

35. (New) The headphone assembly of claim 30, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.
36. (New) The headphone assembly of claim 31, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.
37. (New) The headphone assembly of claim 32, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.
38. (New) The headphone assembly of claim 33, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.
39. (New) The headphone assembly of claim 12, wherein the headphone assembly is for receiving firmware upgrades transmitted from the remote, network-connected server transmits .

40. (New) The headphone assembly of claim 12, wherein each of the first and second earphones comprise earbuds.

41. (New) The headphone assembly of claim 2, wherein:
the wireless circuit comprises first and second wireless circuit;
the first wireless circuit is in the first earphone; and
the second wireless circuit is in the second earphone.

42. (New) The headphone assembly of claim 40, wherein each of the first and second earphones comprises:
a body portion that sits at least partially in an ear of the user when the headphone assembly is worn by the user; and
an elongated portion that extends from the body portion.

43. (New) The headphone assembly of claim 42, wherein at least one of the first and second earphones is charged by a docking station.

44. (New) The headphone assembly of claim 43, wherein:
in a first audio play mode, the first and second earphones play audio content stored on a mobile, digital audio player and transmitted to the headphone assembly from the mobile, digital audio player via the one or more ad hoc wireless communication links; and
in a second audio play mode, the earphones play audio content streamed from the remote, network-connected server.

45. (New) The headphone assembly of claim 43, wherein the processor is for:
processing audible utterances by the user picked up by the microphone in response to activation of the microphone by the user; and
transmitting a communication based on the audible utterances via the one or more ad hoc wireless communication links.

46. (New) The headphone assembly of claim 44, wherein the processor is for:

processing audible utterances by the user picked up by the microphone in response to activation of the microphone by the user; and
transmitting a communication based on the audible utterances via the one or more ad hoc wireless communication links.

47. (New) The headphone assembly of claim 41, wherein each of the first and second earphones further comprises:

an adjustable, curved hanger bar that sits upon an upper external curvature of the user's ear, behind an upper portion of an auricula of the user's ear, when the headphone assembly is worn by the user; and

a body connected to the hanger bar, wherein the earphone extends from the body into the user's ear when the headphone assembly is worn by the user.

48. (New) The headphone assembly of claim 47, wherein at least one of the first and second earphones is charged by a docking station.

49. (New) The headphone assembly of claim 47, wherein:

the mobile, digital audio player is a first digital audio source;

the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source

50. (New) The headphone assembly of claim 2, wherein upon activation of the microphone by the user, data are transmitted about the headphone assembly to a remote device.

51. (New) The headphone assembly of claim 42, wherein:

the mobile, digital audio player is a first digital audio source;

the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a

signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

52. (New) The headphone assembly of claim 44, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

53. (New) The headphone assembly of claim 45, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

54. (New) The headphone assembly of claim 41, wherein the headphone assembly is for receiving firmware upgrades transmitted from the remote, network-connected server.

55. (New) The headphone assembly of claim 2, wherein the headphone assembly further comprises first and second integrated circuits, wherein the first integrated circuit comprises the wireless communication circuit and the second integrated circuit, which is separate from the first integrated circuit, comprises the processor.

56. (New) The headphone assembly of claim 2, wherein each of the first and second earphones further comprises:
an adjustable, curved hanger bar that sits upon an upper external curvature of the user's ear, behind an upper portion of an auricula of the user's ear, when the headphone assembly is worn by the user; and

a body connected to the hanger bar, wherein the earphone extends from the body into the user's ear when the headphone assembly is worn by the user.

57. (New) The headphone assembly of claim 2, wherein each of the first and second earphones comprise earbuds.

58. (New) The headphone assembly of claim 2, wherein each of the first and second earphones comprise on-ear speaker elements.

59. (New) The headphone assembly of claim 2, wherein each of the first and second earphones comprise over-ear speaker elements.

60. (New) The headphone assembly of claim 47, wherein the headphone assembly is for receiving firmware upgrades transmitted from the remote, network-connected server

REMARKS

In this preliminary amendment, Applicant has canceled original claim 1 without prejudice or disclaimer and added new claims 2-60. Support for the new claims may be found throughout the application as originally filed; no new matter is added. New claims 2-60 are similar to the claims of U.S. Patent 10, 206,025 (“the ‘025 Patent”), to which the Subject Application claims priority. To expedite prosecution, Applicant has filed a terminal disclaimer referencing the ‘025 Patent.

Applicant is paying the requisite fees for the additional claims and the Office is authorized to charge any additionally needed fees for consideration of this amendment to Account No. 02-1818. To the extent that an extension of time is required and is not otherwise addressed, Applicant hereby petitions for the same and requests that the fee be charged to Deposit Account 02-1818.

A representative of the Office is invited to contact the undersigned with any questions regarding this application or this preliminary amendment.

Respectfully submitted,

Date: April 8, 2019

/Mark G. Knedeisen/
Mark G. Knedeisen
Reg. No. 42,747

K&L GATES LLP
K&L Gates Center
210 Sixth Ave.
Pittsburgh, Pennsylvania 15222

Ph. (412) 355-6342
Fax (412) 355-6501
email: mark.knedeisen@klgates.com

Electronic Patent Application Fee Transmittal

Application Number:	16375879			
Filing Date:				
Title of Invention:	SYSTEM WITH WIRELESS EARPHONES			
First Named Inventor/Applicant Name:	Michael J. Koss			
Filer:	Mark G. Knedeisen/Amanda Kernan			
Attorney Docket Number:	080188PCTUSCON10			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	2202	39	50	1950
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
STATUTORY OR TERMINAL DISCLAIMER	2814	1	160	160
Total in USD (\$)				2110

Electronic Acknowledgement Receipt

EFS ID:	35651155
Application Number:	16375879
International Application Number:	
Confirmation Number:	1056
Title of Invention:	SYSTEM WITH WIRELESS EARPHONES
First Named Inventor/Applicant Name:	Michael J. Koss
Customer Number:	26285
Filer:	Mark G. Knedeisen/Amanda Kernan
Filer Authorized By:	Mark G. Knedeisen
Attorney Docket Number:	080188PCTUSCON10
Receipt Date:	08-APR-2019
Filing Date:	
Time Stamp:	12:04:14
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$2110
RAM confirmation Number	040819INTEFSW00012011021818
Deposit Account	021818
Authorized User	Amanda Kernan

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer Filed	4-8-2019-080188PCTUSCON10-Terminal-Disclaimer.pdf	125123 33c061cca66947a1a4dde7b61bc427e4f44b6a34	no	1
Warnings:					
Information:					
2	Miscellaneous Incoming Letter	4-8-2019-Amendment-transmittal.pdf	145410 b9db1e895973c186193d3a835598256899d89381	no	4
Warnings:					
Information:					
3		4-8-2019-080188PCTUSCON10-Preliminary-Amendment.pdf	131561 d2691c4efba24902c05a245ee7fcf224bb18511	yes	14
Multipart Description/PDF files in .zip description					
Document Description			Start	End	
Preliminary Amendment			1	1	
Claims			2	13	
Applicant Arguments/Remarks Made in an Amendment			14	14	
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	31951 8ee9ffa9858fca85bcdce27897683e7aa9e348945	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			434045		

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.

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.

TERMINAL DISCLAIMER TO OBTAIN A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	Docket Number (Optional) 080188PCTUSCON10
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In re Application of: Koss Corporation
Application No.: 16/375,879
Filed: April 5, 2019
For: SYSTEM WITH WIRELESS EARPHONES

The applicant, Koss Corporation, owner of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of **prior patent** No. 10,206,025 as the term of said **prior patent** is presently shortened by any terminal disclaimer. The applicant hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the applicant does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. The undersigned is the applicant. If the applicant is an assignee, the undersigned is authorized to act on behalf of the assignee.

I hereby acknowledge that any willful false statements made are punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

2. The undersigned is an attorney or agent of record. Reg. No. 42,747

_____ /Mark G. Knedeisen/ Signature	_____ April 8, 2019 Date
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_____ Mark G. Knedeisen Typed or printed name

_____ Attorney Title	_____ 412-355-6342 Telephone Number
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- Terminal disclaimer fee under 37 CFR 1.20(d) included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.321. 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.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Koss Corporation) **Examiner:** TBD
)
Inventor(s): Michael J. Koss, et al.) **Art Unit:** TBD
)
Application No.: 16/375,879) **Atty. Docket No.** 080188PCTUSCON10
)
Filing Date: April 8, 2019) **Conf. No.:** 1056
Title: SYSTEM WITH WIRELESS EARPHONES

VIA EFS-Web

April 8, 2019

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT TRANSMITTAL

1. Transmitted herewith is an amendment for this application.

STATUS

2. Applicant is

A statement that this filing is by a small entity is hereby asserted in accordance with the rule change effective September 8, 2000, 65 Fed. Reg. 54603.

other than a small entity.

502173071

EXTENSION OF TERM

NOTE: "Extension of Time in Patent Cases (Supplement Amendments) - If a timely and complete response has been filed after a Non-Final Office Action, an extension of time is not required to permit filing and/or entry of an additional amendment after expiration of the shortened statutory period.

If a timely response has been filed after a Final Office Action, an extension of time is required to permit filing and/or entry of a Notice of Appeal or filing and/or entry of an additional amendment after expiration of the shortened statutory period unless the timely-filed response placed the application in condition for allowance. Of course, if a Notice of Appeal has been filed within the shortened statutory period, the period has ceased to run." Notice of December 10, 1985 (1061 O.G. 34-35).

NOTE: See 37 CFR 1.645 for extensions of time in interference proceedings, and 37 CFR 1.550(c) for extensions of time in reexamination proceedings.

3. The proceedings herein are for a patent application and the provisions of 37 CFR 1.136 apply.

(complete (a) or (b), as applicable)

(a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

<u>Extension (months)</u>	<u>Fee for other than small entity</u>	<u>Fee for small entity</u>
<input type="checkbox"/> one month	\$ 200.00	\$ 100.00
<input type="checkbox"/> two months	\$ 600.00	\$ 300.00
<input type="checkbox"/> three months	\$1,400.00	\$ 700.00
<input type="checkbox"/> four months	\$2,200.00	\$ 1,100.00

Fee: \$

If an additional **extension** of time is required, please consider this a petition therefor.

(check and complete the next item, if applicable)

An extension for _____ months has already been secured and the fee paid therefor of \$_____ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request **\$**

OR

(b) Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

FEE FOR CLAIMS

4. The fee for claims (37 CFR 1.16(b)-(d) has been calculated as shown below:

	(Col. 1)	(Col. 2)	(Col. 3)	SMALL ENTITY			OTHER THAN A SMALL ENTITY	
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NO PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDIT. FEE	OR	RATE	ADDIT. FEE
TOTAL	59•	MINUS 20••	=39	X50=	\$1,950		X100=	\$0
INDEP.	1•	MINUS 3•••	=0	X230=	\$0		X460=	\$0
<input type="checkbox"/>	FIRST PRESENTATION OF MULTIPLE DEP. CLAIM			+410=	\$0		+820=	\$0
				TOTAL ADDIT. FEE	\$1,950	OR	TOTAL ADDIT. FEE	\$0

- If the entry in Col. 1 is less than entry in Col. 2, write “)” in Col. 3.
- If the “Highest No. Previously Paid for” IN THIS SPACE is less than 20, enter “20.”
- If the “Highest No. Previously Paid for” IN THIS SPACE is less than 3, enter “3.”
The “Highest No. Previously Paid for” (Total or indep.) is the highest number found in the appropriate box in Col. 1 of a prior amendment or the number of claims originally filed.

WARNING “After final rejection or action (§ 1.113) amendments may be made cancelling claims or complying with any requirement of form which has been made.” 37 CFR § 1.116(a) (emphasis added).

Complete (c) or (d), as applicable)

(c) No additional fee for claims is required.

OR

(d) Total additional fee for claims required \$ 1,950.00

FEE PAYMENT

5. Attached is a check in the sum of \$ _____

Charge Account No. 02-1818 the sum of \$1,950.00

FEE DEFICIENCY

NOTE: If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to charge the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, (1065 O.G. 31-33).

- 6. If any additional extension and/or fee is required, charge Account No. 02-1818.

AND/OR

- 7. If any additional fee for claims is required, charge Account No. 02-1818.

/Mark G. Knedeisen/
SIGNATURE OF ATTORNEY

Reg. No.: 42,747
Tel. No.: 412-355-6342
Customer No. 26285

Mark G. Knedeisen
(type or print name of attorney)
K&L Gates LLP
P.O. Address
K&L Gates Center
210 Sixth Avenue
Pittsburgh, PA 15222-2613



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

Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 16/375,879, 04/05/2019, 2649, 2735, 080188PCTUSCON10, 59, 1

CONFIRMATION NO. 1056

FILING RECEIPT

26285
K&L GATES LLP-Pittsburgh
210 SIXTH AVENUE
PITTSBURGH, PA 15222-2613



Date Mailed: 04/22/2019

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)

- Michael J. Koss, Milwaukee, WI;
Michael J. Pelland, Princeton, WI;
Michael Sagan, Fairfield, CA;
Steven R. Reckamp, Crystal Lake, IL;
Gregory J. Hallingstad, Deforest, WI;
Jeffery K. Bovee, Sterling, IL;
Morgan J. Lowery, Deforest, WI;

Applicant(s)

Koss Corporation, Milwaukee, WI;

Power of Attorney: The patent practitioners associated with Customer Number 26285

Domestic Priority data as claimed by applicant

This application is a CON of 16/182,927 11/07/2018
which is a CON of 15/962,305 04/25/2018 PAT 10206025
which is a CON of 15/650,362 07/14/2017 PAT 9986325
which is a CON of 15/293,785 10/14/2016 PAT 9729959
which is a CON of 15/082,040 03/28/2016 PAT 9497535
which is a CON of 14/695,696 04/24/2015 PAT 9438987
which is a CON of 13/609,409 09/11/2012 PAT 9049502
which is a CON of 13/459,291 04/30/2012 PAT 8571544
which is a CON of 12/936,488 12/20/2010 PAT 8190203
which is a 371 of PCT/US2009/039754 04/07/2009
which claims benefit of 61/123,265 04/07/2008

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.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 04/18/2019

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/375,879**

Projected Publication Date: 08/01/2019

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

SYSTEM WITH WIRELESS EARPHONES

Preliminary Class

455

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).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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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.

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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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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number
16/375,879

APPLICATION AS FILED - PART I

(Column 1)		(Column 2)	SMALL ENTITY		OR	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	75		N/A	
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	330		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	380		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	59 minus 20 = *	39	x 50 =	1950	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 = *		x 230 =	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	2735		TOTAL	

APPLICATION AS AMENDED - PART II

AMENDMENT A	(Column 1)	(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
Total (37 CFR 1.16(i))	*	Minus **	=	x	=	OR	x	=
Independent (37 CFR 1.16(h))	*	Minus ***	=	x	=	OR	x	=
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	
AMENDMENT B	(Column 1)	(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
Total (37 CFR 1.16(i))	*	Minus **	=	x	=	OR	x	=
Independent (37 CFR 1.16(h))	*	Minus ***	=	x	=	OR	x	=
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 NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/375,879	04/05/2019	Michael J. Koss	080188PCTUSCON10	1056
26285	7590	06/28/2019	EXAMINER	
K&L GATES LLP-Pittsburgh 210 SIXTH AVENUE PITTSBURGH, PA 15222-2613			DOAN, KIET M	
			ART UNIT	PAPER NUMBER
			2641	
			NOTIFICATION DATE	DELIVERY MODE
			06/28/2019	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):

USpatentmail@klgates.com

Office Action Summary	Application No. 16/375,879	Applicant(s) Koss et al.	
	Examiner KIET M DOAN	Art Unit 2641	AIA (FITF) 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 04/05/2019.
 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) 1-60 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) 1-60 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 04/05/2019 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) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 3) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date _____. | 4) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Notice of Pre-AIA or AIA Status

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

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 04/05/2019. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

The drawings were received on 04/05/2019 these drawing are acceptable by the examiner.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 2 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 14 and 30 of US Patent 8,190,203 B2; claims 1 and 5-6 of US Patent 8,571, 544 B2; claims 1, 10 and 13 of US Patent 9,049,502 B2; claim 1 of US Patent 8,655,420 B1; claim 1 of US Patent 9,438,987 B2; claims 1, 8 and 11 of US Patent 9,497,535 B1; claims 1-3 of US Patent 9,729,959 B2; claims 1-3 of US Patent 9,986,325 B2; claim 1 of US Patent 10,206,025 B2 . Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 2 limitation are found in claims 1, 14 and 30 of US Patent 8,190,203 B2; claims 1 and 5-6 of US Patent 8,571, 544 B2; claims 1, 10 and 13 of US Patent 9,049,502 B2; claim 1 of US Patent 8,655,420 B1; claim 1 of US Patent 9,438,987 B2; claims 1, 8 and 11 of US Patent 9,497,535 B1; claims 1-3 of US Patent 9,729,959 B2; claims 1-3 of US Patent 9,986,325 B2; claim 1 of US Patent 10,206,025 B2 with obvious wording variation such as they all sets of claims are drawn to first and second earphones, wherein each of the first and second earphones comprises an acoustic transducer; an antenna for receiving wireless signals and playing digital audio content received wirelessly by the headphone.

It is important to note that claimed features recited in claims 1, 14 and 30 of US Patent 8,190,203 B2; claims 1 and 5-6 of US Patent 8,571,544 B2; claims 1, 10 and 13 of US Patent 9,049,502 B2; claim 1 of US Patent 8,655,420 B1; claim 1 of US Patent 9,438,987 B2; claims 1, 8 and 11 of US Patent 9,497,535 B1; claims 1-3 of US Patent

9,729,959 B2; claims 1-3 of US Patent 9,986,325 B2; claim 1 of US Patent 10,206,025 B2 are more specific than claimed features recited in claim 2 of the instant application. Hence, the scope of claims of present application is now broader than U.S. Patent No. 8,190,203; 8,571, 544; 9,049,502; 8,655,420; 9,438,987; 9,497,535; 9,729,959; 9,986,325 and 10,206,025

Many decisions support the fact that a broad or generic claim is obvious from a specific claim, i.e., an obvious variation. See *In re Van Ornum and Stang*, 214 USPQ 761 (CCPA 1982); *In re Goodman* (CA FC) 29 USPQ2d 2010 (12/3/1993); *In re Vogel and Vogel*; 164 USPQ 619 (CCPA 1970); *In re Berg* (CA FC) 46 USPQ2d 1226 (3/30/1998); *Eli Lilly and Co. v. Barr Laboratories Inc.*, 58 USPQ2d 1865 (CA FC 2001). It is well settled that omission of an element and its function in a combination is an obvious expedient if the remaining elements perform the same functions as before. This notion is supported by *In re KARLSON*, 136 USPQ 184 (1963); *In re Nelson*, 95 USPQ 82 (CCPA 1952); and *In re Eliot*, 25 USPQ 111 (CCPA 1935).

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, 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 2, 3, 7-10 and 12-23 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Lair et al. (US 2009/0029743 A9) in view of Rezvani (US 2007/0136446 A1).

Regarding claim 2. Lair teaches a headphone assembly comprising:

first and second earphones, wherein each of the first and second earphones comprises an acoustic transducer; and an antenna for receiving wireless signals from a mobile, digital audio player via one or more ad hoc wireless communication links (Paragraphs 0030] fig.1B illustrate and teach the headset 108 comprises an acoustic transducer, an antenna 106 receiving wireless signals from a mobile, digital audio player/communication device 102);

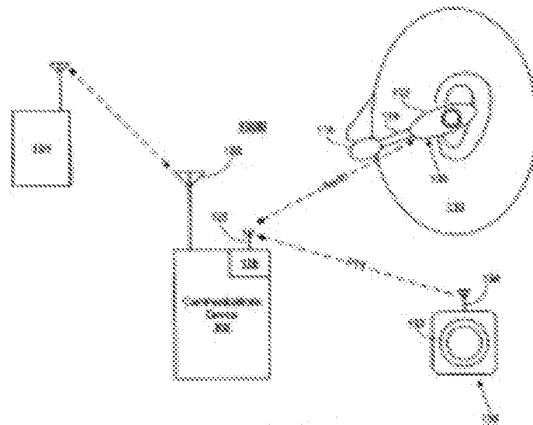
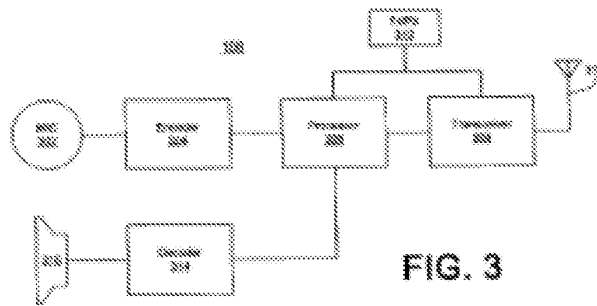


FIG. 1B

a wireless communication circuit connected to the antenna, wherein the wireless communication circuit is for receiving and transmitting wireless signals to and from the headphone assembly; a processor (Paragraph [0043], fig.3 illustrate and teach headset contain antenna 310 for wireless communication and processor 306);



a rechargeable battery for powering the headphone assembly (Paragraph [0058] teach induction link for rechargeable battery for powering the headphone); and a microphone for picking up utterances by a user of the headphone assembly (Paragraph [0028] teach headset contain microphone for input audio information from user); and wherein the headphone assembly is configured to play, by the first and second earphones, digital audio content transmitted by the mobile, digital audio player via the one or more ad hoc wireless communication links (Paragraphs [0028], [0030], [0043], [0045-0046] teach headset received audio/video from the communication device 102).

Lair is silent on

wherein the processor is configured to, upon activation of a user-control of the headphone assembly, initiate transmission of a request to a remote, network-connected server that is in wireless communication with the mobile, digital audio player.

In an analogous art, Rezvani teaches

wherein the processor is configured to, upon activation of a user-control of the headphone assembly, initiate transmission of a request to a remote, network-connected server that is in wireless communication with the mobile, digital audio player

(Paragraphs [0055-0057], [0062] teach headset request audio from WPM server, wherein server provide music to headset).

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention was made to modify Lair with Rezvani's system such that earphones comprises an acoustic transducer; and an antenna for receiving wireless signals/audio, a rechargeable battery, a microphone for picking up utterances by a user of the headphone and initiate transmission of a request to a remote, network-connected server that is in wireless communication with the mobile, digital audio player in order to provide a multiple quality music to the headset and headset does not need to have storage to store music/songs.

Regarding claims 3, 13, 22, 31, 44. The combination of Lair and Rezvani teach the headphone assembly of claim 2, Lair teaches wherein: in a first audio play mode, the first and second earphones play audio content stored on a mobile, digital audio player and transmitted to the headphone assembly from the mobile, digital audio player via the one or more ad hoc wireless communication links (Paragraphs 0030] fig.1B Illustrate and described); and

Rezvani teach in a second audio play mode, the earphones play audio content streamed from the remote, network-connected server (Paragraph [0058]).

Regarding claims 4-5, 14-15, 23-24, 32-33, 45-46. The combination of Lair and Rezvani teach the headphone assembly of claim 2, Lair teaches wherein the processor is for: processing audible utterances by the user picked up by the microphone in response to activation of the microphone by the user; and transmitting a communication based on the audible utterances via the one or more ad hoc wireless communication links (Paragraphs [0028], [0030], [0043]).

Regarding claims 6, 16, 25, 34, 50. The combination of Lair and Rezvani teach the headphone assembly of claim 2, Lair teaches wherein upon activation of the microphone by the user, data are transmitted about the headphone assembly to a remote device (Paragraphs [0028], [0048]).

Regarding claims 7-10, 17-20, 26-29, 35-38, 49, 51-53. The combination of Lair and Rezvani teach the headphone assembly of claim 2, Lair teaches wherein: the mobile, digital audio player is a first digital audio source (fig.1 #102); the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source (Paragraphs [0008], [0032]).

Regarding claims 11, 39, 54 and 60. The combination of Lair and Rezvani teach the headphone assembly of claim 2, Rezvani teach wherein the headphone assembly is for receiving firmware upgrades transmitted from the remote, network-connected server (Paragraph [0069]).

Regarding claims 12. The combination of Lair and Rezvani teach the headphone assembly of claim 3, Lair teaches wherein: the wireless communication circuit is located in the first earphone; and the headphone assembly further comprises a connection wire between the first and second earphones to carry the received digital audio content from the first earphone to the second earphone (Paragraphs [0041-0042]).

Regarding claims 21. The combination of Lair and Rezvani teach the headphone assembly of claim 12, Lair teaches wherein the headphone assembly further comprises a headband, and wherein the headband carries the connection wire (Paragraph [0042]).

Regarding claims 30, 47, 30. The combination of Lair and Rezvani teach the headphone assembly of claim 12, Lair teaches wherein each of the first and second earphones further comprises: an adjustable, curved hanger bar that sits upon an upper external curvature of the user's ear, behind an upper portion of an auricula of the user's ear, when the headphone assembly is worn by the user; and a body connected to the hanger bar, wherein the earphone extends from the body into the user's ear when the headphone assembly is worn by the user (Paragraph [0042, fig. 2D and fig.2e Illustrate and described).

Regarding claims 40 and 57. The combination of Lair and Rezvani teach the headphone assembly of claim 12, Lair teaches wherein each of the first and second earphones comprise earbuds (Paragraph [0042]).

Regarding claims 41, 55. The combination of Lair and Rezvani teach the headphone assembly of claim 2, Lair teaches wherein: the wireless circuit comprises first and second wireless circuit; the first wireless circuit is in the first earphone; and the second wireless circuit is in the second earphone (Paragraphs [0042-0043]).

Regarding claim 42. The combination of Lair and Rezvani teach the headphone assembly of claim 40, Lair teaches wherein each of the first and second earphones comprises: a body portion that sits at least partially in an ear of the user when the headphone assembly is worn by the user; and an elongated portion that extends from the body portion (fig.2D, 2E,, 2F and 2G Illustrate and described).

Regarding claims 58 and 59. The combination of Lair and Rezvani teach the headphone assembly of claim 2, Lair teaches wherein each of the first and second earphones comprise on-ear/over-ear speaker elements (Paragraph [0028], [0034])

Claims 43 and 48 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Lair et al. (US 2009/0029743 A9) in view of Rezvani (US 2007/0136446 A1) and further view of Goldman et al. (US 2011/0275323 A1).

Regarding claims 43 and 48. The combination of Lair and Rezvani teach the headphone assembly of claim 42, but is silent on wherein at least one of the first and second earphones is charged by a docking station.

In an analogous art, Goldman teaches wherein at least one of the first and second earphones is charged by a docking station (Paragraph [0058] fig.1 Illustrate and teach headset base unit as read on docking station).

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention was made to modify Lair and Rezvani with Goldman's system such that wherein at least one of the first and second earphones is charged by a docking station in order to provide saving cost by recharging the earphone and without using battery.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIET M DOAN whose telephone number is (571)272-7863. The examiner can normally be reached on M-F 9:30am-5:30pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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.

/KIET M DOAN/
Primary Examiner, Art Unit 2641

Notice of References Cited	Application/Control No. 16/375,879	Applicant(s)/Patent Under Reexamination Koss et al.	
	Examiner KIET M DOAN	Art Unit 2641	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20090029743-A9	01-2009	Lair; John	H04M1/6066	455/569.1
*	B	US-20070136446-A1	06-2007	Rezvani; Behrooz	H04B7/0871	709/219
*	C	US-20110275323-A1	11-2011	Goldman; Tomasz	H04M1/04	455/41.2
	D					
	E					
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC 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.

<i>Search Notes</i> 	Application/Control No. 16/375,879	Applicant(s)/Patent Under Reexamination Koss et al.
	Examiner KIET M DOAN	Art Unit 2641


CPC - Searched*		
Symbol	Date	Examiner
H04R2201/107	06/24/2019	KD
H04R3/00	06/24/2019	KD

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
455	466	06/24/2019	KD
	41.2	06/24/2019	KD
	556.1	06/24/2019	KD
	421	06/24/2019	KD
	569.1	06/24/2019	KD
	575.2	06/24/2019	KD
	553.1	06/24/2019	KD
381	58	06/24/2019	KD
	309	06/24/2019	KD
	74	06/24/2019	KD

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.


/KIET M DOAN/ Primary Examiner, Art Unit 2641	
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<i>Search Notes</i> 	Application/Control No. 16/375,879	Applicant(s)/Patent Under Reexamination Koss et al.
	Examiner KIET M DOAN	Art Unit 2641

Search Notes		
Search Notes	Date	Examiner
Inventor search	06/24/2019	KD
East search	06/24/2019	KD
(earphone earcup headset headphone earbud (head near phone) (head near set)) with acoustic\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 and @ad<"20101010"	06/24/2019	KD
(earphone earcup headset headphone earbud (head near phone) (head near set)) with (transduc\$3 acoustic\$1) and (earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with request\$3 with (server\$1 (base near station)) and @ad<"20101010"	06/24/2019	KD
((H04M1/6066 OR H04M1/2535 OR H04M1/72558 OR H04R2201/107 OR H04R25/554 OR H04R3/00 OR H04R5/033).CPC.)	06/24/2019	KD
((H04W4/70 OR H04W4/80 OR H04W8/005 OR H04W88/02 OR G06F3/167 OR G06F17/28 OR G06F17/27 OR G06F1/1605 OR H04B5/02 OR H04L2012/2841 OR H04L2012/2849 OR H04L65/1069).CPC.)	06/24/2019	KD


Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
381	57	06/24/2019	KD

/KIET M DOAN/ Primary Examiner, Art Unit 2641	
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<i>Index of Claims</i> 	Application/Control No. 16/375,879	Applicant(s)/Patent Under Reexamination Koss et al.
	Examiner KIET M DOAN	Art Unit 2641

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS									
<input type="checkbox"/> Claims renumbered in the same order as presented by applicant <input type="checkbox"/> CPA <input type="checkbox"/> T.D. <input type="checkbox"/> R.1.47									
CLAIM		DATE							
Final	Original	06/24/2019							
	1	✓							
	2	✓							
	3	✓							
	4	✓							
	5	✓							
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	39	✓							
	40	✓							
	41	✓							
	42	✓							

<i>Index of Claims</i> 	Application/Control No. 16/375,879	Applicant(s)/Patent Under Reexamination Koss et al.
	Examiner KIET M DOAN	Art Unit 2641

CLAIM		DATE								
Final	Original	06/24/2019								
	43	✓								
	44	✓								
	45	✓								
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	47	✓								
	48	✓								
	49	✓								
	50	✓								
	51	✓								
	52	✓								
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	54	✓								
	55	✓								
	56	✓								
	57	✓								
	58	✓								
	59	✓								
	60	✓								

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Substitute for form 1449/PTO				Complete if Known	
				Application Number	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Filing Date	04/05/2019
				First Named Inventor	Michael J. Koss
				Art Unit	
				Examiner Name	Kiet Doan
				Attorney Docket Number	080188PCTUSCON10
Sheet	1	of	4		

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
		2004/0107271 A1	06-03-2004	Ahn et al.	
		2005/0064853 A1	03-25-2005	Radpour	
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		5,784,685 A	07-21-1998	Stanford et al.	
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		6,671,494 B1	12-30-2003	James	
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		7,099,370 B2	08-29-2006	Takahashi	

Examiner Signature	/KIET M DOAN/	Date Considered	06/24/2019
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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 2 hours 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, 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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				Filing Date	04/05/2019
				First Named Inventor	Michael J. Koss
				Art Unit	
				Examiner Name	Kiet doan
Sheet	2	of	4	Attorney Docket Number	080188PCTUSCON10

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		Number - Kind Code ² (if known)			
		7,120,388 B2	10-10-2006	Hall	
		7,139,585 B2	11-21-2006	Hachimura et al.	
		7,266,390 B2	09-04-2007	Mathews	
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		8,027,638 B2	09-27-2011	Sanguino	
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		8,086,281 B2	12-27-2011	Rabu et al.	
		8,102,836 B2	01-24-2012	Jerlhagen	
		8,190,203 B2	05-29-2012	Pelland et al.	
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		8,401,202 B2	03-19-2013	Brooking	
		8,478,880 B2	07-02-2013	Finkelstein et al.	
		8,483,755 B2	07-09-2013	Kumar	
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		8,571,544 B2	10-29-2013	Pelland et al.	
		8,655,420 B1	02-18-2014	Pelland et al.	
		8,792,945 B2	07-29-2014	Russell et al.	
		9,049,502 B2	06-02-2015	Pelland et al.	

Examiner Signature	/KIET M DOAN/	Date Considered	06/24/2019
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				Examiner Name	Kiet Doan
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Sheet	4	of	4		

NON PATENT LITERATURE DOCUMENTS			
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		Supplementary European Search Report for European Application No. 09731146.8 mailed June 10, 2011, 7 pages.	
		International Search Report for International Application No. PCT/US09/39754 mailed June 11, 2009, 2 pages.	
		International Preliminary Examination Report for International Application No. PCT/US09/39754 mailed October 28, 2010, 8 pages.	
		Written Opinion of the International Searching Authority for International Application No. PCT/US09/39754 mailed June 11, 2009, 5 pages.	
		IT REVIEW, "LTB 802.11 WiFi Headphones", http://itreview.belproject.com/item/1536 accessed on 03/13/2008 (4 pages).	

Examiner Signature	/KIET M DOAN/	Date Considered	06/24/2019
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	14	(earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with request\$3 with (server\$1 (base near station)) and @ad<"20101010"	US-PGPUB; USPAT; USOCR	OR	ON	2019/06/24 10:45
L2	9	1 AND ((H04M1/6066 OR H04M1/2535 OR H04M1/72558 OR H04R2201/107 OR H04R25/554 OR H04R3/00 OR H04R5/033).CPC.)	US-PGPUB; USPAT; USOCR	OR	ON	2019/06/24 10:48
S1	2	(mobile wireless \$4phone) with out near1 (rang\$4 area) and (mobilw wireless pda \$4phone) with automat\$5 with (chang\$3 convert\$4 divert\$4) with (ip internet digital\$1)	USPAT	OR	OFF	2011/09/19 20:35
S2	10	(mobile wireless \$4phone) with out near1 (rang\$4 area) and (mobile wireless pda \$4phone) with automat\$5 with (chang\$3 convert\$4 divert\$4) with (ip internet digital\$1)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 20:35
S3	0	(mobile wireless \$4phone) with out near1 (rang\$4 area) and (mobile wireless pda \$4phone) with automat\$5 with (chang\$3 convert\$4 divert\$4) with (mode state) with network	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 20:42
S4	3	(mobile wireless \$4phone) with out near1 (rang\$4 area) and (mobile wireless pda \$4phone) with automat\$5 with (chang\$3 convert\$4 divert\$4) with network	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 20:42
S5	11	(mobile wireless \$4phone) with out near1 (rang\$4 area) and automat\$5 with (chang\$3 convert\$4 divert\$4) with network	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 20:44
S6	872	(mobile wireless \$4phone) with out near1 (rang\$4 area) and (mobile wireless pda \$4phone) with (chang\$3 convert\$4 divert\$4) with network	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 20:45
S7	145	(mobile wireless \$4phone) with out near1 (rang\$4 area) and (mobile wireless pda \$4phone) with (chang\$3 convert\$4 divert\$4) with network with (internet digital)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 20:45
S8	8	acoustic near transducer same (convert\$3 chang\$3) with (analog rf frequency signal\$3) with (audio sound) and firmware	USPAT	OR	OFF	2011/09/19 21:30

S9	46	acoustic near transducer same (convert\$3 chang\$3) with (analog rf frequency signal\$3) with (audio sound) and firmware	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 21:30
S10	2	"7697899".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 21:33
S11	130	(mobile wireless) same acoustic near transducer and (convert\$3 chang\$3) with (analog rf frequency signal\$3) with (audio sound) and digital and (audio sound)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/20 00:33
S12	25	S11 and stream\$3 and server	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/20 00:33
S13	91	("20020069263" "20040169581" "2660662" "3651471" "3732536" "3742463" "3845391" "4025851" "4237449" "4425642" "4514725" "4642685" "4718106" "4750034" "4807031" "4840602" "4846693" "4923428" "4945412" "5085610" "5090936" "5108341" "5113437" "5136613" "5191615" "5301167" "5305348" "5319735" "5353352" "5412620" "5436941" "5442343" "5446756" "5450490" "5479442" "5499265" "5519779" "5539705" "5555258" "5574773" "5579124" "5604767" "5657379" "5663766" "5687191" "5719937" "5734639" "5752880" "5774452" "5822360" "5828325" "5848155" "5930369" "5937000" "5945932" "5960398" "5978413" "5999899" "6021432" "6022273" "6031914" "6035177" "6061793" "6125172" "6290566" "6298322" "6370666" "6389055" "6434253" "6438117" "6442283" "6449596" "6577881" "6584138" "6636551" "6650877" "6708214" "6737957" "6757300" "6765950" "6773344" "6782253" "6832093" "6850555" "6876623" "6892175" "6983051" "7031271" "7065342" "7158676").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/09/20 00:35
S14	187	mbsfn and sfn	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2012/02/29 11:27
S15	1	12/031462	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2012/02/29 11:29

EAST Search History

S16	0	(mobile wireless \$4phone) with out near1 (rang\$4 area) and transducer with (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc))	USPAT	OR	OFF	2012/02/29 12:11
S17	1	(mobile wireless \$4phone) with out near1 (rang\$4 area) and transducer with (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 12:11
S18	2	(mobile wireless \$4phone) and transducer with (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc)) and (signal\$3 rf frequency) with threshold.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 12:15
S19	19	(mobile wireless \$4phone) and transducer with (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc)) and (signal\$3 rf frequency) with threshold	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 12:16
S20	20	transducer with (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc)) and (signal\$3 rf frequency) with threshold	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 12:17
S21	1003	(mobile wireless \$4phone) and (ad hoc (ad adj hoc)) and (signal\$3 rf frequency) with threshold and "455"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 12:20
S22	8	(mobile wireless \$4phone) with (ad hoc (ad adj hoc)) with (signal\$3 rf frequency) with threshold and "455"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 12:21
S23	38203	(mobile wireless \$4phone) and transducer wand (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc)) and threshold and rang\$3	USPAT	OR	OFF	2012/02/29 13:54
S24	258	(mobile wireless \$4phone) and transducer and (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc)) and threshold and rang\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 13:54
S25	21	(mobile wireless \$4phone) and transducer and (convert\$3 chang\$3	US-PGPUB; USPAT;	OR	OFF	2012/02/29 13:55

		divert\$3) with (sound audio) and (ad hoc (ad adj hoc)) and threshold and rang\$3.clm.	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S26	25	(mobile wireless \$4phone) and transducer and (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc)) and threshold and rang\$3 and "455"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 13:59
S27	9	(mobile wireless \$4phone) and transducer and (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc)) and threshold and rang\$3 and earphone	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 14:00
S28	1	(mobile wireless \$4phone) and transducer and (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc)) and threshold and rang\$3 and earphone.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 14:03
S29	2	"8190203".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2013/03/21 23:39
S30	27	("20050064853" "20050198233" "20060206487" "20060212442" "20060212444" "20070008984" "20070037615" "20070049198" "20070116316" "20070165875" "20070230727" "20080062939" "20080101279" "20080291891" "20100246788" "5784685" "6792091" "6937712" "7003515" "7027311" "7099370" "7120388" "7139585" "7599679" "7697899" "7764775" "7805210").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/03/29 14:23
S31	0	(server computer) with internet and stream\$4 near audio near server and (headset earphone\$1 bluetooth) with (ap (access near point)) with internet	US-PGPUB; USPAT; USOCR	OR	ON	2013/03/29 14:34
S32	41	(server computer) with internet and (stream\$4 near audio) and server and (headset earphone\$1 bluetooth) with (ap (access near point)) with internet	US-PGPUB; USPAT; USOCR	OR	ON	2013/03/29 14:35
S33	2287	host near server and internet and (stream\$4 near audio) and server and (headset earphone\$1 bluetooth) with (ap (access near point)) and register\$3and approva\$4 with (song media)	US-PGPUB; USPAT; USOCR	OR	ON	2013/03/29 14:52
S34	4	host near server and internet and (stream\$4 near audio) and server and (headset earphone\$1 bluetooth) with (ap (access near point)) and	US-PGPUB; USPAT; USOCR	OR	ON	2013/03/29 14:56

		register\$3 and approva\$4 with (song media)				
S35	4	host near server and internet and (stream\$4 near audio) and server and (headset earphone\$1 bluetooth) with (ap (access near point)) and approva\$4 with (song media)	US-PGPUB; USPAT; USOCR	OR	ON	2013/03/29 14:57
S36	56	(earphone headset) with receiv\$3 with (song audio music) and convert\$4 near digital same analog and acoustic\$1 with transducer\$3	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/03/29 18:50
S37	769	(earphone headset) and convert\$4 near3 digital with analog and acoustic\$1 with transducer\$3	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/03/29 19:11
S38	464	S37 and @ad< "20080101"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/03/29 19:13
S39	30	S37 and @ad< "20080101" and "455"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/03/29 19:15
S40	0	("8190203.pn.").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2013/06/08 23:17
S41	0	("8190203.pn.").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/06/08 23:18
S42	2	("8190203").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/06/08 23:18
S43	27	("20050064853" "20050198233" "20060206487" "20060212442" "20060212444" "20070008984" "20070037615" "20070049198" "20070116316" "20070165875" "20070230727" "20080062939" "20080101279" "20080291891" "20100246788" "5784685" "6792091" "6937712" "7003515" "7027311" "7099370" "7120388" "7139585" "7599679" "7697899" "7764775" "7805210").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/08 23:22
S44	9	((cd adj player) ipad) with audio near jack same (network internet wireless)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/08 23:26
S45	55	("20010050991" "20010050993" "20010053228" "20020102005" "20040136522" "20040198436" "20040204185" "20050004796" "200500064915" "20050090295" "20050130697" "20050146227" "20050177365" "20050181826"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/08 23:32

		"20050232448" "20050239434" "20060013410" "20060046656" "20060046778" "20060134959" "20060166705" "20060193479" "20070015486" "20070025561" "20070036384" "20070041582" "20070082612" "20070225035" "20070226384" "20070239849" "20070247794" "20080167092" "20080201138" "5604813" "5787180" "5825897" "5951141" "5978689" "5991637" "6061456" "6108415" "6415034" "6507650" "6873862" "6975984" "7155214" "7181233" "7187948" "7190797" "7251332" "7254420" "7292880" "7346176" "7395090" "7433715").PN.				
S46	550	((cd adj player) ipad mp3) and (server computer) with encod\$4 with (audio sound) and (earphone earcup headset headphone)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 12:19
S47	6	((cd adj player) ipad mp3) and (server computer) with encod\$4 with analog with digital with (audio sound) and (earphone earcup headset headphone) same acoustic	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 12:21
S48	1	"8055361".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 12:24
S49	2	"20080167092"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 12:27
S50	2	"20040156012"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/06/10 12:30
S51	108	((cd adj player) ipad mp3) same (server computer) with encod\$4 with (audio sound) and (earphone earcup headset headphone) and internet	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 12:41
S52	41	(server computer) with encod\$4 with (analog digital) and ((cd adj player) ipad mp3) with (earphone earcup headset headphone) and internet	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 12:44
S53	0	"200700826612"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 12:57
S54	2	"20070082612"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/06/10 12:58
S55	12	((cd adj player) ipad mp3) with (earphone earcup headset headphone) same (convert\$3 switch\$3 chang\$3) with (analog digital) and acoustic with analog	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 15:32
S56	0	((cd adj player) ipad mp3) and (earphone earcup headset headphone) same acoustic with aoutput\$4 with analog	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 16:15
S57	18	((cd adj player) ipad mp3) and	US-PGPUB;	OR	ON	2013/06/10

		(earphone earcup headset headphone) same acoustic with output\$3 with analog	USPAT; USOCR			16:15
S58	178	(earphone earcup headset headphone) same acoustic with output\$3 with analog	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 16:23
S59	5	(earphone earcup headset headphone) same (mp3 (cd near player)) and server with song\$1 and register\$3 with song\$1	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 21:24
S60	75	(earphone earcup headset headphone) same (mp3 (cd near player)) same ear near canal	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 22:40
S61	1	(earphone earcup headset headphone) same (mp3 (cd near player)) same ear near canal and wifi	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 23:02
S62	20	(earphone earcup headset headphone) same (mp3 (cd near player)) same ear near canal and (wifi bluetooth)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 23:02
S63	1	"8190203".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/29 22:19
S64	1	"8571544".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/29 22:21
S65	0	(earphone headset) same coustic\$1 with transducer\$3 and (earphone headset) with wireless with (server internet) and play\$4 with (song music) with (server internet)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/29 23:16
S66	5	(earphone headset) same acoustic\$1 with transducer\$3 and (earphone headset) with wireless with (server internet) and play\$4 with (song music) with (server internet)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/29 23:23
S67	25	(earphone headset) same acoustic\$1 with transducer\$3 and (earphone headset) with wireless with (server internet)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/29 23:24
S68	1826	(earphone headset) same (play\$4 operat\$3) with (music song multimedia media audio) with (server internet)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/30 12:30
S69	418	(earphone headset) with (play\$4 operat\$3) with (music song multimedia media audio) with (server internet)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/30 12:31
S70	252	(earphone headset) with (play\$4 operat\$3) with (music song multimedia media audio) with (server internet) and @ad- "20080505"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/30 12:31
S71	119	(earphone headset) near3 (music song multimedia media audio) with (server internet) and @ad- "20080505"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/30 12:36
S72	15	(earphone headset) near3 (music song) with (server internet) and @ad- "20080505"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/30 13:27
S73	1	"8571544".pn.	US-PGPUB;	OR	ON	2013/12/07

			USPAT; EPO; JPO			12:49
S74	4	(earphone headset headphone) with wireless with receive\$3 with (song audio music) same (server (base near station)) same internet.clm.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/12/07 12:54
S75	73	("20020122396" "20020132630" "20020147016" "20020160779" "20020160806" "20020164991" "20040085938" "4617674" "5115463" "5255307" "5345448" "5353331" "5410588" "5448569" "5469496" "5506887" "5519706" "5519759" "5537434" "5546411" "5579379" "5594718" "5610972" "5664005" "5715521" "5734699" "5745850" "5758281" "5809415" "5818824" "5822313" "5845211" "5887256" "5896375" "5911120" "5913163" "5960344" "5999813" "6005856" "6009332" "6011975" "6021138" "6047177" "6052602" "6055427" "6058106" "6069588" "6078571" "6119006" "6151311" "6163546" "6175860" "6201962" "6205552" "6212395" "6226515" "6259685" "6275518" "6278699" "6295310" "6321089" "6396457" "6430395" "6466791" "6490446" "6510381" "6529732" "6628632" "6640098" "6650871" "6665541" "6675015" "6714524").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/07 13:00
S76	483	(earphone headset headphone) with receive\$3 with (song audio music) same (server (base near station))	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/12/07 13:12
S77	61	(earphone headset headphone) with receive\$3 with (song audio music) same (server (base near station)) same internet	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/12/07 13:13
S78	21	("4659877" "4872160" "4872197" "4958341" "5029196" "5109405" "5341374" "5375068" "5410754" "5434913" "5490247" "5493568" "5608786" "5724355" "5726984" "5751706" "5802160" "5815562" "5946299" "5999525" "6067350").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/07 13:20
S79	38	(earphone headset headphone) with receive\$3 with (song audio music) same (server (base near station)).clm.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/12/07 13:22
S80	3	"9049502".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 14:56
S81	2	"8571544".pn.	US-PGPUB; USPAT; USOCR;	OR	OFF	2016/06/14 15:01

EAST Search History

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S82	2	"8190203".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 15:03
S83	1	14/695696	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 15:36
S86	23	digital near player and adapter and acoustic near transducer\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 15:59
S87	4	S86 AND ((H04W52/0229 OR H04R1/1091 OR H04R2201/103 OR H04R2225/55 OR H04R2420/07 OR H04R25/554 OR H04R3/00 OR H04R5/033 OR H04R5/04).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 16:02
S88	2	digital near player and acoustic near transducer\$1 and plugg\$2 and 381/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 16:03
S89	28	digital near player and acoustic near transducer\$1 and 381/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 16:03
S90	6	("3894196" "4110583" "4490842" "5022486" "5138663" "5459290").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/06/14 16:04
S91	5	("4432097" "4641361" "7215202" "7583809" "8150067").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/06/14 16:05
S92	13	S89 AND ((H04R5/0335 OR H04R2460/13 OR H04R5/033 OR H04R1/1016 OR H04R2201/107 OR H04R2499/11 OR H04R19/00 OR H04R2201/023 OR H04R2400/01 OR G02C11/06 OR G02C11/10).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 16:07
S93	19	digital near player and adapter and	US-PGPUB;	OR	OFF	2016/06/14

		acoustic near transducer\$1 and wireless\$2 with network	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			16:12
S94	139	("20060212442" "20060268830" "8478880" "8571544" "7003515" "7650168" "8335312" "20090063703" "20070008984" "20070297618" "20080298606" "5784685" "6671494" "7027311" "7099370" "7266390" "7734055" "20130039510" "7467021" "8401202" "20040107271" "20070037615" "20070165875" "20080031470" "20080076489" "6674864" "6937712" "7095455" "7139585" "7764775" "7805210" "8023663" "8027638" "8102836" "9049502" "20050198233" "20060206487" "20070253603" "6389463" "7120388" "7599679" "7680490" "7861312" "7962482" "8553865" "20050240296" "20070049198" "20080062939" "6792091" "7697899" "8295516" "8655420" "20050064853" "20100290642" "20150237439" "7337027" "7512414" "8190203" "8792945"), PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2016/07/28 10:00
S95	0	S94 and (multiple plurality multi) with acoustic near1 transducer\$1 and adapter\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2016/07/28 10:02
S96	63	(multiple plurality multi) with acoustic near1 transducer\$1 and adapter\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2016/07/28 10:02
S97	10	(multiple plurality multi) with acoustic near1 transducer\$1 and adapter\$3.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2016/07/28 10:02
S98	0	(earphone headset) near3 (music song multimedia media audio) with (server internet) and @ad<"20080505".clm.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2016/07/28 10:11
S99	10	digital near player and adapter and acoustic near transducer\$1 and wireless\$2 with network.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/07/28 10:11
S100	23	digital near player and adapter and acoustic\$1 near transducer\$1 and wireless\$2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	OFF	2016/07/28 10:23

			IBM_TDB			
S101	17	digital near player and adapter and acoustic\$1 near transducer\$1 and wireless\$2.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/07/28 10:29
S102	6	digital near player and adapter and (multiple plurality multi) with acoustic\$1 and transducer\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/07/28 10:40
S103	2	adapter\$3 with digital near player\$3 and acoustic\$1 near transducer\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/07/28 10:42
S104	2	adapter\$3 same digital\$1 near player\$3 and acoustic\$1 near transducer\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/07/28 10:42
S105	29	adapter\$3 and digital\$1 near player\$3 and acoustic\$1 near transducer\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/07/28 10:42
S106	2	adapter\$3 and digital\$1 near player\$3 and acoustic\$1 near transducer\$1.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/07/28 11:01
S107	2	"8497535".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 10:49
S108	2	"9497535".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 10:49
S109	2	"9438987".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 10:50
S110	3	"9049502".pn.	US-PGPUB; USPAT;	OR	OFF	2017/05/24 10:52

EAST Search History

			USOCR; EPO; JPO; DERWENT			
S111	3	"5571544".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 10:58
S112	2	"8571544".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 10:58
S113	2	"8190203".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 11:16
S114	3	"8655420".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 11:18
S115	0	"90729959".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/02/12 13:34
S116	3	"9729959".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/02/12 13:34
S117	2	"9497535".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/02/12 13:35
S118	902	digital near player and adapter and acoustic near transducer\$1 dock\$ near station and elongat\$3 and bluetooth	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/02/12 14:49
S123	2	digital near player and acoustic\$1 with transducer\$1 and dock\$ near station	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/02/12 14:51
S124	1	(earphone headset) with (play\$4 operat\$3) with (music song multimedia media audio) with (server internet) and transduc\$3 and elongat\$3 and wireless and (recharg\$5 charg\$5) with batter\$3.clm.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/03/19 10:29
S125	1	S124 AND ((H04R2201/103 OR H04R2201/107 OR H04R25/554 OR	US-PGPUB; USPAT;	OR	ON	2018/03/19 10:32

		H04R5/033).CPC.)	EPO; JPO			
S126	1	(earphone headset) with (play\$4 operat\$3) with (music song multimedia media audio) with (server internet) and transduc\$3 and elongat\$3 and wireless and (recharg\$5 charg\$5) with batter\$3	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/03/19 10:32
S127	1	(earphone headset) with (play\$4 operat\$3) with (music song multimedia media audio) with (server internet) and transduc\$3 and elongat\$3 and (recharg\$5 charg\$5) with batter\$3	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/03/19 10:39
S128	7	(earphone headset) with (play\$4 operat\$3) with (music song multimedia media audio) with (server internet) and transduc\$3 and elongat\$3 and (recharg\$5 charg\$5)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/03/19 10:40
S129	2	S128 AND ((H04R1/02 OR H04R5/033 OR H04R2201/107 OR H04R25/554 OR H04R3/00 OR H04W4/80).CPC.)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/03/19 10:42
S130	9	"49783294".FMID.	US-PGPUB; USPAT; FPRS	OR	OFF	2018/03/19 10:42
S131	158	("20010011951" "20010026626" "20020001381" "20020012441" "20020068995" "20020115478" "20020149561" "20020183014" "20030108209" "20030118197" "20030119566" "20040013279" "20040105566" "20040131211" "20040132509" "20040189151" "20040207542" "20040259513" "20050046790" "20050088530" "20050160270" "20050176459" "20050184875" "20050185813" "20050207599" "20050213432" "20050232436" "20050237685" "20050244020" "20050275714" "20050286734" "20060079291" "20060093161" "20060120546" "20060121960" "20060140439" "20060158064" "20060159297" "20060171107" "20060227984" "20060286998" "20070003098" "20070015467" "20070036370" "20070080951" "20070081679" "20070098200" "20070160253" "20070249395" "20070263893" "20080008344" "20080054862" "20080106449" "20080107300" "20080129703" "20080139254" "20080170725" "20080227490" "20080239061" "20080247562" "20080267433" "20090002626" "20090028356" "20090129620" "20090226011" "20090226017" "20090226020" "20090245557" "20090288489" "20090290730" "20090323976" "20100056227" "20100061582" "20100098269" "20100150368" "20100172519"	US-PGPUB; USPAT; USOCR	OR	OFF	2018/03/19 10:43

		"20100178957" "20100184487" "20100246878" "20100254562" "20100310086" "20100311462" "20100322127" "20100328033" "20100329485" "20110143819" "20110158425" "20110170718" "20110180542" "20110201301" "20110237306" "20110254616" "20110267551").PN. OR ("20110280416" "20110281617" "20110293105" "20110301729" "20120008793" "20120008807" "20120010735" "20120082329" "20120130660" "20120133213" "20120182429" "20120183163" "20120237075" "20120244917" "20120249223" "20120253236" "20120289162" "20120300956" "20130100596" "20130111346" "20130136279" "20130169352" "20130169829" "20130236043" "20130242809" "20130301860" "20130316691" "20130322670" "20130324193" "20130336507" "20140003641" "20140342783" "20140378191" "20150054779" "20150065057" "20150070083" "20150078569" "20150086047" "20150141088" "20150172588" "20150181338" "20150208153" "20150256946" "20160007109" "20160086594" "20160205233" "20160261299" "20160286296" "2045404" "5295193" "5323468" "6380923" "6456721" "6463157" "6950126" "7231235" "7437122" "7442164" "7555136" "8521239" "8526646" "8886263" "8918149" "9020170").PN.				
S132	1	"9986325".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/08/31 15:04
S133	2	"9986325".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:02
S134	0	microphone with utteranc\$3 with headphone and (mobile wireless pda \$4phone) with (ad hoc (ad adj hoc)) and earphone\$1 and @ad< "20090303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:10
S135	1	microphone with utteranc\$3 with headphone and (mobile wireless pda \$4phone) with (ad hoc (ad adj hoc)) and earphone\$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:10
S136	1	microphone with utteranc\$3 and headphone and (mobile wireless pda \$4phone) with (ad hoc (ad adj hoc)) and earphone\$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:12

S137	31	microphone with utteranc\$3 and headphone and earphone\$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:12
S138	8	microphone with utteranc\$3 and headphone and earphone\$1.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:12
S139	7	S138 AND ((H04R2201/107 OR H04R5/033 OR H04R1/1008 OR H04R1/1016 OR H04R2460/13 OR H04M1/6066).CPC.)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:14
S140	128	(mobile wireless \$4phone) with (ad hoc (ad adj hoc)) with (signal\$3 rf frequency) with threshold and (mobile wireless pda \$4phone) with (ad hoc (ad adj hoc))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/08/31 16:23
S141	32	(mobile wireless \$4phone) with (ad hoc (ad adj hoc)) with (signal\$3 rf frequency) with threshold and (mobile wireless pda \$4phone) with (ad hoc (ad adj hoc)) and @ad< "20090303"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/08/31 16:23
S142	0	microphone\$1 and headphone\$1 and (earphone\$1 headset headphone) with acoutic\$1 and (mobile wireless pda \$4phone) with (ad hoc (ad adj hoc)) and @ad< "20090303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:25
S143	0	microphone\$1 and headphone\$1 and (earphone\$1 headset headphone) with acoutic\$1 and (mobile wireless pda \$4phone) with (ad hoc (ad adj hoc))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:25
S144	0	microphone\$1 and headphone\$1 and (earphone\$1 headset headphone) with acoutic\$1 and (ad hoc (ad adj hoc))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:25
S145	2807	microphone\$1 and headphone\$1 and (ad hoc (ad adj hoc))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:26
S146	153	microphone\$1 and headphone\$1 and (earphone\$1 headset headphone) and (mobile wireless pda \$4phone) with (ad hoc (ad adj hoc)) and @ad< "20090303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:27
S147	31	microphone\$1 and headphone\$1 and (earphone\$1 headset headphone) and (mobile wireless pda \$4phone) with (ad hoc (ad adj hoc)) and (acoutic\$1 transducer\$1) and @ad< "20090303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:28
S148	782	(earphone headset) with (recharg\$5	US-PGPUB;	OR	ON	2018/09/06

		charg\$5) with (battery power) and @ad< "20080101"	USPAT; EPO; JPO			16:49
S149	313	(earphone\$1 headset) with (recharg\$5 charg\$5) near3 battery with power\$3 and @ad< "20080101"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/09/06 16:50
S150	44	S149 AND ((H04M1/0258 OR H04M1/04 OR H04M1/0262 OR H04M1/0202 OR G06F1/3203 OR H02J7/0054 OR H02J2007/0096 OR H02J7/32).CPC.)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/09/06 16:52
S151	351136	((cd near player) (audio near player) (music near player) mobile) with stor\$3 (audio music sound song\$1) and (earphone\$1 headset headphone\$1 (head near phone\$1)) and (earphone\$1 headset headphone\$1 (head near phone\$1)) with (acoustic transducer\$1) and ((cd near player) (audio near player) (music near player) mobile) with (bluetooth adhoc (short near rang\$3) (ad adj hoc)) and @ad< "20080101"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/09/06 22:46
S152	351041	((cd near player) (audio near player) (music near player) mobile) with stor\$3 (audio music song\$1) and (earphone\$1 headset headphone\$1 (head near phone\$1)) and (earphone\$1 headset headphone\$1 (head near phone\$1)) with acoustic with transducer\$1 and ((cd near player) (audio near player) (music near player) mobile) with (bluetooth adhoc (short near rang\$3) (ad adj hoc)) and @ad< "20080101"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/09/06 22:48
S153	548914	((cd near player) (audio near player) (music near player) mobile) with stor\$3 (audio music song\$1) and (earphone\$1 headset headphone\$1 (head near phone\$1)) and (earphone\$1 headset headphone\$1 (head near phone\$1)) with acoustic with transducer\$1 and ((cd near player) (audio near player) (music near player) mobile) with (bluetooth adhoc (short near rang\$3) (ad adj hoc)) and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/06 22:48
S154	8	((cd near player) (audio near player) (music near player)) with stor\$3 with (audio music song\$1) and (earphone\$1 headset headphone\$1 (head near phone\$1)) and (earphone\$1 headset headphone\$1 (head near phone\$1)) with acoustic with transducer\$1 and ((cd near player) (audio near player) (music near player) mobile) with (bluetooth adhoc (short near rang\$3) (ad adj hoc)) and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/06 22:49
S155	24	((cd near player) (audio near player) (music near player) mobile) with stor\$3 with (audio music song\$1) and (earphone\$1 headset headphone\$1	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2018/09/06 23:00

		(head near phone\$1)) and acoustic with transducer\$1 and (bluetooth adhoc (ad adj hoc) and @ad<"20080101"	EPO; JPO; DERWENT; IBM_TDB			
S156	2	(earphone\$1 headset headphone\$1 (head near phone\$1) (ear near phone\$1)) with antenna with ((cd near player) (audio near player) (music near player) mobile mp3) with (bluetooth adhoc (ad adj hoc) and acoustic\$1 and @ad<"20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 07:51
S157	27	(earphone\$1 headset headphone\$1 (head near phone\$1) (ear near phone\$1)) with antenna with ((cd near player) (audio near player) (music near player) mobile mp3) with (bluetooth adhoc (ad adj hoc) and @ad<"20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 08:05
S158	8	(earphone\$1 (ear near phone\$1)) with antenna with ((cd near player) (audio near player) (music near player) mobile mp3) with (bluetooth adhoc (ad adj hoc) and @ad<"20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 08:17
S159	118	(earphone\$1 (ear near phone\$1)) with ((cd near player) (audio near player) (music near player) mobile mp3) with (bluetooth adhoc (ad adj hoc) and microphone and @ad<"20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 08:19
S160	26	(earphone\$1 (ear near phone\$1)) with ((cd near player) (audio near player) (music near player) mobile mp3) with (bluetooth adhoc (ad adj hoc) and microphone with (headphone headset) and @ad<"20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 08:21
S161	1	(mobile wireless \$4phone terminal) with antenna\$1 with ((cd near player) (audio near player) (music near player) mp3) with (adhoc (ad adj hoc) and (headphone headset)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 09:10
S162	4	(mobile wireless \$4phone terminal) with antenna\$1 with ((cd near player) (audio near player) (music near player) mp3) with (adhoc (ad adj hoc) bluetooth (short near rang\$3)) and (headphone headset) with microphone and (adhoc (ad adj hoc) bluetooth (short near rang\$3)) and @ad<"20080303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 09:12
S163	1	(mobile wireless \$4phone terminal handset) with antenna\$1 with ((cd near player) (audio near player) (music near player) mp3) with (adhoc (ad adj hoc) and (headphone headset)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 09:23
S164	210	(mobile wireless \$4phone terminal handset) with ((cd near player) (audio	US-PGPUB; USPAT;	OR	OFF	2018/09/07 09:26

		near player) (music near player) mp3 music song\$1 multimedia) with (ad hoc) and (headphone headset)	USOCR; EPO; JPO; DERWENT			
S165	24	(mobile wireless \$4phone terminal handset) with ((cd near player) (audio near player) (music near player) mp3 music song\$1 multimedia) with (ad hoc) and (headphone headset) and @ad< "20080303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 09:26
S166	0	(server computer center\$1 central\$3) with (software firmware) with upgrat\$3 near8 (headphone headset) and @ad< "20080303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 11:32
S167	0	(server computer center\$1 central\$3) with upgrat\$3 near8 (headphone headset) and @ad< "20080303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 11:34
S168	15	(server computer center\$1 central\$3) with (upgrad\$3 updat\$3) near8 (headphone headset) and @ad< "20080303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 11:34
S169	0	(earphone\$1 (ear near phone\$1)) with curve\$3 with hang\$3 with bar\$1 and (headphone headset) and elongat\$3 and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 11:45
S170	0	(earphone\$1 (ear near phone\$1)) with curve\$3 with hang\$3 with bar\$1 and (headphone headset) and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 11:46
S171	0	(earphone\$1 (ear near phone\$1)) and curve\$3 with hang\$3 with bar\$1 and (headphone headset) and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 11:46
S172	3	curve\$3 with hang\$3 with bar\$1 and (headphone headset) and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 11:47
S173	72	curve\$3 with bar\$1 and (headphone headset) and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 11:47

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S174	282	(headphone headset) with elongat\$3 and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 12:07
S175	19	(headphone headset) with elongat\$3 and transducer with acoustic and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 12:08
S176	160	(earphone\$1 (ear near phone\$1)) with elongat\$3 and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 12:13
S177	31	(earphone\$1 (ear near phone\$1)) with elongat\$3 and transducer and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 12:13
S178	7	S177 AND ((H04R5/033 OR H04R1/1008 OR H04R1/105).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 12:21
S179	3	S165 AND ((H04W92/18 OR G06F3/167).CPC.)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 12:23
S180	2	"9438987".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2019/04/04 09:54
S181	2	"9497535".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2019/04/04 09:56
S182	3	"9729959".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2019/04/04 09:57
S183	2	"9986325".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2019/04/04 09:58

S184	6	"10206025".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2019/04/04 09:59
S185	23	(earphone earcup headset headphone earbud) with acoustic\$1 with transducer\$3 and (earphone earcup headset headphone earbud) with antenna\$1 with wireless and play\$3 with (audio music song\$1)	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/04 10:15
S186	17	(earphone earcup headset headphone earbud) with acoustic\$1 and automat\$4 with play\$3 with (song music audio) and wireless with network	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/04 17:54
S188	2668	(earphone earcup headset headphone earbud) and automati\$4 with play\$3 with (song\$1 music audio digital) and wireless	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/04 18:00
S189	201	(earphone earcup headset headphone earbud) same automati\$4 with play\$3 with (song\$1 music audio digital) and wireless	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/04 18:01
S190	24	(earphone earcup headset headphone earbud) same automati\$4 with play\$3 with (song\$1 music audio digital) and wireless and @ad<"20090202"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 10:07
S191	11	S190 AND ((H04R5/033 OR H04R1/1016 OR H04L2012/2841 OR H04M1/6066 OR H04M1/7253 OR H04N1/00307).CPC.)	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 10:10
S192	8978	(earphone earcup headset headphone earbud) same microphone\$1 and (voice speak\$3 utteran\$3) with control\$3 and @ad<"20090202"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 10:51
S193	3583	(earphone earcup headset headphone earbud) same microphone\$1 same (voice speak\$3 utteran\$3) with control\$3 and @ad<"20090202"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 10:52
S194	3656	(earphone earcup headset headphone earbud) with microphone\$1 same (voice speak\$3 utteran\$3) with control\$3 and @ad<"20090202"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/04/05 10:52
S195	564	(earphone earcup headset headphone earbud) with microphone\$1 with (voice speak\$3 utteran\$3) near4 control\$3 and @ad<"20090202"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/04/05 10:53
S196	140	S195 and 455/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2019/04/05 10:53

			BM_TDB			
S197	41	(earphone earcup headset headphone) and earbud and microphone\$1 with (voice speak\$3 utteran\$3) near4 control\$3 and @ad<"20090202"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/04/05 11:34
S198	5	(earphone earcup headset headphone) and hanger near bar and @ad<"20090202"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/04/05 12:06
S199	34	(earphone earcup headset headphone earbud) with acoustic\$1 and firmware with updat\$3 and @ad<"20090101"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 12:45
S200	27	(earphone earcup headset headphone earbud) with acoustic\$1 and stor\$3 with network with identi\$4 and @ad<"20090101"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:05
S201	2965976	(earphone earcup headset headphone earbud) and memory with stor\$3 with network neae2 identi\$4 and @ad<"20090101"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:07
S202	50	(earphone earcup headset headphone earbud) and memory with stor\$3 with network near2 identi\$4 and @ad<"20090101"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:10
S203	8	(earphone earcup headset headphone earbud) and memory with stor\$3 with (plurality multiple multi) with network near2 identi\$4 and @ad<"20090101"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:11
S204	21	(earphone earcup headset headphone earbud) and (memory stor\$3) with (plurality multiple multi) with network near2 identi\$4 and @ad<"20090101"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:13
S205	350	(earphone earcup headset headphone earbud) and stor\$3 with network near2 identi\$4 and @ad<"20090101"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:25
S206	132	(earphone earcup headset headphone earbud) and stor\$3 with network near2 identi\$4 and @ad<"20090101" and 455/\$.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:25
S207	0	(earphone earcup headset headphone earbud) same stor\$3 with network near2 identi\$4 and @ad<"20090101" and 455/\$.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:27
S208	27	(earphone earcup headset headphone earbud) with acoustic\$1 and automat\$4 with play\$3 with (song music audio) and wireless	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 14:05
S209	9	S208 AND ((H04R1/1008 OR H04R1/1016 OR H04R1/105 OR H04R29/004 OR G10K2210/1081).CPC.)	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 14:06
S210	7	(earphone earcup headset headphone earbud) with acoustic\$1 and	US-PGPUB; USPAT;	OR	ON	2019/05/25 10:38

		automat\$4 with play\$3 with (song music audio) and (plurality multiple second) near6 network	USOCR			
S211	4	S210 AND ((H04H20/83 OR G06F3/167 OR H04R2225/55).CPC.)	US-PGPUB; USPAT; USOCR	OR	ON	2019/05/25 11:13
S212	0	(earphone earcup headset headphone earbud) with acoustic\$1 and (earphone earcup headset headphone earbud) with automat\$4 with play\$3 and (plurality multiple second) near6 network.clm.	US-PGPUB; USPAT; USOCR	OR	ON	2019/05/25 11:14
S213	6	(earphone earcup headset headphone earbud) with acoustic\$1 and (earphone earcup headset headphone earbud) with automat\$4 with play\$3 and (plurality multiple second) near6 network	US-PGPUB; USPAT; USOCR	OR	ON	2019/05/25 16:52
S214	195	(earphone earcup headset headphone earbud) and (earphone earcup headset headphone earbud) with automat\$4 with play\$3 and (plurality multiple second) near6 network	US-PGPUB; USPAT; USOCR	OR	ON	2019/05/25 16:53
S215	22	(earphone earcup headset headphone earbud) and (earphone earcup headset headphone earbud) with automat\$4 with play\$3 and (plurality multiple second) near6 network.clm.	US-PGPUB; USPAT; USOCR	OR	ON	2019/05/25 16:54
S216	108	("20010003712" "20020030649" "20020044152" "20020154070" "20030016253" "20030046401" "20030067536" "20040102957" "20040113867" "20040193413" "20040210852" "20040267527" "20050114140" "20050237296" "20050245292" "20050261890" "20060010368" "20060028400" "20060061551" "20060074624" "20060109237" "20060178085" "20060221266" "20070009125" "20070030174" "20070103388" "20070180979" "20070220108" "20070265495" "20080052643" "20080055194" "20080084992" "20080120141" "20080144854" "20080180640" "20080200774" "20080239080" "20090002640" "20090079839" "20090093304" "20090099836" "20090117890" "20090182562" "20090204410" "20090213071" "20090240488" "20090251409" "20100106497" "20100117930" "20100119052" "20100128626" "20100141554" "20100156812" "20100164990" "20100169073" "20100182137" "20100204981" "20100235161" "20100245585" "20100250231" "20100302137" "20100309295" "20110001699" "20110092825" "20110134910" "20110187640" "20110238405" "20120068914"	US-PGPUB; USPAT; USOCR	OR	OFF	2019/05/25 16:59

		"20120075177" "20120089392" "20120110456" "20120236025" "20120287284" "20130174205" "20130231937" "20130288753" "20130289971" "20130300649" "20140223299" "20140235169" "20140368412" "20150072672" "20150279354" "5005213" "5208449" "5594469" "5698834" "6084556" "6198462" "6313864" "6369952" "6408257" "6532446" "6538676" "6778906" "6965862" "7501995").PN. OR ("8184983" "8327295" "8838075" "8855719" "8862186" "8929954" "9122307" "9235262" "9294607" "9316827" "9369760").PN.				
S217	7	"10206025".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/06/20 18:18
S218	0	(earphone earcup headset headphone earbud (head near phone) (head near set)) with acoustic\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 with revei\$3 with (audio music media) and @ad< "20101010"	US-PGPUB; USPAT; USOCR	OR	ON	2019/06/21 10:44
S219	182	(earphone earcup headset headphone earbud (head near phone) (head near set)) with acoustic\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 and @ad< "20101010"	US-PGPUB; USPAT; USOCR	OR	ON	2019/06/21 10:44
S220	39	(earphone earcup headset headphone earbud (head near phone) (head near set)) with acoustic\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 and wireless with (audio music multimedia) and @ad< "20101010"	US-PGPUB; USPAT; USOCR	OR	ON	2019/06/21 10:49
S221	5	"20040063459"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/06/21 12:44
S222	2	(earphone earcup headset headphone earbud (head near phone) (head near set)) with acoustic\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 and request\$3 with (connect\$3 communicat\$3) with server\$1 and @ad< "20101010"	US-PGPUB; USPAT; USOCR	OR	ON	2019/06/21 12:50

EAST Search History

S223	4	(earphone earcup headset headphone earbud (head near phone) (head near set)) with (transduc\$3 acoustic\$1) and (earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with request\$3 with (server\$1 (base near station)) and @ad<"20101010"	US-PGPUB; OR USPAT; USOCR	ON	2019/06/21 12:53
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6/ 24/ 2019 10:56:00 AM

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Table with 4 columns: APPLICATION NUMBER (16/375,879), FILING OR 371(C) DATE (04/05/2019), FIRST NAMED APPLICANT (Michael J. Koss), ATTY. DOCKET NO./TITLE (080188PCTUSCON10)

CONFIRMATION NO. 1056

26285
K&L GATES LLP-Pittsburgh
210 SIXTH AVENUE
PITTSBURGH, PA 15222-2613

PUBLICATION NOTICE



Title:SYSTEM WITH WIRELESS EARPHONES

Publication No.US-2019-0238970-A1

Publication Date:08/01/2019

NOTICE OF PUBLICATION OF APPLICATION

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Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Doc code: PET.OP.AGE
 Description: Petition to make special based on age/health

PTO/SB/130 (01-19)
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PETITION TO MAKE SPECIAL BASED ON AGE FOR ADVANCEMENT OF EXAMINATION UNDER 37 CFR 1.102(c)(1)			
Application Information			
Application Number	16/375,879	Confirmation Number	1056
Filing Date	04/05/2019		
Attorney Docket Number (optional)	080188PCTUSCON10	Art Unit	2641
Examiner	DOAN, KIET M		
First Named Inventor	Michael J. Koss		
Title of Invention	SYSTEM WITH WIRELESS EARPHONES		
<p>Attention: Office of Petitions</p> <p>An application may be made special for advancement of examination upon filing of a petition showing that the applicant is 65 years of age, or more. No fee is required with such a petition. See 37 CFR 1.102(c)(1) and MPEP 708.02 (II).</p> <p>APPLICANT HEREBY PETITIONS TO MAKE SPECIAL FOR ADVANCEMENT OF EXAMINATION IN THIS APPLICATION UNDER 37 CFR 1.102(c)(1) and MPEP 708.02 (II) ON THE BASIS OF THE APPLICANT'S AGE.</p> <p>A grantable petition requires one of the following items:</p> <p>(1) Statement by one named inventor in the application that he/she is 65 years of age, or more; or</p> <p>(2) Certification by a registered attorney/agent having evidence such as a birth certificate, passport, driver's license, etc. showing one named inventor in the application is 65 years of age, or more.</p>			
<p>Name of inventor who is 65 years of age, or older</p>			
Given Name	Middle Name	Family Name	Suffix
Michael	J.	Koss	
<p>A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 11.18. Please see 37 CFR 1.4(d) for the format of the signature.</p> <p>Select (1) or (2):</p> <p><input type="checkbox"/> (1) I am an inventor in this application and I am 65 years of age, or more.</p> <p><input checked="" type="checkbox"/> (2) I am an attorney or agent registered to practice before the Patent and Trademark Office, and I certify that I am in possession of evidence, and will retain such in the application file record, showing that the inventor listed above is 65 years of age, or more.</p>			
Signature	/Mark G. Knedeisen/	Date (YYYY-MM-DD)	August 5, 2019
Name	Mark G. Knedeisen	Registration Number	42,747

This collection of information is required by 37 CFR 1.102(c)(1). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) a petition to make special based on age for advancement of examination. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed 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 COMPLETED FORMS TO THE CHIEF INFORMATION OFFICER. Submit completed forms electronically over EFS-Web, or mail to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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EFS ID:	36785190
Application Number:	16375879
International Application Number:	
Confirmation Number:	1056
Title of Invention:	SYSTEM WITH WIRELESS EARPHONES
First Named Inventor/Applicant Name:	Michael J. Koss
Customer Number:	26285
Filer:	Jason R. Freeck/US Patent Mail
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Attorney Docket Number:	080188PCTUSCON10
Receipt Date:	05-AUG-2019
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Time Stamp:	16:53:15
Application Type:	Utility under 35 USC 111(a)

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1	Petition to make special based on Age/ Health	080188PCTUSCON10_Petition- Make-Special.pdf	160965 <small>0ac30046b4be27f64c75dc5654d8878c3bd 49c98</small>	no	1

Warnings:

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<p>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.</p> <p><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.</p> <p><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.</p> <p><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.</p>	



Espacenet

Bibliographic data: JP2008067258 (A) — 2008-03-21
WIRELESS HEADPHONE AND WIRELESS HEADPHONE SYSTEM

Inventor(s): KATSUNO GAKUJITSU; WADA ARIKATSU; KIMURA MASANORI ±
(KATSUNO GAKUJITSU, ; WADA ARIKATSU, ; KIMURA MASANORI)

Applicant(s): AUDIO TECHNICA KK ± (AUDIO TECHNICA CORP)

Classification: - international: *H04R1/06; H04R1/10; H04R3/00*
- cooperative:

Application number: JP20060245159 20060911 Global Dossier

Priority number(s): JP20060245159 20060911

Abstract of JP2008067258 (A)

PROBLEM TO BE SOLVED: To obtain a headphone constituted so that original volume can be recovered gradually from a state where the volume is narrowed down, when sound is interrupted by a radio connection defect and connected again thereafter. ;**SOLUTION:** A wireless headphone system comprises a digital radio receiver 21 for receiving an audio signal transmitted from a player 10, a buffer memory 22 for storing received audio signals, a D/A converter 23 for converting an audio signal read from the buffer memory 22 into an analog signal, and an electro-acoustic transducer 24 for converting the analog signal into audio. The system further comprises a connection detection unit 25 for detecting connection normality or defect of the digital radio transceiver, a volume control unit 27 for controlling the volume of sound outputted from the electro-acoustic transducer 24, and a control unit 26 which controls the volume control unit 27 to reduce the volume when the connection detection unit 25 detects a connection defect, and controls the volume control unit 27 to sequentially recover the volume in the detection of the connection defect when the connection detection unit 25 detects the connection normality thereafter. ;**COPYRIGHT:** (C)2008,JPO&INPIT

(19) 日本国特許庁 (JP)

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審査請求 未請求 請求項の数 8 O L (全 13 頁)

(21) 出願番号 (22) 出願日 (特許庁注：以下のものは登録商標) 1. Bluetooth	特願2006-245159 (P2006-245159) 平成18年9月11日 (2006.9.11)	(71) 出願人 000128566 株式会社オーディオテクニカ 東京都町田市成瀬2206番地 (74) 代理人 100088856 弁理士 石橋 佳之夫 (72) 発明者 勝野 学実 東京都町田市成瀬2206番地 株式会社 オーディオテクニカ内 (72) 発明者 和田 存功 東京都町田市成瀬2206番地 株式会社 オーディオテクニカ内 (72) 発明者 木村 雅徳 東京都町田市成瀬2206番地 株式会社 オーディオテクニカ内 Fターム(参考) 5D005 B008
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最終頁に続く

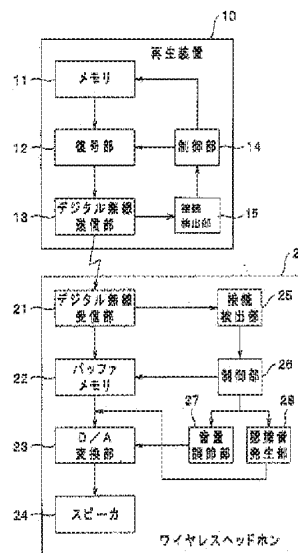
(54) 【発明の名称】 ワイヤレスヘッドホンおよびワイヤレスヘッドホンシステム

(57) 【要約】

【課題】無線による接続不良によって音声途絶え、その後再び接続されるとき、音量が絞られた状態から徐々にもとの音量に戻すようにしたヘッドホンを得る。

【解決手段】再生装置10から送信される音声信号を受信するデジタル無線受信部21、受信される音声信号を蓄えるバッファメモリ22、バッファメモリ22から読み出される音声信号をアナログ信号に変換するD/A変換部23、アナログ信号を音声に変換する電気音響変換器24を備える。デジタル無線送受信部の接続正常または不良を検出する接続検出部25、電気音響変換器24から出力される音声の音量を調節する音量調節部27、接続検出部25が接続不良を検出したとき音量を低下させるように音量調節部27を制御し、その後接続検出部25が接続正常を検出したとき、接続不良を検出したときの音量まで順次戻すように音量調節部27を制御する制御部26を備えている。

【選択図】図1



【特許請求の範囲】

【請求項1】

再生装置側からデジタル無線信号で送信される音声信号を受信するデジタル無線受信部と、

デジタル無線受信部で受信される音声信号を一時的に蓄えるバッファメモリと、

バッファメモリから読み出される音声信号をアナログ信号に変換するD/A変換部と、

D/A変換部で変換されるアナログ信号を音声に変換する電気音響変換器と、を備えるワイヤレスヘッドホンであって、

デジタル無線受信部と再生装置側のデジタル無線送信部との接続が正常かまたは接続不良かを検出する接続検出部と、

電気音響変換器から出力される音声の音量を調節する音量調節部と、

接続検出部が接続不良を検出したとき音量を低下させるように音量調節部を制御し、その後接続検出部が接続正常を検出したとき、接続不良を検出したときの音量まで順次戻すように音量調節部を制御する制御部を備えていることを特徴とするワイヤレスヘッドホン。

【請求項2】

接続検出部が接続不良を検出したとき、制御部の制御によって接続不良を認識させるための認識音を電気音響変換器から出力させる認識音発生部をさらに備えている請求項1記載のワイヤレスヘッドホン。

【請求項3】

再生装置側からデジタル無線信号で送信される音声信号を受信するデジタル無線送受信部と、

ワイヤレスヘッドホン側のデジタル無線送受信部で受信される音声信号を一時的に蓄えるバッファメモリと、

バッファメモリから読み出される音声信号をアナログ信号に変換するD/A変換部と、

D/A変換部で変換されるアナログ信号を音声に変換する電気音響変換器と、を備えるワイヤレスヘッドホンであって、

再生装置側のデジタル無線送信部と上記デジタル無線受信部との接続が正常かまたは接続不良かを検出する接続検出部と、

接続検出部が接続不良を検出したときバッファメモリによる音声信号の読み出しを停止させて再生を一時停止させ、その後接続検出部が接続正常を検出したとき、バッファメモリによる音声信号の読み出しを、接続不良検出時の音声信号に続けて再開させる制御部を備えていることを特徴とするワイヤレスヘッドホン。

【請求項4】

接続検出部が接続不良を検出したとき、制御部の制御によって接続不良を認識させるための認識音を電気音響変換器から出力させる認識音発生部をさらに備えている請求項3記載のワイヤレスヘッドホン。

【請求項5】

電気音響変換器から出力される音声の音量を調節する音量調節部をさらに有し、制御部は、接続検出部が接続不良を検出したとき音量を低下させるように音量調節部を制御し、その後接続検出部が接続正常を検出したとき、接続不良を検出したときの音量まで順次戻すように音量調節部を制御する請求項3記載のワイヤレスヘッドホン。

【請求項6】

携帯電話に内蔵されていて予め記録されている音声信号を再生する再生装置と、

携帯電話からデジタル無線信号で送信される音声信号を受信するデジタル無線受信部と、

デジタル無線受信部で受信される音声信号を一時的に蓄えるバッファメモリと、

バッファメモリから読み出される音声信号をアナログ信号に変換するD/A変換部と、

D/A変換部で変換されるアナログ信号を音声に変換する電気音響変換器と、を備える

ワイヤレスヘッドホンであって、

携帯電話が通話中であるか非通話かを検出する通話検出部と、

通話検出部が通話を検出したときバッファメモリによる音声信号の読み出しを停止させて再生を一時停止させ、その後通話検出部が非通話を検出したとき、バッファメモリによる音声信号の読み出しを、一時停止時の音声信号に続けて再開させる制御部を備えていることを特徴とするワイヤレスヘッドホン。

【請求項7】

携帯電話側のデジタル無線送信部と上記デジタル無線受信部相互の接続が正常かまたは接続不良かを検出する接続検出部をさらに備え、

制御部は、接続検出部が接続不良を検出したときバッファメモリによる音声信号の読み出しを停止させて再生を一時停止させ、その後接続検出部が接続正常を検出したとき、バッファメモリによる音声信号の読み出しを、一時停止時の音声信号に続けて再開させる請求項6記載のワイヤレスヘッドホン。

【請求項8】

音声信号の再生装置と、再生装置側からデジタル無線信号で送信される音声信号を受信して音声に変換するヘッドホンからなるワイヤレスヘッドホンシステムであって、

ヘッドホンは、再生装置側からデジタル無線信号で送信される音声信号を受信するデジタル無線送受信部と、ワイヤレスヘッドホン側のデジタル無線送受信部で受信される音声信号を一時的に蓄えるバッファメモリと、バッファメモリから読み出される音声信号をアナログ信号に変換するD/A変換部と、D/A変換部で変換されるアナログ信号を音声に変換する電気音響変換器を備え、

再生装置は、再生装置側のデジタル無線送信部と上記デジタル無線受信部との接続が正常かまたは接続不良かを検出する接続検出部と、接続検出部が接続不良を検出したとき再生を一時停止させ、その後上記接続検出部が接続正常を検出したとき、接続不良検出時の音声信号に続けて音声信号の読み出しを再開させる制御部を備えていることを特徴とするワイヤレスヘッドホンシステム。

【発明の詳細な説明】

【技術分野】

【0001】

本発明は、音声信号の再生装置から無線で送信されるデジタル音声信号を受信し、音声に変換するワイヤレスヘッドホンおよびワイヤレスヘッドホンシステムに関するもので、特に、無線による通信に不具合がある場合に、ユーザーに不愉快な思いをさせないように工夫を施したものである。

【背景技術】

【0002】

ヘッドホンは、テープレコーダ、CDプレーヤ、MDプレーヤ、MPEG方式プレーヤなどの音声再生器などの音源装置に接続して個人的に音声を聞くものである。しかし、音源装置とヘッドホンとの間をコードあるいはワイヤ（以下「ワイヤ」という）で接続すると、ワイヤがわずらわしく、取り扱いが面倒であることから、ワイヤをなくして音源装置からヘッドホンに無線によって音声信号を送信するワイヤレスヘッドホンが市販されている。また、近年では、デジタル無線通信規格であるBluetoothに基づいて音声信号を送受信するものが普及しつつある。

【0003】

図7は、一般的なワイヤレスヘッドホンおよび音源装置のイメージを示す。図7において、コンピュータ55はデジタル化された音声データファイルを保存していて、音声データファイルを読み出すことによって音源装置として機能する。読み出された音声データは送信機56から無線によって送信される。また、携帯電話57も同様に音声データファイルを保存することができるようになっていて、音声データファイルを読み出すことによって音源装置として機能し、読み出された音声データは送信部58から無線によって送信される。送信機56または送信部58から送信される電波はワイヤレスヘッドホン52が内蔵している受信機53で受信され、音声信号に復調されてワイヤレスヘッドホン52が備

えているスピーカを音声信号で駆動し、スピーカから音声出力されるように構成されている。

【0004】

ワイヤレスヘッドホンの通信可能な距離には限度がある。図6は通信可能な距離のイメージを示すもので、例えば、Bluetooth規格に基づく無線通信手段の接続可能な範囲は送信機51から10m程度の範囲で、それ以上離れると接続不良になる。図6において、符号60は通信可能な範囲を示している。AV機器50は、オーディオ・ビデオ信号をデジタル信号の形態で記録し再生することができる音源装置である。この音源装置で再生された音声信号は、送信機51からBluetoothなどの所定の通信規格に基づいて電波に乗せられて送信される。ヘッドホン52は上記電波を受信することができる受信機を備えていて、前述のとおり受信した電波から音声信号に復調し、内蔵のスピーカを音声信号によって駆動する。ヘッドホン52が無線通信手段の接続可能範囲60内にあれば音声信号に従った音声をスピーカから出力することができるが、接続可能範囲60から外れると音声信号が途絶えてスピーカから音声を出力することができない。再びヘッドホン52が接続可能範囲60内に入ると、再びヘッドホン52のスピーカから音声出力される。

【0005】

このような従来のワイヤレスヘッドホンには、以下のような問題点がある。

1. 無線による接続不良によって音声途絶えた後、再び接続されたとき、接続不良となった時点での音量で再び音声出力されるため、大音量で音声を出力していた場合には、再接続時に突然大音量で音声出力され、ユーザーを驚かせ、あるいはユーザーを難聴にするなどの不具合がある。
2. 接続不良となっても、音源側での音声出力は継続して行なわれるため、再接続されて出力される音声は、途絶えたときの音声との連続性がなく、ユーザーは接続不良の間の音声を聞き逃すことになる。音楽を聴いている場合、その他、例えば朗読や語学学習をしていた場合は、途中が途切れることになるため、音声を聞くことの価値が低下することになり、望ましくない。

【発明の開示】

【発明が解決しようとする課題】

【0006】

そこで本発明の第1の目的は、ワイヤレスヘッドホンにおいて、無線による接続不良によって音声途絶え、その後再び接続されるとき、音量が絞られた状態から徐々にもとの音量になるように、いわゆるフェードインさせることができるヘッドホンを提供することである。

本発明の第2の目的は、無線による接続不良によって音声途絶えると、音声信号の読み出しを停止し、再び接続されるとき、停止していた音声の読み出しを停止時点から連続性をもたせて再開させるようにしたワイヤレスヘッドホンおよびワイヤレスヘッドホンシステムを提供することである。

【0007】

なお、ワイヤレスヘッドホンに関連のある従来技術として、再生装置本体から送信されてくる音曲データをワイヤレスヘッドホン側のデジタル無線受信部で受信し、受信した音曲データを一時的にバッファメモリに蓄積し、蓄積した音曲データをバッファメモリから読み出し、D/A変換部でアナログデータに変換し、このアナログデータによりスピーカを駆動して音波に変換する技術が提案されている(例えば、特許文献1参照)。特許文献1記載の発明が上記のように構成される理由は、無線での通信時に外乱が入ると、通信が途絶えて再生音が途切れるので、あるいは、圧縮データを再生する場合、データ処理で遅延するため、バッファメモリにデータを蓄積して、これを順次読み出すことにより、再生音の途切れを無くすためである。

【0008】

特許文献1記載の発明と略同じ目的で、オーディオサーバのブルートゥースモジュール

から受信したパケットを順次格納するバッファを有し、バッファに所定数のパケットが格納された後、その後に受信されるパケットをバッファに格納しながらバッファ内の受信パケットを順にデコードしてリアルタイムデータを再生して音声を出し、バッファ内のパケットが0となったとき、データの再生を停止するとともに、その後の受信パケットを廃棄し、その後、所定時間電波の強度が所定の強度を越えたとき、受信データパケットのバッファへの格納を再開するようにした技術が提案されている（例えば、特許文献2参照）。

【0009】

【特許文献1】特開2003-280693号公報

【特許文献2】特開2005-348226号公報

【0010】

特許文献1および特許文献2記載の発明はいずれも、無線による通信が途絶えても、ヘッドホンからの音声出力が途絶えないようにバッファメモリを介在させるものである。

しかし、特許文献1および特許文献2におけるバッファメモリはあくまでも一時的にデータを蓄積するものであるから、通信が途絶えている時間がある程度以上になると音声信号を出力することができなくなる。したがって、その後通信が再開して音声出力が再開される時、通信が途絶えたときの音量で突然音声出力され、前述のような本発明の目的を達成することはできない。また、特許文献1および特許文献2記載の発明によれば、通信が再開して音声出力が再開された時点では、通信が途絶えた時点での音声とは連続性のない、先に進んだ音声出力されることになり、ユーザーは途中で切断された音声しか聴くことができない。よって、前述のような本発明の目的を達成することはできない。

【課題を解決するための手段】

【0011】

本発明は、前述の目的を達成するために、再生装置側からデジタル無線信号で送信される音声信号を受信するデジタル無線受信部と、デジタル無線受信部で受信される音声信号を一時的に蓄えるバッファメモリと、バッファメモリから読み出される音声信号をアナログ信号に変換するD/A変換部と、D/A変換部で変換されるアナログ信号を音声に変換する電気音響変換器と、を備えるワイヤレスヘッドホンであって、デジタル無線受信部と再生装置側のデジタル無線送信部との接続が正常かまたは接続不良かを検出する接続検出部と、電気音響変換器から出力される音声の音量を調節する音量調節部と、接続検出部が接続不良を検出したとき音量を低下させるように音量調節部を制御し、その後接続検出部が接続正常を検出したとき、接続不良を検出したときの音量まで順次戻すように音量調節部を制御する制御部を備えていることを最も主要な特徴とする。

【0012】

本発明はまた、再生装置側からデジタル無線信号で送信される音声信号を受信するデジタル無線受信部と、ワイヤレスヘッドホン側のデジタル無線受信部で受信される音声信号を一時的に蓄えるバッファメモリと、バッファメモリから読み出される音声信号をアナログ信号に変換するD/A変換部と、D/A変換部で変換されるアナログ信号を音声に変換する電気音響変換器と、を備えるワイヤレスヘッドホンであって、再生装置側のデジタル無線送信部と上記デジタル無線受信部との接続が正常かまたは接続不良かを検出する接続検出部と、接続検出部が接続不良を検出したときバッファメモリによる音声信号の読み出しを停止させて再生を一時停止させ、その後接続検出部が接続正常を検出したとき、バッファメモリによる音声信号の読み出しを、接続不良検出時の音声信号に続けて再開させる制御部を備えていることを主要な特徴とする。

再生装置側に接続検出部を備え、接続検出部が接続不良を検出したとき再生を一時停止させ、その後上記接続検出部が接続正常を検出したとき、接続不良検出時の音声信号に続けて音声信号の読み出しを再開させるようにしたワイヤレスヘッドホンシステムを構成してもよい。

【発明の効果】

【0013】

本発明にかかるワイヤレスヘッドホンによれば、ヘッドホン側のデジタル無線受信部と再生装置側のデジタル無線送信部とが接続不良になると音量が低下し、その後接続検出部が接続正常を検出すると、接続不良を検出したときの音量まで順次戻され、いわゆるフェードインするため、再生装置とヘッドホンとの無線による接続不良で音声途切れたあと、接続が回復したときに、接続不良となった時点での音量で急激に音声出力が再開されることがなくなる。したがって、大音量で音声を出力していた場合には、再接続時に突然大音量で音声が出力され、ユーザーを驚かせ、あるいはユーザーを難聴にするなどの不具合をなくすることができる。

【0014】

本発明にかかるワイヤレスヘッドホンの別の態様またはワイヤレスヘッドホンシステムによれば、再生装置とヘッドホンとが無線による接続不良になると、バッファメモリからの音声信号の読み出しを停止し、再び接続されたとき、停止していた音声信号の読み出しを停止時点から再開させるため、音声出力が連続性をもって再開され、音声を聞き逃すという不具合をなくすることができる。

【発明を実施するための最良の形態】

【0015】

以下、本発明にかかるワイヤレスヘッドホンおよびワイヤレスヘッドホンシステムの実施例について図面を参照しながら説明する。

【0016】

まず、本発明にかかるワイヤレスヘッドホンのハードウェア構成例について図1の機能ブロック図を参照しながら説明する。図1において、符号10で示す大きなブロックは再生装置を、符号20で示す大きなブロックはワイヤレスヘッドホンを示している。この例における再生装置10は、例えばMP3規格で圧縮されたデジタル信号からなる音声信号をフラッシュメモリなどからなるメモリに保存し、これを読み出して復号し、デジタル無線信号として送信するものである。したがって、再生装置10は、音声信号を所定の形式に圧縮して予め保存することができる例えばフラッシュメモリからなるメモリ11と、メモリ11から読み出される音声信号を圧縮前の音声に戻す復号部12と、復号される音声信号を電波に乗せて外部に送信するデジタル無線送信部13と、後で説明するワイヤレスヘッドホン20側のデジタル無線受信部21との接続が正常かまたは接続不良かを検出する接続検出部15と、この接続検出部15の検出信号に応じて上記メモリ11、復号部12、デジタル無線送信部13の動作を制御する制御部14を備えている。再生装置10は、メモリ11に代わるコンパクトディスク(CD)、ミニディスク(MD)などの記録媒体と、これらの記録媒体を駆動して記録情報を読み出すようにした機械的な駆動部を備える再生装置であってもよい。

上記制御部14は、接続検出部15の検出結果、すなわち、再生装置10側のデジタル無線送信部13とワイヤレスヘッドホン20側のデジタル無線受信部21相互の接続が正常であるかまたは接続不良であるかに基づいて、メモリ11からの読み出し動作と復号部12の動作を制御する。具体的には、接続検出部15が接続不良を検出したとき、音声信号の再生動作すなわち図示の例ではメモリ11による音声信号の読み出しを停止させるようになっている。その後接続検出部15が接続正常を検出したとき、制御部14はメモリ11に再生再開命令を発し、メモリ11による音声信号の読み出しを再開させるように構成されている。制御部14による以上のような制御動作は、予め組み込まれているソフトウェアにしたがって行われる。

【0017】

ワイヤレスヘッドホン20は、上記再生装置10のデジタル無線送信部13からの無線による信号を受信するデジタル無線受信部21と、デジタル無線受信部21で受信される音声信号を一時的に蓄えるバッファメモリ22と、バッファメモリ22から読み出される音声信号をアナログ信号に変換するD/A変換部23と、D/A変換部23で変換されるアナログ信号を音声に変換する電気音響変換器としてのスピーカ24を備えている。D/A変換部23とワイヤレスヘッドホン20はまた、再生装置10側のデジタル無線送信部

13とスピーカ24の間には、通常、上記アナログ信号を増幅してスピーカ24を駆動する増幅器が介在しているが、図1では図示されていない。ワイヤレスヘッドホン20側には、再生装置のデジタル無線送信部13とワイヤレスヘッドホン20側のデジタル無線受信部21相互の接続が正常かまたは接続不良かを検出する接続検出部25を備えている。さらに、制御部26と、スピーカ24から出力される音声の音量を調節する音量調節部27と、接続不良を認識させるための認識音をスピーカ24から出力させる認識音発生部28を備えている。

【0018】

上記制御部26は、接続検出部25の検出結果、すなわち、再生装置10側のデジタル無線送信部13とワイヤレスヘッドホン20側のデジタル無線受信部21相互の接続が正常であるかまたは接続不良であるかに基づいて、音量調節部27と認識音発生部28の動作を制御する。制御部26はまた、接続検出部25が接続不良を検出したとき、バッファメモリ22に再生一時停止命令を発生し、バッファメモリ22による音声信号の読み出しを停止させるようになっている。その後接続検出部25が接続正常を検出したとき、制御部25はバッファメモリ22に再生再開命令を発生し、バッファメモリ22による音声信号の読み出しを再開させるように構成されている。制御部26による以上のような制御動作は、予め組み込まれているソフトウェアにしたがって行われる。

【0019】

前記音量調節部27は、結果としてスピーカ24から出力される音声の音量を調節することができればよく、例えば、D/A変換部23によるアナログ変換前のデジタル信号で調節するようにしてもよいし、変換されたアナログ信号のレベルを調節するようにしてもよい。認識音発生部28は、再生装置10とヘッドホン20の無線による接続状態が不良であることをユーザーに認識させるためのもので、例えば、「ぶっ、ぶっ、ぶっ」というような警報音をスピーカ24から流すようになっている。その具体的な手段は任意であるが、図1に示す例では、上記のような警報音をデジタルデータで保存しておき、これを必要な場合に、すなわち制御部26から命令された場合に読み出してD/A変換部23に入力するようになっている。デジタルデータからなる警報音はD/A変換部23でアナログによる音声信号に変換され、スピーカ24から音声として出力される。

【0020】

以上説明したハードウェア構成において、ワイヤレスヘッドホン20の制御部26に組み込まれるソフトウェアの構成により、ワイヤレスヘッドホン20として、さまざまな機能をもたせることができる。以下、各種機能をもった各種実施例について図2ないし図5を参照しながら説明する。図2ないし図5において、各動作ステップを、S1、S2、・・・のように表している。

【実施例】

【0021】

図2はワイヤレスヘッドホンの実施例を示す。図2において、ワイヤレスヘッドホン20側では、接続検出部25が、再生装置10のデジタル無線送信部13とヘッドホン10側のデジタル無線受信部21相互の接続が正常かまたは接続不良かを検出する(S1)。正常であればその状態を維持する。再生装置10とヘッドホン20との距離が大きく離れるなどの理由によって接続検出部25が接続不良を検出すると、制御部26が音量調節部27に音量低下処理を行わせ(S2)、スピーカ24から出力されるべき音声のレベルを低下させる。接続不良であるから、再生装置10からの音声信号も伝達されず、スピーカ24から音声出力されることもない。接続検出部25はさらにデジタル無線送信部13、21相互の接続状態を監視し(S3)、接続不良状態が続いていれば、スピーカ24から出力されるべき音声のレベルを低下させた状態を維持する。接続が正常な状態に回復すれば、制御部26がデジタル無線受信部21と再生装置側のデジタル無線送信部13との再接続処理を行わせ(S4)、さらに、音量調節部27に音量復帰処理を行わせる(S5)。音量復帰処理は、音声レベルを低下させた状態から、上記接続不良を検出した時点における音声レベルまで徐々にあるいは段階的に復帰させる処理で、これによっていわゆ

るフェードインすることになる。

よって、図2に示す実施例によれば、前に述べた本発明の第1の目的を達成することができる。

【実施例】

【0022】

次に、第2の実施例について、図3を参照しながら説明する。図3において、ワイヤレスヘッドホン20の接続検出部25は、再生装置10のデジタル無線送信部13とヘッドホン10側のデジタル無線受信部21相互の接続が正常かまたは接続不良かを検出する(S11)。正常であればその状態を維持する。接続検出部25が接続不良を検出すると、制御部26がバッファメモリ22に向けて再生一時停止指令を出す(S12)。バッファメモリ22は再生一時停止指令によって音声信号の読み出しを停止する。接続検出部25はデジタル無線送受信部13とデジタル無線送受信部21相互の接続が正常かまたは接続不良かを検出し続け(S13)、接続不良でなければ、すなわち、再び正常に接続されれば、制御部26はデジタル無線受信部21と再生装置側のデジタル無線送信部13との再接続処理を行わせる(S14)。制御部26はさらに、バッファメモリ22に対する再生一時停止指令の出力を停止して音声信号の読み出しを再開し、D/A変換部23、スピーカ24によって音声の再生を再開する(S15)。

【0023】

上記実施例2によれば、再生装置10側のデジタル無線送信部13とヘッドホン20側のデジタル無線受信部21との接続が正常かまたは接続不良かを検出する接続検出部25と、接続検出部25が接続不良を検出したときバッファメモリ22による音声信号の読み出しを停止させて再生を一時停止させ、その後接続検出部25が接続正常を検出したとき、バッファメモリ22による音声信号の読み出しを、接続不良検出時の音声信号に続けて再開させる制御部26を備えているため、前に述べた本発明の第2の目的を達成することができる。

【実施例】

【0024】

次に、第3の実施例について、図4を参照しながら説明する。図4において、ワイヤレスヘッドホン20の接続検出部25は、再生装置10のデジタル無線送信部13とヘッドホン10側のデジタル無線受信部21相互の接続が正常かまたは接続不良かを検出する(S21)。正常であればその状態を維持する。接続検出部25が接続不良を検出すると、制御部26が、バッファメモリ22に向けて再生一時停止指令を出し(S22)、認識音発生部28に向けて認識音発生指令を出し(S23)、音量調節部27に向けて音量低下指令を出す(S24)。上記再生一時停止指令によって、バッファメモリ22は音声信号の読み出しを停止する。上記認識音発生指令によって、認識音発生部28はデジタル無線送受信部が接続不良であることを表す、例えば、「ぶっ、ぶっ、ぶっ」というような警報音のデジタル化信号をD/A変換部23に入力し、これをD/A変換部23がアナログ信号に変換してスピーカ24から流す。上記音量低下指令により音量調節部27がD/A変換部23から出力される音声信号レベル低下させ、スピーカ24から出力されるべき音声のレベルを低下させる。

【0025】

接続検出部25はデジタル無線送信部13とデジタル無線受信部21相互の接続が正常かまたは接続不良かを検出し続け(S25)、接続不良でなければ、すなわち、再び正常に接続されれば、制御部26はデジタル無線受信部21に再生装置側のデジタル無線送信部13との再接続処理を行わせる(S26)。制御部26はまた、バッファメモリ22に対する再生一時停止指令の出力を停止して音声信号の読み出しを再開し、D/A変換部23、スピーカ24によって音声の再生を再開する(S27)。さらに、制御部26は音量調節部27に音量復帰処理を行わせる(S28)。前に説明したように、音量復帰処理は、音声レベルを低下させた状態から、上記接続不良を検出した時点における音声レベルまで徐々にあるいは段階的に復帰させる処理である。

【0026】

実施例3によれば、本発明の第1の目的および第2の目的を達成することができるほか、接続不良の場合に警報音を出力するため、ユーザーは、再生が停止された場合に、その原因が無線送受信部の接続不良ないしは接続停止にあることがわかる。

【実施例】

【0027】

次に、第4の実施例について図5を参照しながら説明する。この実施例は、携帯電話が再生装置10を兼ねている例で、再生装置で再生中に通話が開始された場合にも、再生を一時停止させるようにしたことを特徴とするものである。図5において、再生装置10が音声信号を再生中に、ワイヤレスヘッドホン20の接続検出部25は、再生装置10がわとヘッドホン10側のデジタル無線送受信部13、21相互の接続が正常かまたは接続不良かを検出する(S30)。接続不良の場合は、実施例2の場合と同様に、制御部26がバッファメモリ22に向けて再生一時停止指令を出す(S31)。バッファメモリ22は再生一時停止指令によって音声信号の読み出しを停止する。接続検出部25はデジタル無線送受信部13とデジタル無線受信部21相互の接続が正常かまたは接続不良かを検出し続け(S32)、接続不良でなければ、すなわち、再び正常に接続されれば、制御部26はデジタル無線受信部21に再生装置側のデジタル無線送受信部13との再接続処理を行わせる(S33)。制御部26はさらに、バッファメモリ22に対する再生一時停止指令を停止して音声信号の読み出しを再開し、D/A変換部23、スピーカ24によって音声の再生を再開する(S34)。

【0028】

ステップS30において、接続検出部25が接続正常であることを検出すると、次に携帯電話が通話中であるか非通話中であるかを検出し(S35)、通話中でないすなわち非通話であれば、ステップ30に戻って再生を継続する。ステップS35において通話中であることを検出すると、制御部26はバッファメモリ22に向けて再生一時停止指令を出し(S36)、バッファメモリ22は再生一時停止指令によって音声信号の読み出しを停止して再生を一時停止する。その後通話終了を待ち(S37)、通話が終了すると(非通話になると)、再生再開処理すなわちバッファメモリ22からの音声信号の読み出しを、一時停止時の音声信号に続けて再開させる(S34)。

【0029】

実施例4によれば、再生装置10を携帯電話が兼ねているワイヤレスヘッドホンにおいて、携帯電話として通話中は再生を一時停止し、通話が終了すると、再生再開処理すなわちバッファメモリ22からの音声信号の読み出しを、一時停止時の音声信号に続けて再開させるようになっているため、音声出力が連続性をもって再開され、バッファメモリ22から読み出される音声信号による再生出力を、通話によって聞き逃すという不具合をなくすることができる。

【0030】

再生装置10のデジタル無線送受信部13とワイヤレスヘッドホン20のデジタル無線受信部21相互が接続不良になった場合、再生装置10側では接続検出部15が接続不良を検出する。再生装置10側の制御部14は接続検出部15の検出信号によってメモリ11による読み出し動作の一時停止命令を出す。上記デジタル無線送受信部13とデジタル無線受信部21が再び正常に接続されれば、制御部14はメモリ11に対する読み出し一時停止指令の出力を停止して音声信号の読み出しを再開し、デジタル無線送受信部13からワイヤレスヘッドホン20に向けて音声信号を無線で送信する。ワイヤレスヘッドホン20側の動作は前述のとおりである。よって、一時停止時と再生再開時の音声信号が連続することになり、ユーザーが途中を聞き逃すことはない。上記メモリ11は、CDプレーヤー、MDプレーヤーなどに代替することができ、これらの再生動作、一時停止、再生再開動作が、制御部14からの命令によって行われる。ここで説明した実施例は、デジタル無線送受信部の接続不良検出によって再生装置側の再生動作を一時停止させるようにしたもので、再生装置10とワイヤレスヘッドホン20双方の構成を組み合わせたワイヤレスヘッド

ホンシステムとして捉えることができる。

【0031】

図1に示すハード構成例において、音量調節部27は、結果的に電気音響変換素子としてのスピーカ24から出力される音量を調節することができればよく、D/A変換部23の入力側、したがってデジタル信号の段階で音量を調節するようにしてもよいし、D/A変換部23の出力側、したがってアナログ信号に変換された後音量を調節するようにしてもよい。同様に、認識音発生部28も、デジタル信号で認識音を発生させてD/A変換部23に入力させてもよいし、アナログ信号で認識音を発生させてスピーカ24またはその前段の図示されない増幅器に入力させてもよい。

【図面の簡単な説明】

【0032】

【図1】本発明にかかるワイヤレスヘッドホンの実施例のハード構成を示す機能ブロック図である。

【図2】本発明にかかるワイヤレスヘッドホンの実施例1を示すフローチャートである。

【図3】本発明にかかるワイヤレスヘッドホンの実施例2を示すフローチャートである。

【図4】本発明にかかるワイヤレスヘッドホンの実施例3を示すフローチャートである。

【図5】本発明にかかるワイヤレスヘッドホンの実施例4を示すフローチャートである。

【図6】一般的なワイヤレスヘッドホンおよび再生装置と無線による接続状態および接続不良状態のイメージを示す概念図である。

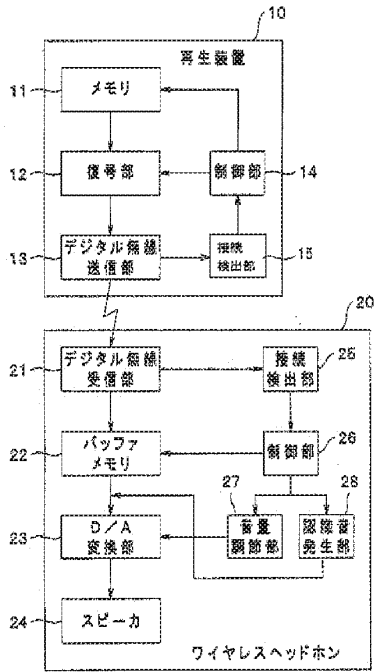
【図7】一般的なワイヤレスヘッドホンおよび音源装置の概念図である。

【符号の説明】

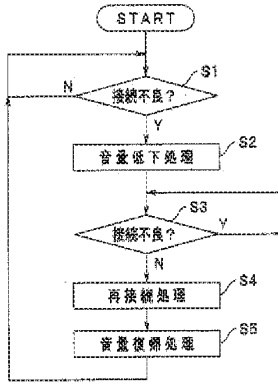
【0033】

- 10 再生装置
- 13 デジタル無線送信部
- 14 制御部
- 20 ワイヤレスヘッドホン
- 21 デジタル無線受信部
- 22 バッファメモリ
- 23 D/A変換部
- 24 電気音響変換器であるスピーカ
- 25 接続検出部
- 26 制御部
- 27 音量溶接部
- 28 認識音発生部

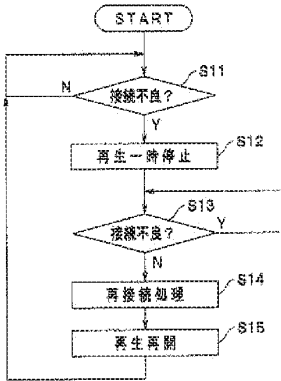
【図1】



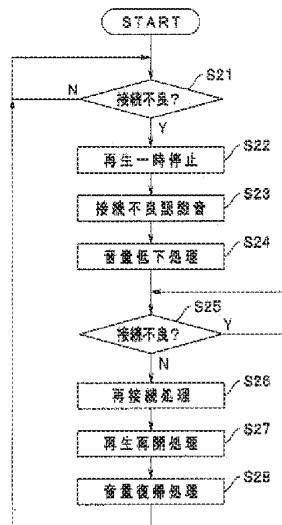
【図2】



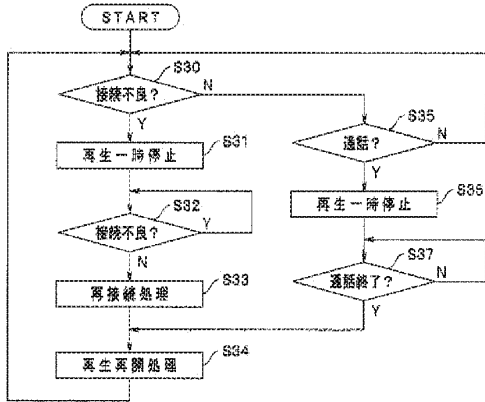
【図3】



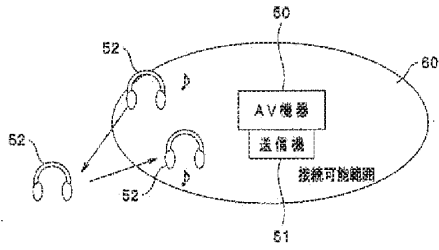
【図4】



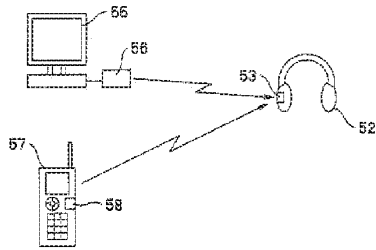
【図5】



【図6】



【図7】



Fグループ(参考) 5D017 AH10
5D020 AC01

Electronic Patent Application Fee Transmittal

Application Number:	16375879			
Filing Date:	05-Apr-2019			
Title of Invention:	SYSTEM WITH WIRELESS EARPHONES			
First Named Inventor/Applicant Name:	Michael J. Koss			
Filer:	Mark G. Knedeisen/Amanda Kernan			
Attorney Docket Number:	080188PCTUSCON10			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
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Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	120	120
Total in USD (\$)				120

Electronic Acknowledgement Receipt

EFS ID:	36909300
Application Number:	16375879
International Application Number:	
Confirmation Number:	1056
Title of Invention:	SYSTEM WITH WIRELESS EARPHONES
First Named Inventor/Applicant Name:	Michael J. Koss
Customer Number:	26285
Filer:	Mark G. Knedeisen/Amanda Kernan
Filer Authorized By:	Mark G. Knedeisen
Attorney Docket Number:	080188PCTUSCON10
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Authorized User	Amanda Kernan

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File Listing:					
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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

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Koss Corporation)
)
Inventors: Michael J. Koss et al.) **Examiner:** Kiet M. Doan
)
Serial No.: 16/375,879) **Art Unit:** 2641
)
Filing Date: April 5, 2019) **Atty. Docket No.** 080188PCTUSCON10

Title: SYSTEM WITH WIRELESS EARPHONES

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Dear Commissioner:

Applicant, in accordance with its duty of disclosure pursuant to 37 C.F.R. § 1.56, hereby advises the United States Patent and Trademark Office of the references listed on the accompanying form PTO/SB/08.

Applicant notes that although the cited references may be relevant to the examination of the above-referenced application, under 37 C.F.R. § 1.97(h), the filing of this *Information Disclosure Statement* “shall not be construed to be an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in § 1.56(b).” Applicant further notes that the filing of this *Information Disclosure Statement* is not an admission that the references cited herein constitutes prior art under 35 U.S.C. §§ 102-103 with respect to the captioned application.

As an Office Action has issued with respect to the referenced application, the Commissioner is hereby authorized to charge the appropriate fee(s) to Account No. 02-1818 for considering this Information Disclosure Statement.

Respectfully submitted,

Date: August 19, 2019

/Mark G. Knedeisen/
 Mark G. Knedeisen
 Reg. No. 42,747

K&L GATES LLP
 K&L Gates Center
 210 Sixth Avenue
 Pittsburgh, Pennsylvania 15222

Ph. (412) 355-6342
 Fax (412) 355-6501

Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed		PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce
Electronic Petition Request	TERMINAL DISCLAIMER TO OBTAIN A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	
Application Number	16375879	
Filing Date	05-Apr-2019	
First Named Inventor	Michael Koss	
Attorney Docket Number	080188PCTUSCON10	
Title of Invention	SYSTEM WITH WIRELESS EARPHONES	
<input checked="" type="checkbox"/> Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action <input checked="" type="checkbox"/> This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.		
Owner	Percent Interest	
Koss Corporation	100%	
The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s) 8655420 9049502 8571544 8190203 9986325 9729959 9497535 9438987		

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- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

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- I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicant claims the following fee status:

- Small Entity
- Micro Entity
- Regular Undiscounted

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

- An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application
Registration Number 42747
- A sole inventor
- A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application
- A joint inventor; all of whom are signing this request

Signature	/Mark G. Knedeisen/
Name	Mark G. Knedeisen

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	16375879			
Filing Date:	05-Apr-2019			
Title of Invention:	SYSTEM WITH WIRELESS EARPHONES			
First Named Inventor/Applicant Name:	Michael J. Koss			
Filer:	Mark G. Knedeisen/Amanda Kernan			
Attorney Docket Number:	080188PCTUSCON10			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
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STATUTORY OR TERMINAL DISCLAIMER	2814	1	160	160
Pages:				
Claims:				
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Petition:				
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Post-Allowance-and-Post-Issuance:				

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Miscellaneous:				
Total in USD (\$)				160

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Application No.: 16375879

Filing Date: 05-Apr-2019

Applicant/Patent under Reexamination: Koss

Electronic Terminal Disclaimer filed on August 21, 2019

APPROVED

This patent is subject to a terminal disclaimer

DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

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Application Number:	16375879
International Application Number:	
Confirmation Number:	1056
Title of Invention:	SYSTEM WITH WIRELESS EARPHONES
First Named Inventor/Applicant Name:	Michael J. Koss
Customer Number:	26285
Filer:	Mark G. Knedeisen/Amanda Kernan
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Attorney Docket Number:	080188PCTUSCON10
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Authorized User	Amanda Kernan

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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.

Electronic Patent Application Fee Transmittal

Application Number:	16375879			
Filing Date:	05-Apr-2019			
Title of Invention:	SYSTEM WITH WIRELESS EARPHONES			
First Named Inventor/Applicant Name:	Michael J. Koss			
Filer:	Mark G. Knedeisen/Amanda Kernan			
Attorney Docket Number:	080188PCTUSCON10			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
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:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	120	120
Total in USD (\$)				120

Electronic Acknowledgement Receipt

EFS ID:	36942015
Application Number:	16375879
International Application Number:	
Confirmation Number:	1056
Title of Invention:	SYSTEM WITH WIRELESS EARPHONES
First Named Inventor/Applicant Name:	Michael J. Koss
Customer Number:	26285
Filer:	Mark G. Knedeisen/Amanda Kernan
Filer Authorized By:	Mark G. Knedeisen
Attorney Docket Number:	080188PCTUSCON10
Receipt Date:	21-AUG-2019
Filing Date:	05-APR-2019
Time Stamp:	17:05:05
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$120
RAM confirmation Number	E20198KH05286612
Deposit Account	021818
Authorized User	Amanda Kernan

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		8-21-2019-Supplemental-IDS.pdf	213991 73dcb1a5c86f829ddf01c880058517e0a46e3f8a	yes	2

Multipart Description/PDF files in .zip description					
Document Description			Start	End	
Transmittal Letter			1	1	
Information Disclosure Statement (IDS) Form (SB08)			2	2	

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30535 584a59396a958551472405170003e84d1c027c2a	no	2
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Warnings:

Information:

Total Files Size (in bytes):	244526
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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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Koss Corporation)
)
Inventors: Michael J. Koss et al.) **Examiner:** Kiet M. Doan
)
Serial No.: 16/375,879) **Art Unit:** 2641
)
Filing Date: April 5, 2019) **Atty. Docket No.** 080188PCTUSCON10

Title: SYSTEM WITH WIRELESS EARPHONES

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Dear Commissioner:

Applicant, in accordance with its duty of disclosure pursuant to 37 C.F.R. § 1.56, hereby advises the United States Patent and Trademark Office of the references listed on the accompanying form PTO/SB/08.

Applicant notes that although the cited references may be relevant to the examination of the above-referenced application, under 37 C.F.R. § 1.97(h), the filing of this *Information Disclosure Statement* “shall not be construed to be an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in § 1.56(b).” Applicant further notes that the filing of this *Information Disclosure Statement* is not an admission that the references cited herein constitutes prior art under 35 U.S.C. §§ 102-103 with respect to the captioned application.

As an Office Action has issued with respect to the referenced application, the Commissioner is hereby authorized to charge the appropriate fee(s) to Account No. 02-1818 for considering this Information Disclosure Statement.

Respectfully submitted,

Date: August 21, 2019

/Mark G. Knedeisen/
 Mark G. Knedeisen
 Reg. No. 42,747

K&L GATES LLP
 K&L Gates Center
 210 Sixth Avenue
 Pittsburgh, Pennsylvania 15222

Ph. (412) 355-6342
 Fax (412) 355-6501

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Koss Corporation) **Examiner:** Doan, Kiet M.
)
Inventor(s): Michael J. Koss, et al.) **Art Unit:** 2641
)
Application No.: 16/375,879) **Atty. Docket No.** 080188PCTUSCON10
)
Filing Date: April 5, 2019) **Conf. No.:** 1056

Title: SYSTEM WITH WIRELESS EARPHONES

AMENDMENT

K&L Gates, LLP
Pittsburgh, PA 15222
August 22, 2019

VIA EFS (WEB)

Mail Stop Amendment
Commissioner for Patents
Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

In response to the Office Action mailed June 28, 2019 for the above-referenced application (“Subject Application”), Applicant responds as follows, wherein:

Amendments to the Claims begin on page 2; and

Remarks begin on page 16.

Amendments to the Claims

Please amend the claims as follows. The following is a complete listing of the claims that replaces all previous versions.

1. (Canceled)

2. (Currently Amended) A headphone assembly comprising:
first and second earphones, wherein each of the first and second earphones comprises an acoustic transducer; and
an antenna for receiving wireless signals from a mobile, digital audio player via one or more ad hoc wireless communication links;
a wireless communication circuit connected to the antenna, wherein the wireless communication circuit is for receiving and transmitting wireless signals to and from the headphone assembly;
a processor;
a memory for storing firmware that is executed by the processor;
a rechargeable battery for powering the headphone assembly; and
a microphone for picking up utterances by a user of the headphone assembly; and
wherein the headphone assembly is configured to play, by the first and second earphones, digital audio content transmitted by the mobile, digital audio player via the one or more ad hoc wireless communication links; ~~and~~
wherein the processor is configured to, upon activation of a user-control of the headphone assembly, initiate transmission of a request to a remote, network-connected server that is in wireless communication with the mobile, digital audio player; and
wherein the headphone assembly is for receiving firmware upgrades transmitted from the remote, network-connected server.

3. (Previously Presented) The headphone assembly of claim 2, wherein:
in a first audio play mode, the first and second earphones play audio content stored on a mobile, digital audio player and transmitted to the headphone assembly from the mobile, digital audio player via the one or more ad hoc wireless communication links; and

in a second audio play mode, the earphones play audio content streamed from the remote, network-connected server.

4. (Previously Presented) The headphone assembly of claim 2, wherein the processor is for: processing audible utterances by the user picked up by the microphone in response to activation of the microphone by the user; and transmitting a communication based on the audible utterances via the one or more ad hoc wireless communication links.

5. (Previously Presented) The headphone assembly of claim 3, wherein the processor is for: processing audible utterances by the user picked up by the microphone in response to activation of the microphone by the user; and transmitting a communication based on the audible utterances via the one or more ad hoc wireless communication links.

6. (Previously Presented) The headphone assembly of claim 2, wherein upon activation of the microphone by the user, data are transmitted about the headphone assembly to a remote device.

7. (Previously Presented) The headphone assembly of claim 2, wherein: the mobile, digital audio player is a first digital audio source; the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

8. (Currently Amended) The A headphone assembly comprising of claim 3, wherein: first and second earphones, wherein each of the first and second earphones comprises an acoustic transducer; and

an antenna for receiving wireless signals from a mobile, digital audio player via one or more ad hoc wireless communication link, wherein the mobile, digital audio player is a first digital audio source;
a wireless communication circuit connected to the antenna, wherein the wireless communication circuit is for receiving and transmitting wireless signals to and from the headphone assembly;
a processor;
a rechargeable battery for powering the headphone assembly; and
a microphone for picking up utterances by a user of the headphone assembly; and
wherein the headphone assembly is configured to play, by the first and second earphones, digital audio content transmitted by the mobile, digital audio player via the one or more ad hoc wireless communication links;
wherein the processor is configured to, upon activation of a user-control of the headphone assembly, initiate transmission of a request to a remote, network-connected server that is in wireless communication with the mobile, digital audio player; and
wherein the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

9. (Previously Presented) The headphone assembly of claim 4, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

10. (Previously Presented) The headphone assembly of claim 5, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a

signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

11. (Currently Amended) The headphone assembly of claim 2, wherein the headphone assembly is for receiving firmware upgrades wirelessly ~~transmitted from the remote, network-connected server.~~

12. (Currently Amended) The headphone assembly of claim ~~[[3]]~~ 2, wherein:
the wireless communication circuit is located in the first earphone; and
the headphone assembly further comprises a connection wire between the first and second earphones to carry the received digital audio content from the first earphone to the second earphone.

13. (Currently Amended) The headphone assembly of claim ~~[[2]]~~ 8, wherein:
in a first audio play mode, the first and second earphones play audio content stored on the mobile, digital audio player and transmitted to the headphone assembly from the mobile, digital audio player via the one or more ad hoc wireless communication links; and
in a second audio play mode, the earphones play audio content streamed from the remote, network-connected server.

14. (Previously Presented) The headphone assembly of claim 12, wherein the processor is for:
processing audible utterances by the user picked up by the microphone in response to activation of the microphone by the user; and
transmitting a communication based on the audible utterances via the one or more ad hoc wireless communication links.

15. (Previously Presented) The headphone assembly of claim 13, wherein the processor is for:
processing audible utterances by the user picked up by the microphone in response to activation of the microphone by the user; and

transmitting a communication based on the audible utterances via the one or more ad hoc wireless communication links.

16. (Currently Amended) The headphone assembly of claim [[2]] 8, wherein upon activation of the microphone by the user, data are transmitted about the headphone assembly to a remote device.

17. (Previously Presented) The headphone assembly of claim 12, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

18. (Canceled)

19. (Previously Presented) The headphone assembly of claim 14, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

20. (Canceled)

21. (Previously Presented) The headphone assembly of claim 12, wherein the headphone assembly further comprises a headband, and wherein the headband carries the connection wire.

22. (Previously Presented) The headphone assembly of claim 21, wherein:

in a first audio play mode, the first and second earphones play audio content stored on the mobile, digital audio player and transmitted to the headphone assembly from the mobile, digital audio player via the one or more ad hoc wireless communication links; and in a second audio play mode, the earphones play audio content streamed from the remote, network-connected server.

23. (Previously Presented) The headphone assembly of claim 21, wherein the processor is for:
processing audible utterances by the user picked up by the microphone in response to activation of the microphone by the user; and
transmitting a communication based on the audible utterances via the one or more ad hoc wireless communication links.

24. (Previously Presented) The headphone assembly of claim 22, wherein the processor is for:
processing audible utterances by the user picked up by the microphone in response to activation of the microphone by the user; and
transmitting a communication based on the audible utterances via the one or more ad hoc wireless communication links.

25. (Previously Presented) The headphone assembly of claim 21, wherein upon activation of the microphone by the user, data are transmitted about the headphone assembly to a remote device.

26. (Previously Presented) The headphone assembly of claim 21, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

27. (Previously Presented) The headphone assembly of claim 22, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a
second digital audio source via a second wireless communication link based on, at least, a
signal strength level for the second wireless communication link, wherein the second digital
audio source is different from the first digital audio source.
28. (Previously Presented) The headphone assembly of claim 23, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a
second digital audio source via a second wireless communication link based on, at least, a
signal strength level for the second wireless communication link, wherein the second digital
audio source is different from the first digital audio source.
29. (Previously Presented) The headphone assembly of claim 24, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a
second digital audio source via a second wireless communication link based on, at least, a
signal strength level for the second wireless communication link, wherein the second digital
audio source is different from the first digital audio source.
30. (Previously Presented) The headphone assembly of claim 12, wherein each of the first
and second earphones further comprises:
an adjustable, curved hanger bar that sits upon an upper external curvature of the user's ear,
behind an upper portion of an auricula of the user's ear, when the headphone assembly is
worn by the user; and
a body connected to the hanger bar, wherein the earphone extends from the body into the user's
ear when the headphone assembly is worn by the user.
31. (Previously Presented) The headphone assembly of claim 30, wherein:

in a first audio play mode, the first and second earphones play audio content stored on the mobile, digital audio player and transmitted to the headphone assembly from the mobile, digital audio player via the one or more ad hoc wireless communication links; and in a second audio play mode, the earphones play audio content streamed from the remote, network-connected server.

32. (Previously Presented) The headphone assembly of claim 30, wherein the processor is for:
processing audible utterances by the user picked up by the microphone in response to activation of the microphone by the user; and
transmitting a communication based on the audible utterances via the one or more ad hoc wireless communication links.

33. (Previously Presented) The headphone assembly of claim 31, wherein:
processing audible utterances by the user picked up by the microphone in response to activation of the microphone by the user; and
transmitting a communication based on the audible utterances via the one or more ad hoc wireless communication links.

34. (Previously Presented) The headphone assembly of claim 30, wherein upon activation of the microphone by the user, data are transmitted about the headphone assembly to a remote device.

35. (Previously Presented) The headphone assembly of claim 30, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

36. (Previously Presented) The headphone assembly of claim 31, wherein:

the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

37. (Previously Presented) The headphone assembly of claim 32, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

38. (Previously Presented) The headphone assembly of claim 33, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

39. (Canceled)

40. (Currently Amended) The headphone assembly of claim ~~[[12]]~~ 41, wherein each of the first and second earphones comprise earbuds.

41. (Currently Amended) The headphone assembly of claim 2, wherein:
the wireless circuit comprises first and second wireless ~~circuit~~ circuits;
the first wireless circuit is in the first earphone; and
the second wireless circuit is in the second earphone.

42. (Previously Presented) The headphone assembly of claim 40, wherein each of the first and second earphones comprises:

a body portion that sits at least partially in an ear of the user when the headphone assembly is worn by the user; and
an elongated portion that extends from the body portion.

43. (Previously Presented) The headphone assembly of claim 42, wherein at least one of the first and second earphones is charged by a docking station.

44. (Previously Presented) The headphone assembly of claim 43, wherein:
in a first audio play mode, the first and second earphones play audio content stored on a mobile, digital audio player and transmitted to the headphone assembly from the mobile, digital audio player via the one or more ad hoc wireless communication links; and
in a second audio play mode, the earphones play audio content streamed from the remote, network-connected server.

45. (Previously Presented) The headphone assembly of claim 43, wherein the processor is for:
processing audible utterances by the user picked up by the microphone in response to activation of the microphone by the user; and
transmitting a communication based on the audible utterances via the one or more ad hoc wireless communication links.

46. (Previously Presented) The headphone assembly of claim 44, wherein the processor is for:
processing audible utterances by the user picked up by the microphone in response to activation of the microphone by the user; and
transmitting a communication based on the audible utterances via the one or more ad hoc wireless communication links.

47. (Currently Amended) The headphone assembly of claim ~~[[41]]~~ 40, wherein each of the first and second earphones further comprises:

an adjustable, curved hanger bar that sits upon an upper external curvature of the user's ear, behind an upper portion of an auricula of the user's ear, when the headphone assembly is worn by the user; and

a body connected to the hanger bar, wherein the earphone extends from the body into the user's ear when the headphone assembly is worn by the user.

48. (Previously Presented) The headphone assembly of claim 47, wherein at least one of the first and second earphones is charged by a docking station.

49. (Previously Presented) The headphone assembly of claim 47, wherein:

the mobile, digital audio player is a first digital audio source;

the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source

50. (Currently Amended) The headphone assembly of claim ~~[[2]]~~ 47, wherein upon activation of the microphone by the user, data are transmitted about the headphone assembly to a remote device.

51. (Previously Presented) The headphone assembly of claim 42, wherein:

the mobile, digital audio player is a first digital audio source;

the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

52. (Previously Presented) The headphone assembly of claim 44, wherein:

the mobile, digital audio player is a first digital audio source;

the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

53. (Previously Presented) The headphone assembly of claim 45, wherein:
the mobile, digital audio player is a first digital audio source;
the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

54. (Currently Amended) The headphone assembly of claim [[41]] 8, wherein the headphone assembly is for receiving firmware upgrades transmitted from the remote, network-connected server.

55. (Previously Presented) The headphone assembly of claim 2, wherein the headphone assembly further comprises first and second integrated circuits, wherein the first integrated circuit comprises the wireless communication circuit and the second integrated circuit, which is separate from the first integrated circuit, comprises the processor.

56. (Previously Presented) The headphone assembly of claim 2, wherein each of the first and second earphones further comprises:
an adjustable, curved hanger bar that sits upon an upper external curvature of the user's ear, behind an upper portion of an auricula of the user's ear, when the headphone assembly is worn by the user; and
a body connected to the hanger bar, wherein the earphone extends from the body into the user's ear when the headphone assembly is worn by the user.

57. (Previously Presented) The headphone assembly of claim 2, wherein each of the first and second earphones comprise earbuds.

58. (Previously Presented) The headphone assembly of claim 2, wherein each of the first and second earphones comprise on-ear speaker elements.

59. (Previously Presented) The headphone assembly of claim 2, wherein each of the first and second earphones comprise over-ear speaker elements.

60. (Previously Presented) The headphone assembly of claim 47, wherein the headphone assembly is for receiving firmware upgrades transmitted from the remote, network-connected server.

61. (New) The headphone assembly of claim 2, wherein the processor comprises a digital signal processor that provides a sound quality enhancement for the audio content played by the acoustic transducers.

62. (New) The headphone assembly of claim 61, further comprising a baseband processor circuit that is in communication with the wireless communication circuit.

63. (New) The headphone assembly of claim 2, wherein each of the first and second earphones comprise:

an antenna for receiving wireless signals from the mobile, digital audio player via the one or more ad hoc wireless communication links;

a wireless communication circuit connected to the antenna, wherein the wireless communication circuit is for receiving and transmitting wireless signals to and from the headphone assembly;

a processor;

a memory for storing firmware that is executed by the processor; and

a rechargeable battery for powering the headphone assembly.

64. (New) The headphone assembly of claim 63, wherein each of the first and second earphones comprise an earbud.

65. (New) The headphone assembly of claim 64, wherein the processor of each of the first and second earphones comprises a digital signal processor that provides a sound quality enhancement for the audio content played by the acoustic transducer of the earphone.

66. (New) The headphone assembly of claim 65, wherein the processor of each of the first and second earphones comprises a baseband processor circuit that is in communication with the wireless communication circuit of the earphone.

REMARKS

Examiner Interview

On August 21, 2019, Applicant's undersigned attorney of record conducted a telephonic interview with Examiner Doan. The participants discussed the pending obviousness-type double patenting (ODP) and obviousness rejections. The participants also discussed proposed amendments to claims 2 and 8 that are identical to the amendments to claims 2 and 8 herein. Examiner Doan stated that, provided Applicant overcomes the ODP rejections by appropriate filing terminal disclaimers, he would allow claims 2 and 8 as amended. Applicant thanks Examiner Doan for his comments and indications of allowability for amended claims 2 and 8.

Overview of Claim Amendments

In this Amendment, Applicant has amended independent claim 2 to include the subject matter of original claim 11 and amended claim 8 to be an independent claim. Also, Applicant made the following amendments to the claims:

- Claim 11 is amended to recite that the headphone assembly receives the firmware upgrades "wirelessly";
- Claim 12 is amended to depend from claim 2;
- Claims 13,16 and 54 are amended to depend from claim 8;
- Claim 40 is amended to depend from claim 41;
- Claim 41 is amended to correct a clerical error;
- Claim 46 is amended to depend from claim 40;
- Claim 50 is amended to depend from claim 47; and
- Claims 61-66 are added as new claims.

Support for the claim amendments and the new claims can be found throughout the Subject Application as originally filed; no new matter is added. The amendments are made without prejudice or disclaimer. Additionally, claims 18, 20, 39 are canceled without prejudice or disclaimer.

Applicant traverses the rejections and submits that the presently pending claims are in condition for allowance for the reasons set forth below.

ODP Rejections

The Office Action rejected original claim 2 for ODP over, separately, the following U.S. patents owned by Koss Corporation:

1. 8,190,203
2. 8,571,544
3. 9,049,502
4. 8,655,420
5. 9,438,987
6. 9,497,535
7. 9,729,959
8. 9,986,325
9. 10,206,025

Applicant (Koss Corporation) has filed a terminal disclaimer for each of these commonly owned patents. Applicant filed a terminal disclaimer for Pat. 10,206,025 on April 8, 2019 and filed an e-petition terminal disclaimer for patents 1-8 on the list above on August 21, 2019. The terminal disclaimers are filed without prejudice or disclaimer.

In light of the terminal disclaimers, the ODP rejections should be withdrawn.

Section 103 Rejections

The Office Action rejected original claims 2-42, 44-47 and 49-60 as being obvious under § 103(a) in view of Lair (Pub. 2009/0029743) in view of Rezvani (Pub. 2007/0136446). Claims 43 and 48 were rejected as being obvious over Lair, Rezvani and Goldman (Pub. 2011/0275323).

Without prejudice or disclaimer, and in order to expedite prosecution and allowance, Applicant has amended independent claim 2 to clarify that the headphone assembly comprises “a memory for storing firmware that is executed by the processor” and that the headphone assembly “is for receiving firmware upgrades transmitted from the remote, network-connected server.” Support for the amendments may be found at ¶¶ [0025] and [0033], for example, of the Subject Application as originally filed. The cited prior art does not disclose, teach or suggest a headphone assembly that comprises “a memory for storing firmware that is executed by the processor” and where the headphone assembly “is for receiving firmware upgrades transmitted from the remote, network-connected server.” Therefore, amended claim 2 is nonobvious, along

with the claims that depend from it. *See* MPEP § 2143.03 (“If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious.”)

Original dependent claim 8 is amended to be a dependent claim (without reciting that headphone assembly comprises “a memory for storing firmware that is executed by the processor” and that the headphone assembly “is for receiving firmware upgrades transmitted from the remote, network-connected server). Independent claim 8, as amended, states that the headphone assembly “transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.” The cited prior art does not disclose, teach or suggest a headphone assembly that transitions from one source to another as set forth in amended claim 8. Therefore, amended claim 8 is nonobvious, along with the claims that depend from it. *See* MPEP § 2143.03 (“If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious.”)

New Claims 61-66

New claims 61-66 are dependent claims that depend, either directly or indirectly, from independent and nonobvious claim 2. At least by virtue of their dependence upon claim 2, new claims 61-66 are nonobvious.

CONCLUSION

In view of the foregoing remarks, Applicant respectfully submits that all of the claims presented in the present application are in condition for allowance. Applicant’s present response should not in any way be taken as acquiescence to any of the specific assertions, statements, etc., presented in the Office Action not explicitly addressed herein, including the rejections of the dependent claims. Applicant reserves the right to address specifically all such assertions and statements in subsequent responses. Applicant also reserves the right to seek claims of a broader or different scope in a continuation application.

Applicant has made a diligent effort to properly respond to the Office Action and believes that the claims are in condition for allowance. If the Examiner has any remaining concerns, the

Examiner is invited to contact the undersigned at the telephone number set forth below so that such concerns may be expeditiously addressed.

Respectfully submitted,

Date: August 22, 2019

/Mark G. Knedeisen/
Mark G. Knedeisen
Reg. No. 42,747

K&L GATES LLP
K&L Gates Center
210 Sixth Ave.
Pittsburgh, Pennsylvania 15222

Ph. (412) 355-6342
Fax (412) 355-6501
email: mark.knedeisen@klgates.com

Electronic Patent Application Fee Transmittal

Application Number:	16375879			
Filing Date:	05-Apr-2019			
Title of Invention:	SYSTEM WITH WIRELESS EARPHONES			
First Named Inventor/Applicant Name:	Michael J. Koss			
Filer:	Mark G. Knedeisen/Theresa Merante			
Attorney Docket Number:	080188PCTUSCON10			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	2202	3	50	150
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				150

Electronic Acknowledgement Receipt

EFS ID:	36946620
Application Number:	16375879
International Application Number:	
Confirmation Number:	1056
Title of Invention:	SYSTEM WITH WIRELESS EARPHONES
First Named Inventor/Applicant Name:	Michael J. Koss
Customer Number:	26285
Filer:	Mark G. Knedeisen/Theresa Merante
Filer Authorized By:	Mark G. Knedeisen
Attorney Docket Number:	080188PCTUSCON10
Receipt Date:	22-AUG-2019
Filing Date:	05-APR-2019
Time Stamp:	13:03:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$150
RAM confirmation Number	E20198LD03596393
Deposit Account	021818
Authorized User	Theresa Merante

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	Amendment_Transmittal.pdf	128988	no	4
			dcd393547a009fef6582277151a4fe6abd30aba9		
Warnings:					
Information:					
2		Amendment.pdf	177537	yes	19
			c7a77bc4f67e66fde4e6bc6cf96507ee06d1fecd		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment/Req. Reconsideration-After Non-Final Reject		1	1	
	Claims		2	15	
	Applicant Arguments/Remarks Made in an Amendment		16	19	
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30347	no	2
			74f6c29098bbf693ba82bfacc7394d8451f8625		
Warnings:					
Information:					
Total Files Size (in bytes):			336872		

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Koss Corporation) **Examiner:** Doan, Kiet M.
)
Inventor(s): Michael J. Koss, et al.) **Art Unit:** 2641
)
Application No.: 16/375,879) **Atty. Docket No.** 080188PCTUSCON10
)
Filing Date: April 5, 2019) **Conf. No.:** 1056

Title: SYSTEM WITH WIRELESS EARPHONES

VIA EFS-Web

August 22, 2019

**Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**

AMENDMENT TRANSMITTAL

1. Transmitted herewith is an amendment for this application.

STATUS

2. Applicant is

A statement that this filing is by a small entity is hereby asserted in accordance with the rule change effective September 8, 2000, 65 Fed. Reg. 54603.

other than a small entity.

EXTENSION OF TERM

NOTE: "Extension of Time in Patent Cases (Supplement Amendments) - If a timely and complete response has been filed after a Non-Final Office Action, an extension of time is not required to permit filing and/or entry of an additional amendment after expiration of the shortened statutory period.

If a timely response has been filed after a Final Office Action, an extension of time is required to permit filing and/or entry of a Notice of Appeal or filing and/or entry of an additional amendment after expiration of the shortened statutory period unless the timely-filed response placed the application in condition for allowance. Of course, if a Notice of Appeal has been filed within the shortened statutory period, the period has ceased to run." Notice of December 10, 1985 (1061 O.G. 34-35).

NOTE: See 37 CFR 1.645 for extensions of time in interference proceedings, and 37 CFR 1.550(c) for extensions of time in reexamination proceedings.

3. The proceedings herein are for a patent application and the provisions of 37 CFR 1.136 apply.

(complete (a) or (b), as applicable)

(a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

<u>Extension (months)</u>	<u>Fee for other than small entity</u>	<u>Fee for small entity</u>
<input type="checkbox"/> one month	\$ 200.00	\$ 100.00
<input type="checkbox"/> two months	\$ 600.00	\$ 300.00
<input type="checkbox"/> three months	\$1,400.00	\$ 700.00
<input type="checkbox"/> four months	\$2,200.00	\$ 1,100.00

Fee: \$

If an additional **extension** of time is required, please consider this a petition therefor.

(check and complete the next item, if applicable)

An extension for _____ months has already been secured and the fee paid therefor of \$_____ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request **\$**

OR

(b) Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

FEE FOR CLAIMS

4. The fee for claims (37 CFR 1.16(b)-(d) has been calculated as shown below:

(Col. 1)	(Col. 2)	(Col. 3)	SMALL ENTITY			OTHER THAN A SMALL ENTITY	
CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NO PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDIT. FEE	OR	RATE	ADDIT. FEE
TOTAL 62•	MINUS 59••	=3	X50=	\$150		X100=	\$0
INDEP. 2•	MINUS 3•••	=0	X230=	\$0		X460=	\$0
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEP. CLAIM			+410=	\$0		+820=	\$0
				TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE
				\$150			\$0

- If the entry in Col. 1 is less than entry in Col. 2, write “)” in Col. 3.
- If the “Highest No. Previously Paid for” IN THIS SPACE is less than 20, enter “20.”
- If the “Highest No. Previously Paid for” IN THIS SPACE is less than 3, enter “3.”
The “Highest No. Previously Paid for” (Total or indep.) is the highest number found in the appropriate box in Col. 1 of a prior amendment or the number of claims originally filed.

WARNING “After final rejection or action (§ 1.113) amendments may be made cancelling claims or complying with any requirement of form which has been made.” 37 CFR § 1.116(a) (emphasis added).

Complete (c) or (d), as applicable)

(c) No additional fee for claims is required.

OR

(d) Total additional fee for claims required \$ 150.00

FEE PAYMENT

5. Attached is a check in the sum of \$ _____

Charge Account No. 02-1818 the sum of \$150.00

FEE DEFICIENCY

NOTE: If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to charge the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, (1065 O.G. 31-33).

- 6. If any additional extension and/or fee is required, charge Account No. 02-1818.

AND/OR

- 7. If any additional fee for claims is required, charge Account No. 02-1818.

/Mark G. Knedeisen/
SIGNATURE OF ATTORNEY

Reg. No.: 42,747
Tel. No.: 412-355-6342
Customer No. 26285

Mark G. Knedeisen
(type or print name of attorney)
K&L Gates LLP
P.O. Address
K&L Gates Center
210 Sixth Avenue
Pittsburgh, PA 15222-2613

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875		Application or Docket Number 16/375,879	Filing Date 04/05/2019	<input type="checkbox"/> To be Mailed
ENTITY: <input type="checkbox"/> LARGE <input checked="" type="checkbox"/> SMALL <input type="checkbox"/> MICRO				
APPLICATION AS FILED - PART I				
	(Column 1)	(Column 2)		
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(j))	minus 20 = *		x \$50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 = *		x \$230 =	
<input type="checkbox"/> 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).			
<input type="checkbox"/> 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	08/22/2019 CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$) ADDITIONAL FEE (\$)
Total (37 CFR 1.16(i))	* 62	Minus ** 59	= 3	x \$50 = 150
Independent (37 CFR 1.16(h))	* 2	Minus *** 3	= 0	x \$230 = 0
<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))				
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))				
				TOTAL ADD'L FEE
				150
	(Column 1)	(Column 2)	(Column 3)	
AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$) ADDITIONAL FEE (\$)
Total (37 CFR 1.16(i))	*	Minus **	=	x \$0 =
Independent (37 CFR 1.16(h))	*	Minus ***	=	x \$0 =
<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))				
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))				
				TOTAL ADD'L FEE
				LIE
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.				/KIMBERLY N PANNELL/
** 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.				

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/375,879	04/05/2019	Michael J. Koss	080188PCTUSCON10	1056
26285	7590	08/26/2019	EXAMINER	
K&L GATES LLP-Pittsburgh 210 SIXTH AVENUE PITTSBURGH, PA 15222-2613			DOAN, KIET M	
			ART UNIT	PAPER NUMBER
			2641	
			NOTIFICATION DATE	DELIVERY MODE
			08/26/2019	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):

USpatentmail@klgates.com

<i>Applicant-Initiated Interview Summary</i>	Application No. 16/375,879	Applicant(s) Koss et al.	
	Examiner KIET M DOAN	Art Unit 2641	AIA (FITF) Status No

All participants (applicant, applicants representative, PTO personnel):

(1) KIET M. DOAN. (3) ____.

(2) Mark Knedeisen. (4) ____.

Date of Interview: 21 August 2019.

Type: Telephonic Video Conference
 Personal [copy given to: applicant applicant's representative]

Exhibit shown or demonstration conducted: Yes No.
If Yes, brief description: ____.

Issues Discussed 101 112 102 103 Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 2 and 8.

Identification of prior art discussed: N/A.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

The examiner discussed with Applicant Representative Mark Knedeisen regarding the proposed amendment, wherein the examiner accept the proposed amendment and request the Terminal Disclaimer file according to the Double patenting rejection on 06/28/2019 in order to place Application for condition of allowance..

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Attachment

/KIET M DOAN/ Primary Examiner, Art Unit 2641	
--	--

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiners responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicants correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted, -
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicants record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiners version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, Interview Record OK on the paper recording the substance of the interview along with the date and the examiners initials.



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

26285 7590 09/05/2019
K&L GATES LLP-Pittsburgh
210 SIXTH AVENUE
PITTSBURGH, PA 15222-2613

EXAMINER

DOAN, KIET M

ART UNIT PAPER NUMBER

2641

DATE MAILED: 09/05/2019

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Values: 16/375,879, 04/05/2019, Michael J. Koss, 080188PCTUSCON10, 1056

TITLE OF INVENTION: SYSTEM WITH WIRELESS EARPHONES

Table with 7 columns: APPLN. TYPE, ENTITY STATUS, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE. Values: nonprovisional, SMALL, \$500, \$0.00, \$0.00, \$500, 12/05/2019

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: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450

By fax, send to: (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)

26285 7590 09/05/2019
 K&L GATES LLP-Pittsburgh
 210 SIXTH AVENUE
 PITTSBURGH, PA 15222-2613

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.

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 transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

_____ (Typed or printed name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/375,879	04/05/2019	Michael J. Koss	080188PCTUSCON10	1056

TITLE OF INVENTION: SYSTEM WITH WIRELESS EARPHONES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$500	\$0.00	\$0.00	\$500	12/05/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
DOAN, KIET M	2641	455-428000

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. Use of a Customer Number is required.</p>	<p>2. For printing on the patent front page, list</p> <p>(1) The names of up to 3 registered patent attorneys or agents OR, alternatively, _____ 1</p> <p>(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</p> <p>_____ 3</p>
---	---

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 must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). 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. Fees submitted: Issue Fee Publication Fee (if required) Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

Electronic Payment via EFS-Web Enclosed check Non-electronic payment by credit card (Attach form PTO-2038)

The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

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
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes application details for Michael J. Koss and examiner information for Doan, Kiet M.

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 30 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. 16/375,879	Applicant(s) Koss et al.	
	Examiner KIET M DOAN	Art Unit 2641	AIA (FITF) 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 08/26/2019.
 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 See Continuation Sheet. 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. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Examiner's Amendment/Comment |
| 2. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____. | 6. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| 3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material _____. | 7. <input type="checkbox"/> Other _____. |
| 4. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date. _____. | |

/KIET M DOAN/
Primary Examiner, Art Unit 2641

Continuation of 3. The allowed claim(s) is/are: 2-17,19,21-38 and 40-66

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 08/19/2019 and 08/21/2019. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

Claims 2-17, 19, 21-38 and 40-66 are allowance, according to Applicant Remark filed on 08/26/2019 and Terminal Disclaimer filed and approved.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIET M DOAN whose telephone number is (571)272-7863. The examiner can normally be reached on M-F 9:30am-5:30pm.


Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an

interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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.

/KIET M DOAN/
Primary Examiner, Art Unit 2641


<i>Index of Claims</i> 	Application/Control No. 16/375,879	Applicant(s)/Patent Under Reexamination Koss et al.
	Examiner KIET M DOAN	Art Unit 2641

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS									
<input type="checkbox"/> Claims renumbered in the same order as presented by applicant <input type="checkbox"/> CPA <input checked="" type="checkbox"/> T.D. <input type="checkbox"/> R.1.47									
CLAIM		DATE							
Final	Original	06/24/2019	08/29/2019						
	1	✓	-						
1	2	✓	=						
2	3	✓	=						
5	4	✓	=						
3	5	✓	=						
7	6	✓	=						
8	7	✓	=						
58	8	✓	=						
6	9	✓	=						
4	10	✓	=						
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10	12	✓	=						
59	13	✓	=						
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60	15	✓	=						
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13	17	✓	=						
	18	✓	-						
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	20	✓	-						
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19	23	✓	=						
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21	25	✓	=						
22	26	✓	=						
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17	29	✓	=						
23	30	✓	=						
24	31	✓	=						
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25	33	✓	=						
30	34	✓	=						
31	35	✓	=						
27	36	✓	=						
29	37	✓	=						
26	38	✓	=						
	39	✓	-						
33	40	✓	=						
32	41	✓	=						
34	42	✓	=						

<i>Index of Claims</i> 	Application/Control No. 16/375,879	Applicant(s)/Patent Under Reexamination Koss et al.
	Examiner KIET M DOAN	Art Unit 2641

CLAIM		DATE							
Final	Original	06/24/2019	08/29/2019						
35	43	✓	=						
36	44	✓	=						
39	45	✓	=						
37	46	✓	=						
42	47	✓	=						
43	48	✓	=						
44	49	✓	=						
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52	61		=						
53	62		=						
54	63		=						
55	64		=						
56	65		=						
57	66		=						

<i>Search Notes</i> 	Application/Control No. 16/375,879	Applicant(s)/Patent Under Reexamination Koss et al.
	Examiner KIET M DOAN	Art Unit 2641


CPC - Searched*		
Symbol	Date	Examiner
H04R2201/107	06/24/2019	KD
H04R3/00	06/24/2019	KD

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
455	466	06/24/2019	KD
	41.2	06/24/2019	KD
	556.1	06/24/2019	KD
	421	06/24/2019	KD
	569.1	06/24/2019	KD
	575.2	06/24/2019	KD
	553.1	06/24/2019	KD
381	58	06/24/2019	KD
	309	06/24/2019	KD
	74	06/24/2019	KD
	update search	08/29/2019	KD
381	312	08/29/2019	KD
700	94	08/29/2019	KD

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.


/KIET M DOAN/ Primary Examiner, Art Unit 2641	
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<i>Search Notes</i> 	Application/Control No. 16/375,879	Applicant(s)/Patent Under Reexamination Koss et al.
	Examiner KIET M DOAN	Art Unit 2641

Search Notes		
Search Notes	Date	Examiner
Inventor search	06/24/2019	KD
East search	06/24/2019	KD
(earphone earcup headset headphone earbud (head near phone) (head near set)) with acoustic\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 and @ad<"20101010"	06/24/2019	KD
(earphone earcup headset headphone earbud (head near phone) (head near set)) with (transduc\$3 acoustic\$1) and (earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with request\$3 with (server\$1 (base near station)) and @ad<"20101010"	06/24/2019	KD
((H04M1/6066 OR H04M1/2535 OR H04M1/72558 OR H04R2201/107 OR H04R25/554 OR H04R3/00 OR H04R5/033).CPC.)	06/24/2019	KD
((H04W4/70 OR H04W4/80 OR H04W8/005 OR H04W88/02 OR G06F3/167 OR G06F17/28 OR G06F17/27 OR G06F1/1605 OR H04B5/02 OR H04L2012/2841 OR H04L2012/2849 OR H04L65/1069).CPC.)	06/24/2019	KD
(earphone earcup headset headphone earbud) with upgrad\$3 with (firmware software) and @ad<"20080202"	08/29/2019	KD
(earphone earcup headset headphone earbud) with upgrad\$3 with (firmware software) with (server network (base near station)).clm.	08/29/2019	KD
(G06F8/65 OR H04R5/033 OR H04M1/6041 OR H04M2250/02 OR G10K2210/1081).CPC.)	08/29/2019	KD
update search	08/29/2019	KD

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
381	57	06/24/2019	KD


/KIET M DOAN/ Primary Examiner, Art Unit 2641	
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Issue Classification 	Application/Control No. 16/375,879	Applicant(s)/Patent Under Reexamination Koss et al.
	Examiner KIET M DOAN	Art Unit 2641

CPC						
Symbol				Type	Version	
H04R	/	1	/	1041	F	2013-01-01
H04M	/	1	/	0254	I	2013-01-01
H04R	/	5	/	033	I	2013-01-01
H04R	/	5	/	04	I	2013-01-01
H03K	/	17	/	9622	I	2013-01-01
H04W	/	4	/	80	I	2018-02-01
H04R	/	1	/	1091	I	2013-01-01
H04R	/	3	/	00	I	2013-01-01
H04W	/	48	/	20	I	2013-01-01
H03G	/	3	/	02	I	2013-01-01
H04R	/	1	/	02	I	2013-01-01
H04H	/	20	/	95	I	2013-01-01
H04L	/	61	/	6068	I	2013-01-01
H04R	/	25	/	554	A	2013-01-01
H04R	/	2201	/	103	A	2013-01-01
H04R	/	2225	/	55	A	2013-01-01
H04R	/	2420	/	07	A	2013-01-01
H03K	/	2217	/	960785	A	2013-01-01
H04R	/	2201	/	107	A	2013-01-01
H04W	/	84	/	18	A	2013-01-01
H04W	/	84	/	12	A	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	62	
/KIET M DOAN/ Primary Examiner, Art Unit 2641	29 August 2019	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	2	8


Issue Classification 	Application/Control No. 16/375,879	Applicant(s)/Patent Under Reexamination Koss et al.
	Examiner KIET M DOAN	Art Unit 2641

INTERNATIONAL CLASSIFICATION			
CLAIMED			
H04R		1	1008
NON-CLAIMED			

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	62	
/KIET M DOAN/ Primary Examiner, Art Unit 2641	29 August 2019	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	2	8

Issue Classification 	Application/Control No. 16/375,879	Applicant(s)/Patent Under Reexamination Koss et al.
	Examiner KIET M DOAN	Art Unit 2641

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	4	10	12	19	20	28	29	37	37	46	47	55	55	64
1	2	9	11		20	17	29	26	38	42	47	48	56	56	65
2	3	10	12	14	21	23	30		39	43	48	49	57	37	66
5	4	59	13	15	22	24	31	33	40	44	49	50	58		
3	5	11	14	19	23	28	32	32	41	45	50	51	59		
7	6	60	15	16	24	25	33	34	42	41	51	46	60		
8	7	61	16	21	25	30	34	35	43	38	52	52	61		
58	8	13	17	22	26	31	35	36	44	40	53	53	62		
6	9		18	18	27	27	36	39	45	62	54	54	63		

NONE			Total Claims Allowed:
(Assistant Examiner)	(Date)		62
/KIET M DOAN/ Primary Examiner, Art Unit 2641	29 August 2019	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	2	8

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	81	("20030182003" "20050136839" "20060083388" "20080194209" "20080215777" "20080226094" "6006115" "20040107271" "20050064853" "20050198233" "20060206487" "20060212442" "20060212444" "20060238878" "20060268830" "20070008984" "20070037615" "20070049198" "20070053543" "20070165875" "20070253603" "20070297618" "20080019557" "20080031470" "20080062939" "20080076489" "20080242312" "20080298606" "20080311852" "20090116678" "20090129605" "20090248178" "20100290642" "20130039510" "20130099507" "20150237439" "20170318378" "20180249240" "20190075390" "5784685" "6389463" "6671494" "6674864" "6792091" "6937712" "7003515" "7027311" "7095455" "7099370" "7120388" "7139585" "7266390" "7337027" "7467021" "7512414" "7599679" "7650168" "7680490" "7697899" "7734055" "7764775" "7805210" "7861312" "7962482" "8023663" "8027638" "8055007" "8073137" "8086281" "8102836" "8190203" "8295516" "8335312" "8401202" "8478880" "8483755" "8553865" "8571544" "8655420" "8792945" "9049502").PN.	US-PGPUB; USPAT	OR	OFF	2019/08/29 11:54
L2	68	("20030182003" "20050136839" "20060083388" "20080194209" "20080215777" "20080226094" "6006115" "20040107271" "20050064853" "20050198233" "20060206487" "20060212442" "20060212444" "20060238878" "20060268830" "20070008984" "20070037615" "20070049198" "20070053543" "20070165875" "20070253603" "20070297618" "20080019557" "20080031470" "20080062939" "20080076489" "20080242312" "20080298606" "20080311852" "20090116678" "20090129605" "20090248178" "20100290642" "20130039510" "20130099507" "20150237439" "20170318378" "20180249240"	US-PGPUB; USPAT	OR	OFF	2019/08/29 12:09

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L3	0	2 and firmware with upgrad\$3 with (headphone earpiece)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/08/29 12:11
L4	10	firmware with upgrad\$3 with (headphone earpiece)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/08/29 12:11
L5	72	("20040107271" "20050064853" "20050198233" "20060206487" "20060212442" "20060212444" "20060238878" "20060268830" "20070008984" "20070037615" "20070049198" "20070053543" "20070154050" "20070165875" "20070253603" "20070297618" "20080019557" "20080031470" "20080062939" "20080076489" "20080167088" "20080242312" "20080298606" "20080311852" "20090116678" "20090129605" "20090248178" "20100290642" "20130039510" "20130099507" "20150237439" "20170318378" "5784685" "6389463" "6671494" "6674864" "6792091" "6937712" "7003515" "7027311" "7095455" "7099370" "7120388" "7139585" "7266390" "7337027" "7467021" "7512414" "7599679" "7650168" "7680490" "7697899" "7734055" "7764775" "7805210" "7861312" "7962482" "8023663" "8027638" "8073137" "8102836" "8190203" "8295516" "8335312" "8401202" "8478880" "8483755" "8553865" "8571544" "8655420" "8792945" "9049502").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/08/29 12:23
L6	19	(earphone earcup headset headphone earbud) with upgrad\$3 with (firmware software) and @ad< "20080202"	US-PGPUB; USPAT; USOCR;	OR	ON	2019/08/29 12:24

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
L7	55	("20030110484" "20030217193" "20030217358" "20040015952" "20040107416" "20040199897" "20040240423" "20040243991" "20040254013" "20040254014" "20050055684" "20050064859" "20050081080" "20050144651" "20050160217" "20050246701" "20060092323" "20060136899" "20070033387" "20070100936" "20070207800" "20070271389" "20070294385" "20080270805" "20090063696" "20090113121" "20110047123" "5206863" "5550997" "5594903" "5649187" "5673385" "5784611" "5815722" "5949772" "6047304" "6052753" "6198705" "6263452" "6281929" "6425122" "6467003" "6467087" "6473832" "6748116" "6928108" "6934873" "7069452" "7293203" "7318172" "7409539" "7480907" "7774820" "8160089" "8407526").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/08/29 12:26
L8	3	(earphone earcup headset headphone earbud) with upgrad\$3 with (firmware software) with (server network (base near station)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/08/29 12:28
L9	2	(earphone earcup headset headphone earbud) with upgrad\$3 with (firmware software) with (server network (base near station)) and @ad< "20080505"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/08/29 12:28
L10	10	6 AND ((G06F8/65 OR H04R5/033 OR H04M1/6041 OR H04M2250/02 OR G10K2210/1081).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/08/29 12:31
S1	2	(mobile wireless \$4phone) with out near1 (rang\$4 area) and (mobilw wireless pda \$4phone) with automat\$5 with (chang\$3 convert\$4 divert\$4) with (ip internet digital\$1)	USPAT	OR	OFF	2011/09/19 20:35
S2	10	(mobile wireless \$4phone) with out near1 (rang\$4 area) and (mobile wireless pda \$4phone) with automat\$5 with (chang\$3 convert\$4 divert\$4) with (ip internet digital\$1)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 20:35
S3	0	(mobile wireless \$4phone) with out near1 (rang\$4 area) and (mobile wireless pda \$4phone) with automat\$5	US-PGPUB; USPAT; USOCR;	OR	OFF	2011/09/19 20:42

		with (chang\$3 convert\$4 divert\$4) with (mode state) with network	EPO; JPO; DERWENT			
S4	3	(mobile wireless \$4phone) with out near1 (rang\$4 area) and (mobile wireless pda \$4phone) with automat\$5 with (chang\$3 convert\$4 divert\$4) with network	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 20:42
S5	11	(mobile wireless \$4phone) with out near1 (rang\$4 area) and automat\$5 with (chang\$3 convert\$4 divert\$4) with network	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 20:44
S6	872	(mobile wireless \$4phone) with out near1 (rang\$4 area) and (mobile wireless pda \$4phone) with (chang\$3 convert\$4 divert\$4) with network	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 20:45
S7	145	(mobile wireless \$4phone) with out near1 (rang\$4 area) and (mobile wireless pda \$4phone) with (chang\$3 convert\$4 divert\$4) with network with (internet digital)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 20:45
S8	8	acoustic near transducer same (convert\$3 chang\$3) with (analog rf frequency signal\$3) with (audio sound) and firmware	USPAT	OR	OFF	2011/09/19 21:30
S9	46	acoustic near transducer same (convert\$3 chang\$3) with (analog rf frequency signal\$3) with (audio sound) and firmware	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 21:30
S10	2	"7697899".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/19 21:33
S11	130	(mobile wireless) same acoustic near transducer and (convert\$3 chang\$3) with (analog rf frequency signal\$3) with (audio sound) and digital and (audio sound)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/20 00:33
S12	25	S11 and stream\$3 and server	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2011/09/20 00:33
S13	91	("20020069263" "20040169581" "2660662" "3651471" "3732536" "3742463" "3845391" "4025851" "4237449" "4425642" "4514725" "4642685" "4718106" "4750034" "4807031" "4840602" "4846693" "4923428" "4945412" "5085610" "5090936" "5108341" "5113437" "5136613" "5191615" "5301167" "5305348" "5319735" "5353352" "5412620" "5436941" "5442343" "5446756" "5450490" "5479442" "5499265" "5519779" "5539705" "5555258" "5574773" "5579124"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/09/20 00:35

		"5604767" "5657379" "5663766" "5687191" "5719937" "5734639" "5752880" "5774452" "5822360" "5828325" "5848155" "5930369" "5937000" "5945932" "5960398" "5978413" "5999899" "6021432" "6022273" "6031914" "6035177" "6061793" "6125172" "6290566" "6298322" "6370666" "6389055" "6434253" "6438117" "6442283" "6449596" "6577881" "6584138" "6636551" "6650877" "6708214" "6737957" "6757300" "6765950" "6773344" "6782253" "6832093" "6850555" "6876623" "6892175" "6983051" "7031271" "7065342" "7158676").PN.				
S14	187	mbsfn and sfn	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2012/02/29 11:27
S15	1	12/031462	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2012/02/29 11:29
S16	0	(mobile wireless \$4phone) with out near1 (rang\$4 area) and transducer with (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc))	USPAT	OR	OFF	2012/02/29 12:11
S17	1	(mobile wireless \$4phone) with out near1 (rang\$4 area) and transducer with (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 12:11
S18	2	(mobile wireless \$4phone) and transducer with (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc)) and (signal\$3 rf frequency) with threshold.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 12:15
S19	19	(mobile wireless \$4phone) and transducer with (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc)) and (signal\$3 rf frequency) with threshold	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 12:16
S20	20	transducer with (convert\$3 chang\$3 divert\$3) with (sound audio) and (ad hoc (ad adj hoc)) and (signal\$3 rf frequency) with threshold	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 12:17
S21	1003	(mobile wireless \$4phone) and (ad hoc	US-PGPUB;	OR	OFF	2012/02/29

		(ad adj hoc) and (signal\$3 rf frequency) with threshold and "455"/\$.ccls.	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			12:20
S22	8	(mobile wireless \$4phone) with (adhoc (ad adj hoc) with (signal\$3 rf frequency) with threshold and "455"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 12:21
S23	38203	(mobile wireless \$4phone) and transducer wand (convert\$3 chang\$3 divert\$3) with (sound audio) and (adhoc (ad adj hoc) and threshold and rang\$3	USPAT	OR	OFF	2012/02/29 13:54
S24	258	(mobile wireless \$4phone) and transducer and (convert\$3 chang\$3 divert\$3) with (sound audio) and (adhoc (ad adj hoc) and threshold and rang\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 13:54
S25	21	(mobile wireless \$4phone) and transducer and (convert\$3 chang\$3 divert\$3) with (sound audio) and (adhoc (ad adj hoc) and threshold and rang\$3.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 13:55
S26	25	(mobile wireless \$4phone) and transducer and (convert\$3 chang\$3 divert\$3) with (sound audio) and (adhoc (ad adj hoc) and threshold and rang\$3 and "455"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 13:59
S27	9	(mobile wireless \$4phone) and transducer and (convert\$3 chang\$3 divert\$3) with (sound audio) and (adhoc (ad adj hoc) and threshold and rang\$3 and earphone	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 14:00
S28	1	(mobile wireless \$4phone) and transducer and (convert\$3 chang\$3 divert\$3) with (sound audio) and (adhoc (ad adj hoc) and threshold and rang\$3 and earphone.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/02/29 14:03
S29	2	"8190203".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2013/03/21 23:39
S30	27	("20050064853" "20050198233" "20060206487" "20060212442" "20060212444" "20070008984"	US-PGPUB; USPAT; USOCR	OR	ON	2013/03/29 14:23

		"20070037615" "20070049198" "20070116316" "20070165875" "20070230727" "20080062939" "20080101279" "20080291891" "20100246788" "5784685" "6792091" "6937712" "7003515" "7027311" "7099370" "7120388" "7139585" "7599679" "7697899" "7764775" "7805210").PN.				
S31	0	(server computer) with internet and stream\$4 near audio near server and (headset earphone\$1 bluetooth) with (ap (access near point)) with internet	US-PGPUB; USPAT; USOCR	OR	ON	2013/03/29 14:34
S32	41	(server computer) with internet and (stream\$4 near audio) and server and (headset earphone\$1 bluetooth) with (ap (access near point)) with internet	US-PGPUB; USPAT; USOCR	OR	ON	2013/03/29 14:35
S33	2287	host near server and internet and (stream\$4 near audio) and server and (headset earphone\$1 bluetooth) with (ap (access near point)) and register\$3and approva\$4 with (song media)	US-PGPUB; USPAT; USOCR	OR	ON	2013/03/29 14:52
S34	4	host near server and internet and (stream\$4 near audio) and server and (headset earphone\$1 bluetooth) with (ap (access near point)) and register\$3 and approva\$4 with (song media)	US-PGPUB; USPAT; USOCR	OR	ON	2013/03/29 14:56
S35	4	host near server and internet and (stream\$4 near audio) and server and (headset earphone\$1 bluetooth) with (ap (access near point)) and approva\$4 with (song media)	US-PGPUB; USPAT; USOCR	OR	ON	2013/03/29 14:57
S36	56	(earphone headset) with receiv\$3 with (song audio music) and convert\$4 near digital same analog and acoustic\$1 with transducer\$3	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/03/29 18:50
S37	769	(earphone headset) and convert\$4 near3 digital with analog and acoustic\$1 with transducer\$3	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/03/29 19:11
S38	464	S37 and @ad< "20080101"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/03/29 19:13
S39	30	S37 and @ad< "20080101" and "455"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/03/29 19:15
S40	0	("8190203.pn.").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2013/06/08 23:17
S41	0	("8190203.pn.").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/06/08 23:18
S42	2	("8190203").PN.	US-PGPUB; USPAT;	OR	OFF	2013/06/08 23:18

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S43	27	("20050064853" "20050198233" "20060206487" "20060212442" "20060212444" "20070008984" "20070037615" "20070049198" "20070116316" "20070165875" "20070230727" "20080062939" "20080101279" "20080291891" "20100246788" "5784685" "6792091" "6937712" "7003515" "7027311" "7099370" "7120388" "7139585" "7599679" "7697899" "7764775" "7805210").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/08 23:22
S44	9	((cd adj player) ipad) with audio near jack same (network internet wireless)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/08 23:26
S45	55	("20010050991" "20010050993" "20010053228" "20020102005" "20040136522" "20040198436" "20040204185" "20050004796" "200500064915" "20050090295" "20050130697" "20050146227" "20050177365" "20050181826" "20050232448" "20050239434" "20060013410" "20060046656" "20060046778" "20060134959" "20060166705" "20060193479" "20070015486" "20070025561" "20070036384" "20070041582" "20070082612" "20070225035" "20070226384" "20070239849" "20070247794" "20080167092" "20080201138" "5604813" "5787180" "5825897" "5951141" "5978689" "5991637" "6061456" "6108415" "6415034" "6507650" "6873862" "6975984" "7155214" "7181233" "7187948" "7190797" "7251332" "7254420" "7292880" "7346176" "7395090" "7433715").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/08 23:32
S46	550	((cd adj player) ipad mp3) and (server computer) with encod\$4 with (audio sound) and (earphone earcup headset headphone)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 12:19
S47	6	((cd adj player) ipad mp3) and (server computer) with encod\$4 with analog with digital with (audio sound) and (earphone earcup headset headphone) same acoustic	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 12:21
S48	1	"8055361".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 12:24
S49	2	"20080167092"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 12:27
S50	2	"20040156012"	US-PGPUB;	OR	ON	2013/06/10

			USPAT; EPO; JPO			12:30
S51	108	((cd adj player) ipad mp3) same (server computer) with encod\$4 with (audio sound) and (earphone earcup headset headphone) and internet	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 12:41
S52	41	(server computer) with encod\$4 with (analog digital) and ((cd adj player) ipad mp3) with (earphone earcup headset headphone) and internet	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 12:44
S53	0	"200700826612"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 12:57
S54	2	"200700826612"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/06/10 12:58
S55	12	((cd adj player) ipad mp3) with (earphone earcup headset headphone) same (convert\$3 switch\$3 chang\$3) with (analog digital) and acoustic with analog	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 15:32
S56	0	((cd adj player) ipad mp3) and (earphone earcup headset headphone) same acoustic with aoutput\$4 with analog	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 16:15
S57	18	((cd adj player) ipad mp3) and (earphone earcup headset headphone) same acoustic with output\$3 with analog	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 16:15
S58	178	(earphone earcup headset headphone) same acoustic with output\$3 with analog	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 16:23
S59	5	(earphone earcup headset headphone) same (mp3 (cd near player)) and server with song\$1 and register\$3 with song\$1	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 21:24
S60	75	(earphone earcup headset headphone) same (mp3 (cd near player)) same ear near canal	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 22:40
S61	1	(earphone earcup headset headphone) same (mp3 (cd near player)) same ear near canal and wifi	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 23:02
S62	20	(earphone earcup headset headphone) same (mp3 (cd near player)) same ear near canal and (wifi bluetooth)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/10 23:02
S63	1	"8190203".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/29 22:19
S64	1	"8571544".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/29 22:21
S65	0	(earphone headset) same coustic\$1 with transducer\$3 and (earphone headset) with wireless with (server internet) and play\$4 with (song music) with (server internet)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/29 23:16
S66	5	(earphone headset) same acoustic\$1 with transducer\$3 and (earphone	US-PGPUB; USPAT;	OR	ON	2013/10/29 23:23

		headset) with wireless with (server internet) and play\$4 with (song music) with (server internet)	EPO; JPO			
S67	25	(earphone headset) same acoustic\$1 with transducer\$3 and (earphone headset) with wireless with (server internet)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/29 23:24
S68	1826	(earphone headset) same (play\$4 operat\$3) with (music song multimedia media audio) with (server internet)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/30 12:30
S69	418	(earphone headset) with (play\$4 operat\$3) with (music song multimedia media audio) with (server internet)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/30 12:31
S70	252	(earphone headset) with (play\$4 operat\$3) with (music song multimedia media audio) with (server internet) and @ad<"20080505"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/30 12:31
S71	119	(earphone headset) near3 (music song multimedia media audio) with (server internet) and @ad<"20080505"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/30 12:36
S72	15	(earphone headset) near3 (music song) with (server internet) and @ad<"20080505"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/10/30 13:27
S73	1	"8571544".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/12/07 12:49
S74	4	(earphone headset headphone) with wireless with receiv\$3 with (song audio music) same (server (base near station)) same internet.clm.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/12/07 12:54
S75	73	("20020122396" "20020132630" "20020147016" "20020160779" "20020160806" "20020164991" "20040085938" "4617674" "5115463" "5255307" "5345448" "5353331" "5410588" "5448569" "5469496" "5506887" "5519706" "5519759" "5537434" "5546411" "5579379" "5594718" "5610972" "5664005" "5715521" "5734699" "5745850" "5758281" "5809415" "5818824" "5822313" "5845211" "5887256" "5896375" "5911120" "5913163" "5960344" "5999813" "6005856" "6009332" "6011975" "6021138" "6047177" "6052602" "6055427" "6058106" "6069588" "6078571" "6119006" "6151311" "6163546" "6175860" "6201962" "6205552" "6212395" "6226515" "6259685" "6275518" "6278699" "6295310" "6321089" "6396457" "6430395" "6466791" "6490446" "6510381" "6529732" "6628632" "6640098" "6650871" "6665541" "6675015" "6714524").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/07 13:00
S76	483	(earphone headset headphone) with receiv\$3 with (song audio music)	US-PGPUB; USPAT;	OR	ON	2013/12/07 13:12

		same (server (base near station))	EPO; JPO			
S77	61	(earphone headset headphone) with receiv\$3 with (song audio music) same (server (base near station)) same internet	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/12/07 13:13
S78	21	("4659877" "4872160" "4872197" "4958341" "5029196" "5109405" "5341374" "5375068" "5410754" "5434913" "5490247" "5493568" "5608786" "5724355" "5726984" "5751706" "5802160" "5815562" "5946299" "5999525" "6067350").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/07 13:20
S79	38	(earphone headset headphone) with receiv\$3 with (song audio music) same (server (base near station)).clm.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2013/12/07 13:22
S80	3	"9049502".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 14:56
S81	2	"8571544".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 15:01
S82	2	"8190203".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 15:03
S83	1	14/695696	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 15:36
S86	23	digital near player and adapter and acoustic near transducer\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 15:59
S87	4	S86 AND ((H04W52/0229 OR H04R1/1091 OR H04R2201/103 OR H04R2225/55 OR H04R2420/07 OR H04R25/554 OR H04R3/00 OR H04R5/033 OR H04R5/04).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 16:02
S88	2	digital near player and acoustic near	US-PGPUB;	OR	OFF	2016/06/14

		transducer\$1 and plugg\$2 and 381/\$.ccls.	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			16:03
S89	28	digital near player and acoustic near transducer\$1 and 381/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 16:03
S90	6	("3894196" "4110583" "4490842" "5022486" "5138663" "5459290").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/06/14 16:04
S91	5	("4432097" "4641361" "7215202" "7583809" "8150067").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/06/14 16:05
S92	13	S89 AND ((H04R5/0335 OR H04R2460/13 OR H04R5/033 OR H04R1/1016 OR H04R2201/107 OR H04R2499/11 OR H04R19/00 OR H04R2201/023 OR H04R2400/01 OR G02C11/06 OR G02C11/10).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 16:07
S93	19	digital near player and adapter and acoustic near transducer\$1 and wireless\$2 with network	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/06/14 16:12
S94	139	("20060212442" "20060268830" "8478880" "8571544" "7003515" "7650168" "8335312" "20090063703" "20070008984" "20070297618" "20080298606" "5784685" "6671494" "7027311" "7099370" "7266390" "7734055" "20130039510" "7467021" "8401202" "20040107271" "20070037615" "20070165875" "20080031470" "20080076489" "6674864" "6937712" "7095455" "7139585" "7764775" "7805210" "8023663" "8027638" "8102836" "9049502" "20050198233" "20060206487" "20070253603" "6389463" "7120388" "7599679" "7680490" "7861312" "7962482" "8553865" "20050240296" "20070049198" "20080062939" "6792091" "7697899" "8295516" "8655420" "20050064853" "20100290642" "20150237439" "7337027" "7512414" "8190203" "8792945").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2016/07/28 10:00
S95	0	S94 and (multiple plurality multi) with acoustic near1 transducer\$1 and adapter\$3	US-PGPUB; USPAT; USOCR; EPO; JPO;	OR	OFF	2016/07/28 10:02

			DERWENT			
S96	63	(multiple plurality multi) with acoustic near1 transducer\$1 and adapter\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2016/07/28 10:02
S97	10	(multiple plurality multi) with acoustic near1 transducer\$1 and adapter\$3.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2016/07/28 10:02
S98	0	(earphone headset) near3 (music song multimedia media audio) with (server internet) and @ad<"20080505".clm.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2016/07/28 10:11
S99	10	digital near player and adapter and acoustic near transducer\$1 and wireless\$2 with network.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/07/28 10:11
S100	23	digital near player and adapter and acoustic\$1 near transducer\$1 and wireless\$2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/07/28 10:23
S101	17	digital near player and adapter and acoustic\$1 near transducer\$1 and wireless\$2.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/07/28 10:29
S102	6	digital near player and adapter and (multiple plurality multi) with acoustic\$1 and transducer\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/07/28 10:40
S103	2	adapter\$3 with digital near player\$3 and acoustic\$1 near transducer\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/07/28 10:42
S104	2	adapter\$3 same digital\$1 near player\$3 and acoustic\$1 near transducer\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/07/28 10:42
S105	29	adapter\$3 and digital\$1 near player\$3 and acoustic\$1 near transducer\$1	US-PGPUB; USPAT; USOCR; FPRS;	OR	OFF	2016/07/28 10:42

EAST Search History

			EPO; JPO; DERWENT; IBM_TDB			
S106	2	adapter\$3 and digital\$1 near player\$3 and acoustic\$1 near transducer\$1.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/07/28 11:01
S107	2	"8497535".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 10:49
S108	2	"9497535".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 10:49
S109	2	"9438987".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 10:50
S110	3	"9049502".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 10:52
S111	3	"5571544".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 10:58
S112	2	"8571544".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 10:58
S113	2	"8190203".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 11:16
S114	3	"8655420".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2017/05/24 11:18
S115	0	"90729959".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/02/12 13:34
S116	3	"9729959".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/02/12 13:34

EAST Search History

S117	2	"9497535".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/02/12 13:35
S118	902	digital near player and adapter and acoustic near transducer\$1 dock\$ near station and elongat\$3 and bluetooth	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/02/12 14:49
S123	2	digital near player and acoustic\$1 with transducer\$1 and dock\$ near station	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/02/12 14:51
S124	1	(earphone headset) with (play\$4 operat\$3) with (music song multimedia media audio) with (server internet) and transduc\$3 and elongat\$3 and wireless and (recharg\$5 charg\$5) with batter\$3.clm.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/03/19 10:29
S125	1	S124 AND ((H04R2201/103 OR H04R2201/107 OR H04R25/554 OR H04R5/033).CPC.)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/03/19 10:32
S126	1	(earphone headset) with (play\$4 operat\$3) with (music song multimedia media audio) with (server internet) and transduc\$3 and elongat\$3 and wireless and (recharg\$5 charg\$5) with batter\$3	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/03/19 10:32
S127	1	(earphone headset) with (play\$4 operat\$3) with (music song multimedia media audio) with (server internet) and transduc\$3 and elongat\$3 and (recharg\$5 charg\$5) with batter\$3	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/03/19 10:39
S128	7	(earphone headset) with (play\$4 operat\$3) with (music song multimedia media audio) with (server internet) and transduc\$3 and elongat\$3 and (recharg\$5 charg\$5)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/03/19 10:40
S129	2	S128 AND ((H04R1/02 OR H04R5/033 OR H04R2201/107 OR H04R25/554 OR H04R3/00 OR H04W4/80).CPC.)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/03/19 10:42
S130	9	"49783294".FMID.	US-PGPUB; USPAT; FPRS	OR	OFF	2018/03/19 10:42
S131	158	("20010011951" "20010026626" "20020001381" "20020012441" "20020068995" "20020115478" "20020149561" "20020183014" "20030108209" "20030118197" "20030119566" "20040013279" "20040105566" "20040131211" "20040132509" "20040189151" "20040207542" "20040259513"	US-PGPUB; USPAT; USOCR	OR	OFF	2018/03/19 10:43

"20050046790"	"20050088530"
"20050160270"	"20050176459"
"20050184875"	"20050185813"
"20050207599"	"20050213432"
"20050232436"	"20050237685"
"20050244020"	"20050275714"
"20050286734"	"20060079291"
"20060093161"	"20060120546"
"20060121960"	"20060140439"
"20060158064"	"20060159297"
"20060171107"	"20060227984"
"20060286998"	"20070003098"
"20070015467"	"20070036370"
"20070080951"	"20070081679"
"20070098200"	"20070160253"
"20070249395"	"20070263893"
"20080008344"	"20080054862"
"20080106449"	"20080107300"
"20080129703"	"20080139254"
"20080170725"	"20080227490"
"20080239061"	"20080247562"
"20080267433"	"20090002626"
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("20110280416"	"20110281617"
"20110293105"	"20110301729"
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"20130136279"	"20130169352"
"20130169829"	"20130236043"
"20130242809"	"20130301860"
"20130316691"	"20130322670"
"20130324193"	"20130336507"
"20140003641"	"20140342783"
"20140378191"	"20150054779"
"20150065057"	"20150070083"
"20150078569"	"20150086047"
"20150141088"	"20150172588"
"20150181338"	"20150208153"
"20150256946"	"20160007109"
"20160086594"	"20160205233"
"20160261299"	"20160286296"
"2045404"	"5295193" "5323468"
"6380923"	"6456721" "6463157"

		"6950126" "7231235" "7437122" "7442164" "7555136" "8521239" "8526646" "8886263" "8918149" "9020170").PN.				
S132	1	"9986325".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/08/31 15:04
S133	2	"9986325".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:02
S134	0	microphone with utteranc\$3 with headphone and (mobile wireless pda \$4phone) with (adhoc (ad adj hoc)) and earphone\$1 and @ad<"20090303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:10
S135	1	microphone with utteranc\$3 with headphone and (mobile wireless pda \$4phone) with (adhoc (ad adj hoc)) and earphone\$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:10
S136	1	microphone with utteranc\$3 and headphone and (mobile wireless pda \$4phone) with (adhoc (ad adj hoc)) and earphone\$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:12
S137	31	microphone with utteranc\$3 and headphone and earphone\$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:12
S138	8	microphone with utteranc\$3 and headphone and earphone\$1.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:12
S139	7	S138 AND ((H04R2201/107 OR H04R5/033 OR H04R1/1008 OR H04R1/1016 OR H04R2460/13 OR H04M1/6066).CPC.)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:14
S140	128	(mobile wireless \$4phone) with (adhoc (ad adj hoc)) with (signal\$3 rf frequency) with threshold and (mobile wireless pda \$4phone) with (adhoc (ad adj hoc))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/08/31 16:23
S141	32	(mobile wireless \$4phone) with (adhoc (ad adj hoc)) with (signal\$3 rf frequency) with threshold and (mobile wireless pda \$4phone) with (adhoc (ad adj hoc)) and @ad<"20090303"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/08/31 16:23
S142	0	microphone\$1 and headphone\$1 and earphone\$1 headset headphone) with acoutic\$1 and (mobile wireless pda \$4phone) with (adhoc (ad adj hoc))	US-PGPUB; USPAT; USOCR; EPO; JPO;	OR	OFF	2018/08/31 16:25

		and @ad< "20090303"	DERWENT			
S143	0	microphone\$1 and headphone\$1 and (earphone\$1 headset headphone) with acoutic\$1 and (mobile wireless pda \$4phone) with (adhoc (ad adj hoc))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:25
S144	0	microphone\$1 and headphone\$1 and (earphone\$1 headset headphone) with acoutic\$1 and (adhoc (ad adj hoc))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:25
S145	2807	microphone\$1 and headphone\$1 and (adhoc (ad adj hoc))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:26
S146	153	microphone\$1 and headphone\$1 and (earphone\$1 headset headphone) and (mobile wireless pda \$4phone) with (adhoc (ad adj hoc)) and @ad< "20090303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:27
S147	31	microphone\$1 and headphone\$1 and (earphone\$1 headset headphone) and (mobile wireless pda \$4phone) with (adhoc (ad adj hoc)) and (acoutic\$1 transducer\$1) and @ad< "20090303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/08/31 16:28
S148	782	(earphone headset) with (recharg\$5 charg\$5) with (battery power) and @ad< "20080101"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/09/06 16:49
S149	313	(earphone\$1 headset) with (recharg\$5 charg\$5) near3 battery with power\$3 and @ad< "20080101"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/09/06 16:50
S150	44	S149 AND ((H04M1/0258 OR H04M1/04 OR H04M1/0262 OR H04M1/0202 OR G06F1/3203 OR H02J7/0054 OR H02J2007/0096 OR H02J7/32). CPC.)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/09/06 16:52
S151	351136	((cd near player) (audio near player) (music near player) mobile) with stor\$3 (audio music sound song\$1) and (earphone\$1 headset headphone\$1 (head near phone\$1)) and (earphone\$1 headset headphone\$1 (head near phone\$1)) with (acoustic transducer\$1) and ((cd near player) (audio near player) (music near player) mobile) with (bluetooth adhoc (short near rang\$3) (ad adj hoc)) and @ad< "20080101"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/09/06 22:46
S152	351041	((cd near player) (audio near player) (music near player) mobile) with stor\$3 (audio music song\$1) and (earphone\$1 headset headphone\$1 (head near phone\$1)) and (earphone\$1 headset headphone\$1 (head near phone\$1)) with acoustic with transducer\$1 and ((cd near player) (audio near player) (music near player) mobile) with (bluetooth adhoc (short near rang\$3) (ad adj	US-PGPUB; USPAT; EPO; JPO	OR	ON	2018/09/06 22:48

		hoc)) and @ad<"20080101"				
S153	548914	((cd near player) (audio near player) (music near player) mobile) with stor\$3 (audio music song\$1) and (earphone\$1 headset headphone\$1 (head near phone\$1)) and (earphone\$1 headset headphone\$1 (head near phone\$1)) with acoustic with transducer\$1 and ((cd near player) (audio near player) (music near player) mobile) with (bluetooth adhoc (short near rang\$3) (ad adj hoc)) and @ad<"20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/06 22:48
S154	8	((cd near player) (audio near player) (music near player)) with stor\$3 with (audio music song\$1) and (earphone\$1 headset headphone\$1 (head near phone\$1)) and (earphone\$1 headset headphone\$1 (head near phone\$1)) with acoustic with transducer\$1 and ((cd near player) (audio near player) (music near player) mobile) with (bluetooth adhoc (short near rang\$3) (ad adj hoc)) and @ad<"20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/06 22:49
S155	24	((cd near player) (audio near player) (music near player) mobile) with stor\$3 with (audio music song\$1) and (earphone\$1 headset headphone\$1 (head near phone\$1)) and acoustic with transducer\$1 and (bluetooth adhoc (ad adj hoc)) and @ad<"20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/06 23:00
S156	2	(earphone\$1 headset headphone\$1 (head near phone\$1) (ear near phone\$1)) with antenna with ((cd near player) (audio near player) (music near player) mobile mp3) with (bluetooth adhoc (ad adj hoc)) and acoustic\$1 and @ad<"20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 07:51
S157	27	(earphone\$1 headset headphone\$1 (head near phone\$1) (ear near phone\$1)) with antenna with ((cd near player) (audio near player) (music near player) mobile mp3) with (bluetooth adhoc (ad adj hoc)) and @ad<"20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 08:05
S158	8	(earphone\$1 (ear near phone\$1)) with antenna with ((cd near player) (audio near player) (music near player) mobile mp3) with (bluetooth adhoc (ad adj hoc)) and @ad<"20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 08:17
S159	118	(earphone\$1 (ear near phone\$1)) with ((cd near player) (audio near player) (music near player) mobile mp3) with (bluetooth adhoc (ad adj hoc)) and microphone and @ad<"20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 08:19

S160	26	(earphone\$1 (ear near phone\$1)) with ((cd near player) (audio near player) (music near player) mobile mp3) with (bluetooth adhoc (ad adj hoc)) and microphone with (headphone headset) and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 08:21
S161	1	(mobile wireless \$4phone terminal) with antenna\$1 with ((cd near player) (audio near player) (music near player) mp3) with (adhoc (ad adj hoc)) and (headphone headset)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 09:10
S162	4	(mobile wireless \$4phone terminal) with antenna\$1 with ((cd near player) (audio near player) (music near player) mp3) with (adhoc (ad adj hoc) bluetooth (short near rang\$3)) and (headphone headset) with microphone and (adhoc (ad adj hoc) bluetooth (short near rang\$3)) and @ad< "20080303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 09:12
S163	1	(mobile wireless \$4phone terminal handset) with antenna\$1 with ((cd near player) (audio near player) (music near player) mp3) with (adhoc (ad adj hoc)) and (headphone headset)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 09:23
S164	210	(mobile wireless \$4phone terminal handset) with ((cd near player) (audio near player) (music near player) mp3 music song\$1 multimedia) with (adhoc (ad adj hoc)) and (headphone headset)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 09:26
S165	24	(mobile wireless \$4phone terminal handset) with ((cd near player) (audio near player) (music near player) mp3 music song\$1 multimedia) with (adhoc (ad adj hoc)) and (headphone headset) and @ad< "20080303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 09:26
S166	0	(server computer center\$1 central\$3) with (software firmware) with upgrat\$3 near8 (headphone headset) and @ad< "20080303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 11:32
S167	0	(server computer center\$1 central\$3) with upgrat\$3 near8 (headphone headset) and @ad< "20080303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 11:34
S168	15	(server computer center\$1 central\$3) with (upgrad\$3 updat\$3) near8 (headphone headset) and @ad< "20080303"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 11:34
S169	0	(earphone\$1 (ear near phone\$1)) with curve\$3 with hang\$3 with bar\$1 and (headphone headset) and elongat\$3 and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 11:45

EAST Search History

S170	0	(earphone\$1 (ear near phone\$1)) with curve\$3 with hang\$3 with bar\$1 and (headphone headset) and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 11:46
S171	0	(earphone\$1 (ear near phone\$1)) and curve\$3 with hang\$3 with bar\$1 and (headphone headset) and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 11:46
S172	3	curve\$3 with hang\$3 with bar\$1 and (headphone headset) and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 11:47
S173	72	curve\$3 with bar\$1 and (headphone headset) and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 11:47
S174	282	(headphone headset) with elongat\$3 and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 12:07
S175	19	(headphone headset) with elongat\$3 and transducer with acoustic and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 12:08
S176	160	(earphone\$1 (ear near phone\$1)) with elongat\$3 and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 12:13
S177	31	(earphone\$1 (ear near phone\$1)) with elongat\$3 and transducer and @ad< "20080101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/09/07 12:13
S178	7	S177 AND ((H04R5/033 OR H04R1/1008 OR H04R1/105).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2018/09/07 12:21

			DERWENT; IBM_TDB			
S179	3	S165 AND ((H04W92/18 OR G06F3/167).CPC.)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/09/07 12:23
S180	2	"9438987".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2019/04/04 09:54
S181	2	"9497535".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2019/04/04 09:56
S182	3	"9729959".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2019/04/04 09:57
S183	2	"9986325".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2019/04/04 09:58
S184	6	"10206025".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2019/04/04 09:59
S185	23	(earphone earcup headset headphone earbud) with acoustic\$1 with transducer\$3 and (earphone earcup headset headphone earbud) with antenna\$1 with wireless and play\$3 with (audio music song\$1)	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/04 10:15
S186	17	(earphone earcup headset headphone earbud) with acoustic\$1 and automat\$4 with play\$3 with (song music audio) and wireless with network	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/04 17:54
S188	2668	(earphone earcup headset headphone earbud) and automati\$4 with play\$3 with (song\$1 music audio digital) and wireless	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/04 18:00
S189	201	(earphone earcup headset headphone earbud) same automati\$4 with play\$3 with (song\$1 music audio digital) and wireless	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/04 18:01
S190	24	(earphone earcup headset headphone earbud) same automati\$4 with play\$3 with (song\$1 music audio digital) and wireless and @ad<"20090202"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 10:07
S191	11	S190 AND ((H04R5/033 OR H04R1/1016 OR H04L2012/2841 OR H04M1/6066 OR H04M1/7253 OR H04N1/00307).CPC.)	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 10:10

S192	8978	(earphone earcup headset headphone earbud) same microphone\$1 and (voice speak\$3 utteran\$3) with control\$3 and @ad<"20090202"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 10:51
S193	3583	(earphone earcup headset headphone earbud) same microphone\$1 same (voice speak\$3 utteran\$3) with control\$3 and @ad<"20090202"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 10:52
S194	3656	(earphone earcup headset headphone earbud) with microphone\$1 same (voice speak\$3 utteran\$3) with control\$3 and @ad<"20090202"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/04/05 10:52
S195	564	(earphone earcup headset headphone earbud) with microphone\$1 with (voice speak\$3 utteran\$3) near4 control\$3 and @ad<"20090202"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/04/05 10:53
S196	140	S195 and 455/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/04/05 10:53
S197	41	(earphone earcup headset headphone) and earbud and microphone\$1 with (voice speak\$3 utteran\$3) near4 control\$3 and @ad<"20090202"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/04/05 11:34
S198	5	(earphone earcup headset headphone) and hanger near bar and @ad<"20090202"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/04/05 12:06
S199	34	(earphone earcup headset headphone earbud) with acoustic\$1 and firmware with updat\$3 and @ad<"20090101"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 12:45
S200	27	(earphone earcup headset headphone earbud) with acoustic\$1 and stor\$3 with network with identi\$4 and @ad<"20090101"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:05
S201	2965976	(earphone earcup headset headphone earbud) and memory with stor\$3 with network neae2 identi\$4 and @ad<"20090101"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:07
S202	50	(earphone earcup headset headphone earbud) and memory with stor\$3 with network near2 identi\$4 and @ad<"20090101"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:10
S203	8	(earphone earcup headset headphone earbud) and memory with stor\$3 with	US-PGPUB; USPAT;	OR	ON	2019/04/05 13:11

		(plurality multiple multi) with network near2 identi\$4 and @ad<"20090101"	USOCR			
S204	21	(earphone earcup headset headphone earbud) and (memory stor\$3) with (plurality multiple multi) with network near2 identi\$4 and @ad<"20090101"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:13
S205	350	(earphone earcup headset headphone earbud) and stor\$3 with network near2 identi\$4 and @ad<"20090101"	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:25
S206	132	(earphone earcup headset headphone earbud) and stor\$3 with network near2 identi\$4 and @ad<"20090101" and 455/\$.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:25
S207	0	(earphone earcup headset headphone earbud) same stor\$3 with network near2 identi\$4 and @ad<"20090101" and 455/\$.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 13:27
S208	27	(earphone earcup headset headphone earbud) with acoustic\$1 and automat\$4 with play\$3 with (song music audio) and wireless	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 14:05
S209	9	S208 AND ((H04R1/1008 OR H04R1/1016 OR H04R1/105 OR H04R29/004 OR G10K2210/1081).CPC.)	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/05 14:06
S210	7	(earphone earcup headset headphone earbud) with acoustic\$1 and automat\$4 with play\$3 with (song music audio) and (plurality multiple second) near6 network	US-PGPUB; USPAT; USOCR	OR	ON	2019/05/25 10:38
S211	4	S210 AND ((H04H20/83 OR G06F3/167 OR H04R2225/55).CPC.)	US-PGPUB; USPAT; USOCR	OR	ON	2019/05/25 11:13
S212	0	(earphone earcup headset headphone earbud) with acoustic\$1 and (earphone earcup headset headphone earbud) with automat\$4 with play\$3 and (plurality multiple second) near6 network.clm.	US-PGPUB; USPAT; USOCR	OR	ON	2019/05/25 11:14
S213	6	(earphone earcup headset headphone earbud) with acoustic\$1 and (earphone earcup headset headphone earbud) with automat\$4 with play\$3 and (plurality multiple second) near6 network	US-PGPUB; USPAT; USOCR	OR	ON	2019/05/25 16:52
S214	195	(earphone earcup headset headphone earbud) and (earphone earcup headset headphone earbud) with automat\$4 with play\$3 and (plurality multiple second) near6 network	US-PGPUB; USPAT; USOCR	OR	ON	2019/05/25 16:53
S215	22	(earphone earcup headset headphone earbud) and (earphone earcup headset headphone earbud) with automat\$4 with play\$3 and (plurality multiple second) near6 network.clm.	US-PGPUB; USPAT; USOCR	OR	ON	2019/05/25 16:54
S216	108	("20010003712" "20020030649" "20020044152" "20020154070" "20030016253" "20030046401" "20030067536" "20040102957"	US-PGPUB; USPAT; USOCR	OR	OFF	2019/05/25 16:59

		"20040113867" "20040193413" "20040210852" "20040267527" "20050114140" "20050237296" "20050245292" "20050261890" "20060010368" "20060028400" "20060061551" "20060074624" "20060109237" "20060178085" "20060221266" "20070009125" "20070030174" "20070103388" "20070180979" "20070220108" "20070265495" "20080052643" "20080055194" "20080084992" "20080120141" "20080144854" "20080180640" "20080200774" "20080239080" "20090002640" "20090079839" "20090093304" "20090099836" "20090117890" "20090182562" "20090204410" "20090213071" "20090240488" "20090251409" "20100106497" "20100117930" "20100119052" "20100128626" "20100141554" "20100156812" "20100164990" "20100169073" "20100182137" "20100204981" "20100235161" "20100245585" "20100250231" "20100302137" "20100309295" "20110001699" "20110092825" "20110134910" "20110187640" "20110238405" "20120068914" "20120075177" "20120089392" "20120110456" "20120236025" "20120287284" "20130174205" "20130231937" "20130288753" "20130289971" "20130300649" "20140223299" "20140235169" "20140368412" "20150072672" "20150279354" "5005213" "5208449" "5594469" "5698834" "6084556" "6198462" "6313864" "6369952" "6408257" "6532446" "6538676" "6778906" "6965862" "7501995").PN. OR ("8184983" "8327295" "8838075" "8855719" "8862186" "8929954" "9122307" "9235262" "9294607" "9316827" "9369760").PN.				
S217	7	"10206025".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/06/20 18:18
S218	0	(earphone earcup headset headphone earbud (head near phone) (head near set)) with acoustic\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 with revei\$3 with (audio music media) and @ad< "20101010"	US-PGPUB; USPAT; USOCR	OR	ON	2019/06/21 10:44
S219	182	(earphone earcup headset headphone	US-PGPUB;	OR	ON	2019/06/21

		earbud (head near phone) (head near set)) with acoustic\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 and @ad< "20101010"	USPAT; USOCR			10:44
S220	39	(earphone earcup headset headphone earbud (head near phone) (head near set)) with acoustic\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 and wireless with (audio music multimedia) and @ad< "20101010"	US-PGPUB; USPAT; USOCR	OR	ON	2019/06/21 10:49
S221	5	"20040063459"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/06/21 12:44
S222	2	(earphone earcup headset headphone earbud (head near phone) (head near set)) with acoustic\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 and request\$3 with (connect\$3 communicat\$3) with server\$1 and @ad< "20101010"	US-PGPUB; USPAT; USOCR	OR	ON	2019/06/21 12:50
S223	4	(earphone earcup headset headphone earbud (head near phone) (head near set)) with (transduc\$3 acoustic\$1) and (earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with request\$3 with (server\$1 (base near station)) and @ad< "20101010"	US-PGPUB; USPAT; USOCR	OR	ON	2019/06/21 12:53
S224	14	(earphone earcup headset headphone earbud (head near phone) (head near set)) with antenna\$1 and (earphone earcup headset headphone earbud (head near phone) (head near set)) with request\$3 with (server\$1 (base near station)) and @ad< "20101010"	US-PGPUB; USPAT; USOCR	OR	ON	2019/06/24 10:45
S225	9	S224 AND ((H04M1/6066 OR H04M1/2535 OR H04M1/72558 OR H04R2201/107 OR H04R25/554 OR H04R3/00 OR H04R5/033).CPC.)	US-PGPUB; USPAT; USOCR	OR	ON	2019/06/24 10:48

8/ 29/ 2019 12:39:26 PM

C:\Users\kdoan\Documents\EAST\Workspaces\12936488.wsp

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450

By fax, send to: (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)

26285 7590 09/05/2019
 K&L GATES LLP-Pittsburgh
 210 SIXTH AVENUE
 PITTSBURGH, PA 15222-2613

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.

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 transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/375,879	04/05/2019	Michael J. Koss	080188PCTUSCON10	1056

TITLE OF INVENTION: SYSTEM WITH WIRELESS EARPHONES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$500	\$0.00	\$0.00	\$500	12/05/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
DOAN, KIET M	2641	455-428000

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 03-09 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 K&L Gates LLP
- 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 must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

KOSS CORPORATION

MILWAUKEE, WISCONSIN

Please check the appropriate assignee category or categories (will not be printed on the patent): Individual Corporation or other private group entity Government

4a. Fees submitted: Issue Fee Publication Fee (if required) Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

Electronic Payment via EFS-Web Enclosed check Non-electronic payment by credit card (Attach form PTO-2038)

The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 02-1818

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 /Mark G. Knedeisen/ Date September 16, 2019

Typed or printed name Mark G. Knedeisen Registration No. 42,747

Electronic Patent Application Fee Transmittal

Application Number:	16375879			
Filing Date:	05-Apr-2019			
Title of Invention:	SYSTEM WITH WIRELESS EARPHONES			
First Named Inventor/Applicant Name:	Michael J. Koss			
Filer:	Mark G. Knedeisen/Amanda Kernan			
Attorney Docket Number:	080188PCTUSCON10			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
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	500	500

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				500

Electronic Acknowledgement Receipt

EFS ID:	37171144
Application Number:	16375879
International Application Number:	
Confirmation Number:	1056
Title of Invention:	SYSTEM WITH WIRELESS EARPHONES
First Named Inventor/Applicant Name:	Michael J. Koss
Customer Number:	26285
Filer:	Mark G. Knedeisen/Amanda Kernan
Filer Authorized By:	Mark G. Knedeisen
Attorney Docket Number:	080188PCTUSCON10
Receipt Date:	16-SEP-2019
Filing Date:	05-APR-2019
Time Stamp:	13:25:07
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$500
RAM confirmation Number	E20199FD25259756
Deposit Account	021818
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The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)
 37 CFR 1.20 (Post Issuance fees)
 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	9-16-2019-Issue-fee-transmittal.pdf	1604061	no	1
			0011856a66734bfdd58acf90a03b0a0d0aef6ed5		

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30270	no	2
			724afd450ff42b5088ca5a934096e3dad3101e		

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Total Files Size (in bytes): 1634331

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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.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/375,879	04/05/2019	Michael J. Koss	080188PCTUSCON10	1056
26285	7590	09/17/2019	EXAMINER	
K&L GATES LLP-Pittsburgh 210 SIXTH AVENUE PITTSBURGH, PA 15222-2613			DOAN, KIET M	
			ART UNIT	PAPER NUMBER
			2641	
			NOTIFICATION DATE	DELIVERY MODE
			09/17/2019	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):

USpatentmail@klgates.com



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In re Application of :
Koss et al. :
Application No. 16/375,879 : DECISION ON PETITION
Filed: 5 Apr 2019 :
For: SYSTEM WITH WIRELESS :
EARPHONES :

This is a decision on the petition under 37 CFR 1.102(c)(1), filed August 5, 2019, to make the above-identified application special based on applicant’s age as set forth in MPEP §708.02, Section II.

The petition is **GRANTED**.

A grantable petition to make an application special under 37 CFR 1.102(c)(1) and MPEP §708.02, Section II: Applicant’s Age must be accompanied by evidence showing that the applicant is 65 years of age, or more, such as applicant’s statement or a statement from a registered practitioner that he or she has evidence that the applicant is 65 year of age or older. No fee is required.

The instant petition includes a statement from an attorney or registered practitioner declaring that he/she is in possession of evidence, and will retain such in the application file record, showing that Michael J. Koss is listed is 65 years of age, or more. Accordingly, the above-identified application has been accorded “special” status.

Telephone inquiries concerning this decision should be directed to Cheryl Gibson-Baylor at (571) 272-3213.

All other inquiries concerning either the examination or status of the application should be directed to the Technology Center.

The application is being forwarded to the Technology Center Art Unit 2641 for action on the merits commensurate with this decision.

/Cheryl Gibson-Baylor/
Cheryl Gibson-Baylor
Petitions Paralegal Specialist
Office of Petitions

Application Number * 16/375,879 *	Application/Control No. 16/375,879	Applicant(s)/Patent under Reexamination Koss et al.	
	Examiner DOAN, KIET M	Art Unit 2641	
Document Code - DISQ		Internal Document - DO NOT MAIL	

TERMINAL DISCLAIMER	<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> DISAPPROVED
Date Filed: <u>08 April 2019</u>	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:
/JEAN PROCTOR/ Technology Center: OPLC Telephone: (571)272-1040



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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/375,879	11/05/2019	10469934	080188PCTUSCON10	1056

26285 7590 10/16/2019
K&L GATES LLP-Pittsburgh
210 SIXTH AVENUE
PITTSBURGH, PA 15222-2613

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):

Michael J. Koss, Milwaukee, WI;
Koss Corporation, Milwaukee, WI;
Michael J. Pelland, Princeton, WI;
Michael Sagan, Fairfield, CA;
Steven R. Reckamp, Crystal Lake, IL;
Gregory J. Hallingstad, Deforest, WI;
Jeffery K. Bovee, Sterling, IL;
Morgan J. Lowery, Deforest, WI;

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