCT-2017
Filing Date:	07-JAN-2014
Time Stamp:	14:00:38
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	POA_Issued3V1.pdf	447599	no	1
			4a5dd79ec4c6339cc86752cf496d97a6c9de5e35		

Warnings:

Information:					
2	Assignee showing of ownership per 37 CFR 3.73	aia0096_373_after_V1.pdf	96974	no	3
			739fb8305ee3f524749128fab6b41c42f6c5c02d		
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73	SupplementalSheetAfter2V1.pdf	28848	no	1
			48b5c5048e9ff7f57c8c81791c040f801dd4fdc		
Warnings:					
Information:					
Total Files Size (in bytes):			573421		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/148,752	01/07/2014	Steven Wayne Goldstein	PRS-110US2

CONFIRMATION NO. 2918

POA ACCEPTANCE LETTER

150139
Staton Techiya LLC
16193 Bridlewood Circle
Delray Beach, FL 33445



Date Mailed: 10/30/2017

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/19/2017.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/sleutchit/



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APPLICATION NUMBER	PATENT NUMBER	GROUP ART UNIT	REQUEST ID
14/148,752	8805692	2657	60538

PAIR Correspondence Address/Fee Address Change

The following fields have been changed to Customer Number 154598 on 03/29/2018 via Private PAIR in view of the certification copied below that authorized the change.

- Maintenance Fee Address

The address for Customer Number 154598 is:

154598

Staton Techiya, LLC

John Keady

16193 Bridlewood Circle

Delray Beach, FL 33445

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

An attorney or Agent of Record registered to practice before the Patent and Trademark Office who has been given power of attorney in this application

Signature:	/John Keady/
Name:	John Keady
Registration Number:	56389



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APPLICATION NUMBER	PATENT NUMBER	GROUP ART UNIT	REQUEST ID
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• Correspondence Address

The address for Customer Number 154598 is:

154598

Staton Techiya, LLC

John Keady

16193 Bridlewood Circle

Delray Beach, FL 33445

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

An attorney or Agent of Record registered to practice before the Patent and Trademark Office who has been given power of attorney in this application

Signature:	/John Keady/
Name:	John Keady
Registration Number:	56389