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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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90/019,375

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EXAMINER

REICHLE, KARIN M

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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.



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***EX PARTE* REEXAMINATION COMMUNICATION TRANSMITTAL FORM**

REEXAMINATION CONTROL NO. 90/019,375 .

PATENT UNDER REEXAMINATION 8510768 .

ART UNIT 3992 .

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Office Action in Ex Parte Reexamination	Control No. 90/019,375	Patent Under Reexamination 8510768	
	Examiner Karin M Reichle	Art Unit 3992	AIA (FITF) Status No

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

- a. ☒ Responsive to the communication(s) filed on 16 January 2024.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

b. ☐ This action is made FINAL.

- c. ☒ A statement under 37 CFR 1.530 has not been received from the patent owner.

A shortened statutory period for response to this action is set to expire 2 month(s) from the mailing date of this letter.
Failure to respond within the period for response will result in termination of the proceeding and issuance of an *ex parte* reexamination certificate in accordance with this action. 37 CFR 1.550(d). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c)**.
If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. ☒ Notice of References Cited by Examiner, PTO-892. | 3. ☐ Interview Summary, PTO-474. |
| 2. ☒ Information Disclosure Statement, PTO/SB/08. | 4. ☐ _____. |

Part II SUMMARY OF ACTION

- 1a. ☒ Claims 1-3,5-7,9-11 and 13-15 are subject to reexamination.
 - 1b. ☒ Claims 4,8 and 12 are not subject to reexamination.
 2. ☐ Claims _____ have been canceled in the present reexamination proceeding.
 3. ☒ Claims 3 and 11 are patentable and/or confirmed.
 4. ☒ Claims 1-2,5-7,9-10 and 13-15 are rejected.
 5. ☐ Claims _____ are objected to.
 6. ☐ The drawings, filed on _____ are acceptable.
 7. ☐ The proposed drawing correction, filed on _____ has been (7a) ☐ approved (7b) ☐ disapproved.
 8. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the certified copies have
 - 1 ☐ been received.
 - 2 ☐ not been received.
 - 3 ☐ been filed in Application No. _____.
 - 4 ☐ been filed in reexamination Control No. _____.
 - 5 ☐ been received by the International Bureau in PCT application No. _____.
- * See the attached detailed Office action for a list of the certified copies not received.
9. ☐ Since the proceeding appears to be in condition for issuance of an *ex parte* reexamination certificate 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.
 10. ☐ Other: _____

cc: Requester (if third party requester)

EX PARTE REEXAMINATION NON-FINAL ACTION

This is the *ex parte* reexamination of claims 1-3, 5-7, 9-11, and 13-15 of US Patent No. 8,510,768 (hereinafter also referred to as ‘768 or Steuer ‘768) for which a substantial new question of patentability affecting claims 1-3, 5-7, 9-11, and 13-15 of ‘768 has been deemed to exist.

Patent Owner Statement

Patent Owner **did not file** a Patent Owner Statement.

References Asserted as Raising a Substantial New Question (SNQ)

(1) U.S. Patent No. 5,581,658 to O’Hagan et al. (hereinafter also referred to as O’Hagan or ‘658 (Exhibit D)) filed December 14, 1993 and issued December 3, 1996.

(2) U.S. Patent No. 7,284,255 to Apel et al. (hereinafter also referred to as Apel or ‘255 (Exhibit E)) filed November 16, 1999 and issued October 16, 2007.

(3) U.S. Patent Application No. 2007/0168409 to Cheung (hereinafter also referred to as Cheung or ‘409 (Exhibit F)) filed February 16, 2005 and published July 19, 2007.

(4) U.S. Patent Application No. 2002/0083060 to Wang et al (hereinafter also referred to as Wang or ‘060 (Exhibit H)) filed April 20, 2001 and published June 27, 2002.

Other

The Declaration of David S Doermann Ph.D. (Exhibit C), executed January 15, 2024 and filed January 16, 2024.

All of the references, declaration and accompanying exhibits/attachments identified above and the Request have been reviewed and considered.

Availability of Asserted References as Prior Art

As an initial matter, see the cover page of the '768 patent, the '354 patent application was filed on September 11, 2008 but claimed benefit to the filing date of Provisional Application No. 60/574,836 which was filed on May 27, 2004.

Reference (1) to O'Hagan was filed December 14, 1993 and issued on December 3, 1996, i.e. more than a year prior to the earliest claimed effective filing date of '768, i.e. May 27, 2004 and thus, is available as prior art under 35 USC 102(b) and 35 USC 103.

Reference (2) to Apel includes an issue date, July 19, 2007, after the earliest claimed effective filing date of '768, i.e. May 27, 2004, but was filed November 16, 1999 and also claims the benefit to US provisional application 60/140,190 filed June 18, 1999, prior to the earliest claimed effective filing date of '768, and thus, is available as prior art under 35 USC 102(e) and 35 USC 103.

Reference (3) to Cheung includes an issue date, October 16, 2007, after the earliest claimed effective filing date of '768, i.e. May 27, 2004, but claims the benefit to US provisional application 60/547,931 filed February 26, 2004¹, prior to the earliest claimed effective filing date of '768, and thus, is available as prior art under 35 USC 102(e) and 35 USC 103.

Reference (4) to Wang was filed April 20, 2001 and issued on June 27, 2002, i.e. more than a year prior to the earliest claimed effective filing date of '768, i.e. May 27, 2004 and thus, is available as prior art under 35 USC 102(b) and 35 USC 103.

¹ See pages 35-41 of the Request.

None of the references (1)-(3) cited in the proposed rejections in this Request were before the examiner during prosecution of the '768 Patent.

However, during the prosecution of the '354 application, Reference (4) to Wang was applied as a secondary reference in some rejections, i.e. is considered old art.

However, MPEP 2242 states:

“for example, a substantial new question of patentability may be based solely on old art where the old art is being presented viewed in a new light, or in a different way, as compared with its use in the earlier examination(s), in view of a material new argument or interpretation presented in the request.”

In this instance, Requester asserted such reference (4) in combination with References (1)-(2) or (1)-(3) which were not previously of record, i.e. presented in a new light/different way.

Accordingly, Reference (3) is not precluded from raising a substantial new question of patentability as presented.

Claim Interpretation

As set forth in MPEP 2240, in making the determination of whether to order reexamination, the Office will determine the proper meaning of the patent claims by giving the claims their broadest reasonable interpretation consistent with the specification (see *In re Yamamoto*, 740 F.2d 1569 (Fed. Cir. 1984).

Prior Art Rejections

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

A person shall be entitled to a patent unless –

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

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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.

This application currently names joint inventors. In considering patentability of the claims under pre-AIA 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of pre-AIA 35 U.S.C. 103(c) and potential pre-AIA 35 U.S.C. 102(e), (f) or (g) prior art under pre-AIA 35 U.S.C. 103(a).

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis (i.e., changing from AIA to pre-AIA) for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

Claims 1-2, 5-6, 9-10 and 13-14 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,581,658 to O'Hagan et al. (hereinafter also referred to as O'Hagan or '658 (Exhibit D)) as evidenced by Merriam-Webster.com Dictionary/Thesaurus, in view of U.S. Patent Application No. 2007/0168409 to Cheung (hereinafter also referred to as Cheung or '409 (Exhibit F)).

Claim 1:

A media measurement method comprising:

O'Hagan is directed to the automatic identification of broadcast performances, such as music, commercials, and the like. Ex. D, 1:9-12.² Identification systems are used, for example, to measure the broadcast frequency of any particular program and to provide information about advertising audience numbers, commercial repetitions, and licensed broadcast performances. Ex. D, 1:14-24. O'Hagan describes a typical prior art identification system (Fig. 1) which includes a station monitoring unit 20 (the upper half of Fig. 1 below) for monitoring broadcasts and a signature and recognition post-processing unit 64 (the lower half of Fig. 1 below) for identifying the broadcasts. Ex. D, 4:65-5:4, 5:40-47. Ultimately, the system and method identifies programs, commercial advertisements or other repetitively broadcast programs from each monitored broadcast station together with a starting time and the program duration.

Accordingly, O'Hagan discloses or obviously suggests a media measurement method.

² As discussed on pages 14-15 of the Request, O'Hagan is analogous to the '768 patent.

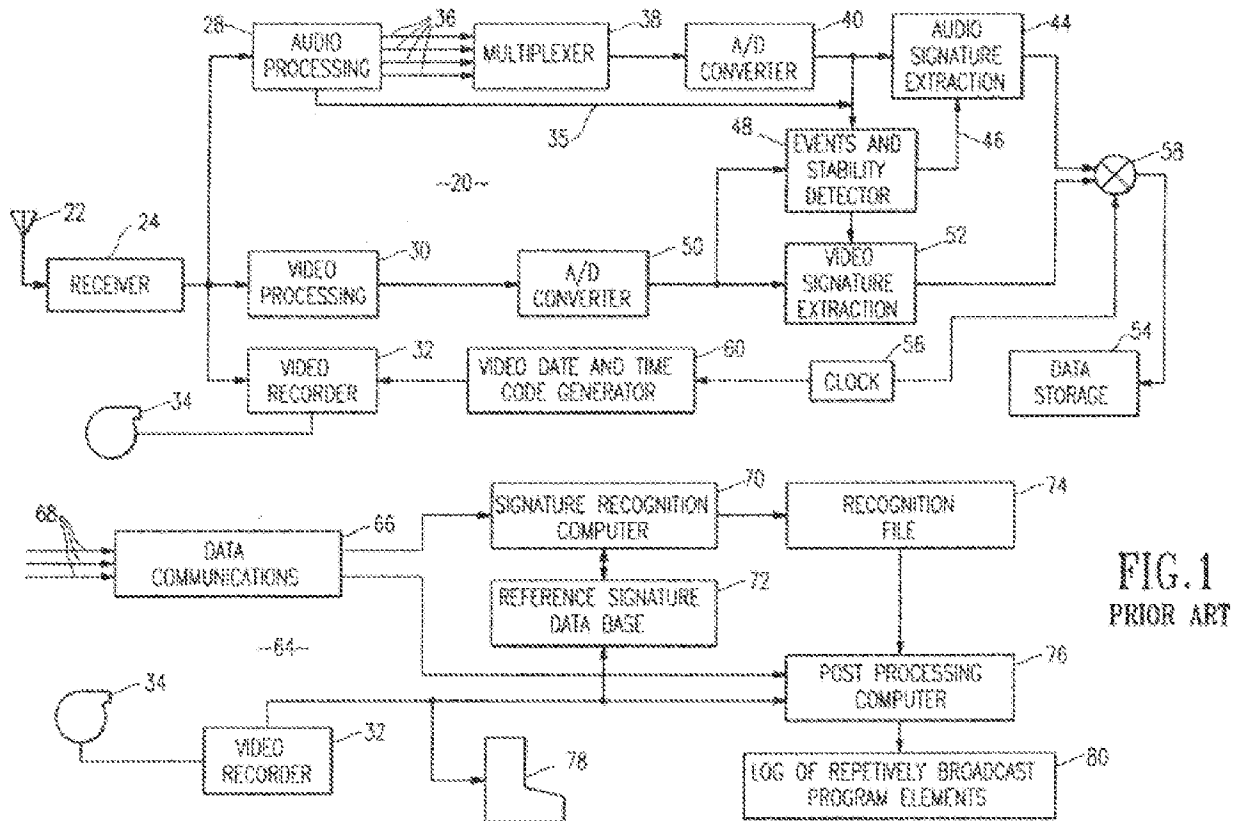


FIG. 1
PRIOR ART

(a) receiving over a network, at one or more computers, data for a sequence of audio data samples, the audio data samples comprising representations of audio data captured at a media monitoring device, the plurality of audio data samples being submitted over the network;

See Fig. 1 above. Station monitoring unit 20 receives radio signals (via antenna 22 and receiver 24) from a monitored broadcast station and processes the signals 26 (via at least audio processing circuitry 28 and audio signature extraction circuit 44) to extract audio signatures that are based, in part, on the energies found in different frequency bands of the received radio signals. Ex. D, 5:1-22. The extracted audio signatures are stored along with their timestamps. Ex.

D, 5:30-36. Signature and recognition post-processing unit 64 receives signatures from station monitoring units 20 (via communication lines 68) which compares the extracted signatures (e.g., computer 70) from the various station monitoring units 20 with a plurality of reference signatures taken from programs to identify particular corresponding broadcast programs. Ex. D, 5:40-50. Accordingly, O'Hagan teaches or obviously suggests receiving over communication lines at one or more computers (e.g., receiving at signature and recognition post-processing unit 64/computer 70), data for a sequence of audio data samples (e.g., successively extracted and stored signatures and times of extraction for monitored audio signals from a broadcast radio antenna), the audio data samples comprising representations of audio data captured at a media monitoring device (e.g., the signatures represent energy found in different frequency bands of the audio signals captured at station monitoring unit 20), the plurality of audio data samples being submitted over the communication lines 68.³

However, while O'Hagan discloses data is received over the communication lines 68 of the broadcast program identification system, O'Hagan does not explicitly teach such are part of a "network". However, as evidenced by Merriam-Webster.com Dictionary/Thesaurus, a "network" is a "system" and is defined as "an interconnected or interrelated chain, group, or system" or "a system of computers and peripherals that are able to communicate with each other" Since O'Hagan teaches a "system" and includes computers, e.g. 64, and peripherals, e.g. unit 20, which are interconnected, e.g., via communication lines 68, see Fig. 1 above, so as to communicate with each other, the system of O'Hagan as evidenced by Merriam-Webster.com

³ See also Request, pages 18-19 with regard to the disclosures of O'Hagan.

Dictionary/Thesaurus is or obviously is a “network” and thereby, data submitted and received over the communication lines 68 is submitted and received “over a network”.⁴

(b) using the one or more computers to query an electronic database of a plurality of audio data representations and corresponding content identifiers;

O’ Hagan further discloses that extracted audio signatures may be recognized and identified as belonging to a particular program. Ex. D, 5:58-64. Signature and recognition post-processing unit 64 receives signatures from station monitoring units 20 (via communication lines 68), compares the signatures with a plurality of reference signatures (via at least signature recognition computer 70 and reference signature database memory 72) to identify corresponding broadcast programs. The signature recognition computer 70 compares the extracted signatures to a library of reference signatures stored in a reference signature database memory 72, classifies and stores them in a recognition file 74, which is coupled to a post-processing computer 76. Ex. D, 5:40-61. Signature recognition computer 70 also generates the reference signatures stored in reference database memory 72. Therefore, O’Hagan is considered to disclose or obviously suggest using the one or more computers (e.g., using signature and recognition post-processing unit 64, which includes signature recognition computer 70) to query an electronic database (e.g., accessing a reference signature database memory 72 to compare data) of a plurality of audio data representations (e.g., a library of reference signatures used for comparison) and corresponding content identifiers (e.g., information used for identifying/classifying to corresponding/particular program).

To the extent O’Hagan would be considered not to disclose a “corresponding content identifier”, attention is invited to Cheung. As discussed above, O’Hagan discusses the signature

⁴ Note also paragraph [0024], col. 2, lines 5-7 of Cheung.

computer 70 which compares and identifies/classifies signatures also generates the reference signatures stored in reference database memory 72. Cheung is also directed to a system and method for detecting and identifying broadcast audio and video signals.⁵ Ex. F, [0001]. The system and method, implemented via computer software and/or hardware, operates by first registering programming content, i.e. storing a series of “fingerprints” or “signatures” (also referred to as pattern vector data) of the content in a database cross-referenced with the identities of the content. Ex. F, [0019]-[0021], [0219]. Next, unidentified monitored content is input and the system calculates the signatures of the monitored content and attempts to match the calculated signatures with signatures of the already registered content in the database. Ex. F, [0019], [0024]-[0031]. Therefore, if not already, to provide the reference signatures stored in the reference database of O’Hagan with corresponding content identifiers as taught by Cheung would be obvious to one of ordinary skill in the art for the predictable result of identifying/classifying the recognized/matched signature as belonging to a particular program as desired by O’Hagan.⁶

(c) generating a raw play stream, the raw play stream comprising a sequence of content identification results corresponding to the sequence of audio data samples;⁷, wherein:

the sequence of content identification results is obtained by querying the electronic database to attempt to determine respective likely matches between respective audio data samples in the sequence of audio data samples and respective audio data representations in the electronic database;⁸

As discussed in (b) above, O’Hagan discloses that extracted audio signatures may be recognized and identified as belonging to a particular program. Ex. D, 5:58-64. Signature and

⁵ As discussed on page 41 of the Request, Cheung is analogous to the ‘768 patent.

⁶ See also page 42, second full paragraph of the Request.

⁷ See also col. 9, lines 17-19 of ‘768.

⁸ See also pages 22-24 of the Request.

recognition post-processing unit 64 receives signatures from station monitoring units 20 (via communication lines 68), compares the signatures with a plurality of reference signatures (via at least signature recognition computer 70 and reference signature database memory 72) to identify corresponding broadcast programs. The signature recognition computer 70 compares the extracted signatures to a library of reference signatures stored in a reference signature database memory 72, classifies and stores them in a recognition file 74, which is coupled to a post-processing computer 76. Ex. D, 5:40-61. O'Hagan further discloses signature recognition computer 70 "searches for instances of successive recognition of extracted signatures to identify a particular program" and "[t]hese successive recognized extracted signatures are provided to post-processing computer 76 which computer produces a file or log 80 of the identified programs along with their start times and durations." Ex. D, 5:61-6:3. Additionally, post-processing computer 76 also provides extensive analytical services to logically check and flag incomplete or otherwise defective broadcast identifications and thereby enable user detection of false signal recognitions. Post-processing computer 76 also assigns a temporary code to identify each non-recognized or unmatched extracted signature to permit later manual review of the program recorded in medium 34 for manual identification. Ex. D, 6:7-10.

Accordingly, O'Hagan or the combination of O'Hagan and Cheung teach or suggest a sequence/succession of content identification results is obtained by querying the electronic database to attempt to determine respective likely matches between respective audio data samples in the sequence of audio data samples and respective audio data representations in the electronic database, (e.g., by comparing the extracted signatures to the reference signatures of database 72, computer 70 obtains a sequence of content identification results, i.e. successive recognition of extracted signatures identifiable of a particular program), and generating a raw

Art Unit: 3992

play stream (e.g., recognition file 74) which comprises/stores the sequence of content identification results corresponding to the sequence of audio data samples. See also the following discussion.

(c) (cont.) a content identification result of the sequence of content identification results comprises either:

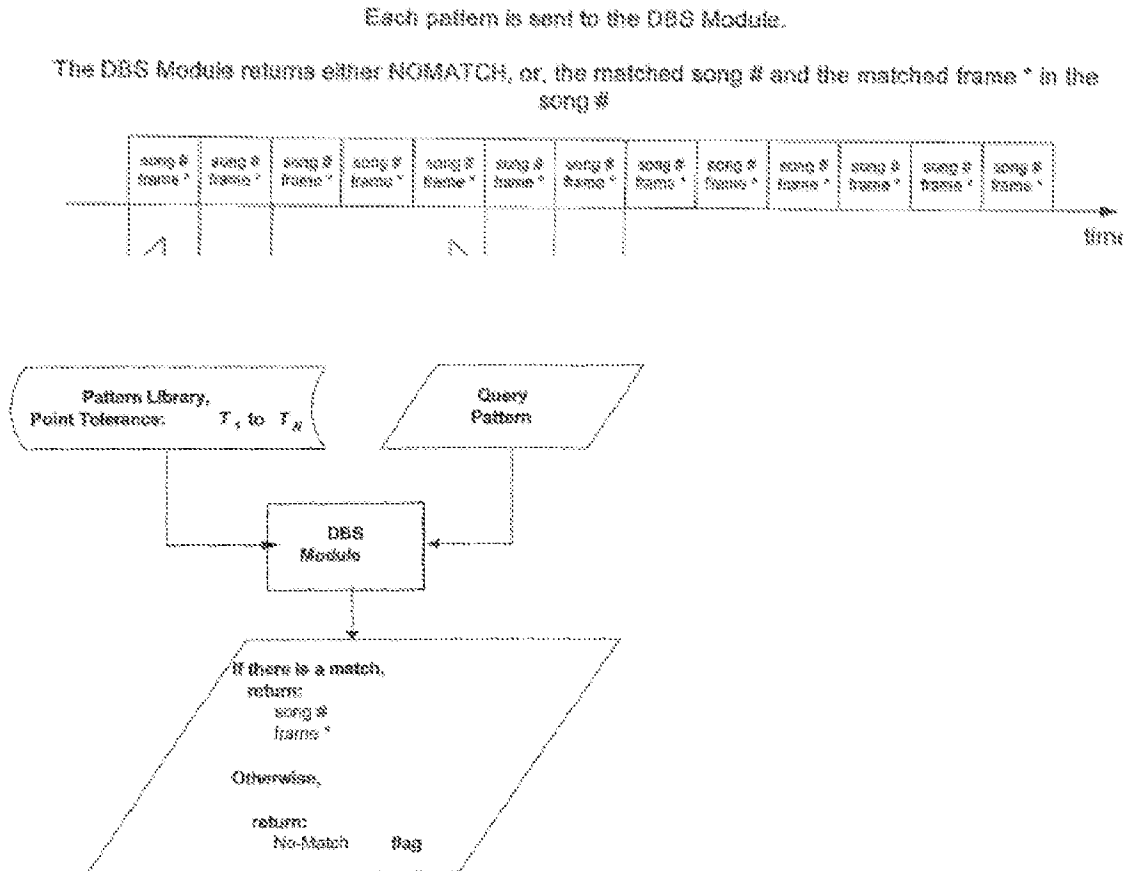
(i) a content identifier associated in the electronic database with a respective audio data representation that is determined to be a respective likely match with a respective one of the audio data samples;

or

(ii) an indication of the absence of a respective likely match between a respective audio data sample and an audio data representation in the electronic database; and

See the discussion of 1(b) and the portions of 1(c) above. O'Hagan is considered to teach or obviously suggest that an extracted signature that had been recognized or matched with a reference signature corresponding to a program would be provided with a classification, i.e. identifier, associated with a respective audio data representation (e.g., associated with a reference signature) that is determined to be the respective likely match. O'Hagan is also considered to teach or obviously suggest that, for non-recognized and unmatched extracted signatures, the recognition file 74 must include an indication of the absence of a respective likely match in order for post-processing computer 76 to programmatically determine that any particular extracted signature is non-recognized or unmatched, e.g. if the recognition file 74 provided no indication of the absence of a likely match, then the post-processing computer 76 would not be able to analyze the recognition file 74 to determine that an extracted signature was non-recognized and unmatched because there is no indication of that status.

To the extent that O' Hagan is considered not to describe classifying extracted signatures to corresponding "content identifiers," the database (i.e. to the extent that the disclosed classification of content can be performed without any content identifiers) and does not explicitly describe the manner of classifying non-recognized or unmatched extracted signatures such as with "an indication of the absence of a respective likely match," see again the discussion of Cheung above, Ex. F, [0019]-[0021] as well as Ex. F, [0033], | [0076], and Figs. 2 and 7 (describing a "NO-MATCHED" indication):



Cheung discloses "search[ing] for a match" for calculated signatures in a "database," and "[w]hen a match is found and confirmed, the system uses the cross-referenced identity in the

database to provide the identity of the content ...” Ex. F, [0019], [0021]. For example, a “program-id” and “frame-id” are returned for successful database searches. Ex. F, [0031], [0033], [0076]. If a match is not found, then a “NO MATCHED” indication is returned instead. Ex. F, [0019], [0031], [0033], [0076], Figs. 2 and 7. That is, Cheung teaches that when a matching signature is not found in a database, that absence of a match is indicated by a “NO MATCHED” indication and not indicated, hypothetically, by the absence of any indication.

Therefore, to implement O’Hagan’s database-based classifications with content identifiers would be obvious to one of ordinary skill in the art in order to advantageously return descriptive identifying information about matches. Indeed, one purpose of O’Hagan’s system is to “identify particular corresponding broadcast programs.” Ex. D, 5:46-47. Moreover, the modification would have been, at least, the application of a known technique (e.g., Cheung’s teaching of cross-referenced identities in a database) to a known system ready for improvement (e.g., O’ Hagan’s database used for classifying extracted signatures to identify the signatures) to yield predictable results (e.g., the production of information that identifies the extracted signatures upon finding a match).⁹ To implement O Hagan’s database-based classifications with an indication of the absence of a match, such as with a “NO MATCHED” indication, would be obvious to one of ordinary skill in the art in order to positively identify extracted signatures that are not matched to reference signatures in the database. In this way, the system is assured that the extracted signature has indeed been analyzed and that a determination, whether matched or unmatched, has actually been made. Moreover, the modification would have been, at least, the application of a known technique (e.g., Cheung’s teaching of identifying unmatched signatures with a “NO MATCHED” indication) to a known system ready for improvement (e.g., O’Hagan’s

⁹ See MPEP § 2143 (citing *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 415- 421 (2007)).

system of classifying unmatched extracted signatures) to yield predictable results (e.g., indicating the absence of a match with a NO MATCHED result).¹⁰

Accordingly, a content identification result (i) or (ii) as claimed above are taught or suggested by O'Hagan alone or the combination of O'Hagan and Cheung.

(c) (cont.) the raw play stream includes either:

at least two different content identifiers obtained from the electronic database;

or

at least one content identifier obtained from the electronic database and at least one indication of the absence of a respective likely match between a respective audio data sample and an audio data representation in the electronic database;

See the discussion above. Therefore, it would have been recognized that the recognition file includes at least two content identification results and such results are either content identifiers obtained from the database (i.e. successive recognized extracted signals), indications of the absence of a respective likely match or both and that the content identifier of the matched/recognized extracted signature represents programs, commercial advertisements or other repetitively broadcast programs from each monitored broadcast stations. O'Hagan or O'Hagan and Cheung thus suggest the second alternative of this limitation, i.e. "or...". Furthermore, it is again noted that O'Hagan discloses that "instances of successive recognition of extracted signatures" are searched for "to identify a particular program" and that these "successive recognized extracted signatures" are provided to post-processing computer 76 which produces a file or log containing records of the identified "programs, commercial advertisements

¹⁰ See footnote 9.

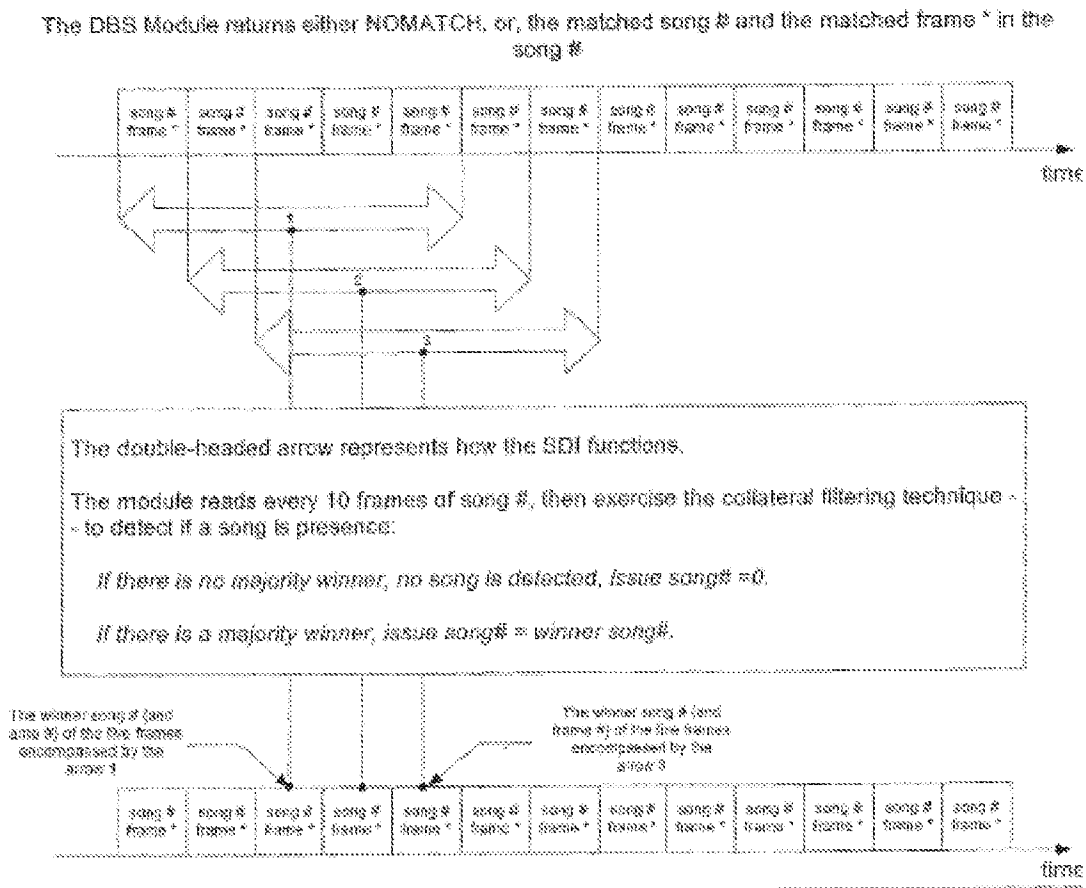
or other repetitively broadcast programs from each monitored broadcast station... together with a starting time and the program duration.” (emphasis added.) Ex. D, 5:62-6:3. From this disclosure, it would have therefore been recognized that the recognition file also includes at least two different content identifiers corresponding to two different contents, such as that of “the particular program” and another program or a commercial advertisement which is not “the particular program” being searched for. O’Hagan or O’Hagan and Cheung also thus suggest the first alternative of this limitation, i.e. “at least two... database”.

(d) scrubbing¹¹ the raw play stream by analyzing sample sequence data of the raw play stream to determine whether to change a result of the sequence of content identification results in view of a pattern of the sample sequence data of the raw play stream compared to an expected pattern of sample sequence data; and

See discussion above. In addition, to returning with a content identifier or no match identification as discussed above, O’Hagan discloses post-processing computer 76 also provides extensive analytical services to logically check and flag incomplete or otherwise defective broadcast identifications and thereby enable user detection of false signal recognitions. Post-processing computer 76 also assigns a temporary code to identify each non-recognized or unmatched extracted signature to permit later manual review of the program recorded in medium 34 for manual identification. Ex. D, 6:3-10. However, O’Hagan does not disclose using an expected pattern of sample sequence data to scrub the raw play stream by analyzing sample sequence data of the raw play stream to determine whether to change a result of the sequence of content of identification results in view of a pattern of the sample sequence data of the raw play

¹¹ See col. 9, lines 32-36 of ‘768, i.e. “Sample sequence data may be used to ‘scrub’ Raw Play Stream 410. **By analyzing the sequence of data on Raw Play Stream, it is possible to locate and correct any identifications that are likely to be incorrect or to supply missing identifications where the system has not otherwise been able to provide an identification.**” (Bold emphasis added.)

stream compared to an expected pattern of sample sequence data. Attention is again invited to Cheung. See Ex. F, paragraph [0032] and Figure 2(below):



Cheung discloses that in order to suppress false positive detections and to increase the correct detections, the matching results from the DBS [Database Search Module] on a most recent contiguous N results are monitored by the SDI [Program Detection and Identification Module] according to either or both of two schemes. The two schemes are used to determine if any audio or video program has been positively detected. The first is a majority voting scheme. The second is a frame sequencing scheme which counts how many frames constitute a valid

sequence. If there exists a majority of the contiguous frames satisfy the frame sequencing requirement, then the program (whether audio or video) is deemed detected in that thread. If the frame sequencing requirement is not satisfied, the detected result is changed. See Figure 2. See also [0147]-[0148] (“[0147] The SDI module takes the results of the DBS module and then provide final confirmation of the audio or video program identity. The SDI module contains two routines: 1. Detection--Filtering on regularity of the detected song number: [0148] Irregular matches, where the DBS module returns different program-id numbers on a consecutive set of frames, is a good indication that no program is being positively detected. In contrast, consistent returns, where the DBS module returns consistently the same song number on a consecutive set of frames, indicates that a program is successfully detected.”) Therefore, Cheng discloses a pattern of content identification results (i.e. a predetermined number of contiguous results) is compared to an expected pattern of content identification results (i.e. a majority or preset number of the predetermined number of contiguous results are the same) to determines whether to change a result.

Therefore, to analyze the raw play stream/recognition file by the processor 76 by analyzing sample sequence data of the raw play stream (by the processor 76) of O’Hagan or O’Hagan and Cheung with a sequencing scheme as taught by Cheung would be obvious to one of ordinary skill in the art in view of the recognition that such would enable determination of false signal recognitions/false positives of the sequence of content identification results with the predictable result of providing a more accurate broadcast identification.

Accordingly, O’Hagan and Cheung obviously teach scrubbing the raw play stream by analyzing sample sequence data of the raw play stream to determine whether to change a result

of the sequence of content identification results in view of a pattern of the sample sequence data of the raw play stream compared to an expected pattern of sample sequence data.

(e) generating a clean play stream¹² from the raw play stream by making any changes to the raw play stream that are determined to be made by the scrubbing.

See the discussion of 1(d). It would be recognized that the scrubbing of the raw play stream as taught by O'Hagan and Cheung, i.e. the sequencing scheme analysis, would generate a clean play stream from the raw play stream by making the changes to the raw play stream (by the post processing computer 760 that are determined by the scrubbing (e.g. change the content identification result, e.g. "NOT-MATCHED", if false positive detection is determined by analysis.

Claim 2:

The method of claim 1 wherein sample sequence data includes at least one of log times, content identifiers, and content offsets.

See discussion of 1(d) above, i.e. the scrubbing taught by O'Hagan and Cheung includes analyzing sample sequence data including content identifiers, e.g. false positives.

Claim 5:

The method of claim 1 wherein a clean play list is generated from the clean play stream.

See the discussion of claim 1(e) above. O'Hagan further discloses post-processing computer 76 producing a file or log 80 containing records of the identified programs, commercial advertisements or other repetitively broadcast programs from each monitored

¹² See again footnote 11,

broadcast station together with a starting time and the program duration. Therefore, O'Hagan and Cheung teach or suggest generating a clean play list (i.e. file or log 80) from the clean play stream.

Claim 6:

The media measurement method of claim 1 wherein the plurality of audio data representations include a plurality of audio signatures.

See the discussion of the plurality of audio data representations in 1(a) above.

Claim 9:

A computer program product in a non-transitory computer readable medium comprising instructions executable by one or more processors of one or more computers, the one or more computers being coupled to a network to receive, over the network, data for a sequence of audio data samples, the audio data samples comprising representations of audio data captured at a media monitoring device, the plurality of audio data samples being submitted over the network, the instructions comprising instructions for:

To the extent the preamble is limiting, see the discussion of 1(a) above. O' Hagan or O'Hagan as evidenced by Merriam-Webster.com Dictionary/Thesaurus discloses one or more computers being coupled to a "network" to receive, over the network, data for a sequence of audio data samples, the audio data samples comprising representations of audio data captured at a media monitoring device, the plurality of audio data samples being submitted over the network. See, e.g., Ex. D, 4:65-6:12 (describing various processing "circuitry," "units," and "computers," an A/D converter, processing digital signals, using a database memory, etc.). To the extent O'Hagan is not considered to explicitly describe its system/network (e.g., station monitoring unit 20 and signature and post-processing unit 64) for broadcast identification implemented as one or more processors of one or more computers executing instructions of a computer program

product stored on a non-transitory computer readable medium, Cheung teaches implementation of a broadcast identification system network via a computer with a central processing unit running “software ... implemented in ROM (read-only memory) form or stored on any kind of computer readable media, including CD-ROM, ... or transmitted as digital data files stored in a computer’s memory.” Ex. F, [(0019)-(0021), (0219), claims 35 and 36 (i.e. “A machine comprising a central processing unit, a digital data transceiver device and a data storage device comprised of any machine readable media, where the machine readable media contains a computer program that when executed by the machine, performs any one of the methods ...36. A machine readable media of any type, which contains data that is a computer program that when executed by a computer, performs any one of the methods...”)) Therefore, it would have been obvious to one of ordinary skill in the art to also implement O’Hagan’s broadcast identification system/network with computers having processing units executing software stored on computer readable media as taught by Cheung with the predictable result of similarly facilitating the implementation of O’Hagan’s broadcast identification system.

a) using the one or more computers to query an electronic database of a plurality of audio data representations and corresponding content identifiers;

See the discussion of the similar language of claim 1(b) above.

(b) generating a raw play stream, the raw play stream comprising a sequence of content identification results corresponding to the sequence of audio data samples; wherein:

the sequence of content identification results is obtained by querying the electronic database to attempt to determine respective likely matches between respective audio data samples in the sequence of audio data samples and respective audio data representations in the electronic database;

a content identification result of the sequence of content identification results comprises either:

(i) a content identifier associated in the electronic database with a respective audio data representation that is determined to be a respective likely match with a respective one of the audio data samples;

or

(ii) an indication of the absence of a respective likely match between a respective audio data sample and an audio data representation in the electronic database; and

the raw play stream includes either:

at least two different content identifiers obtained from the electronic database;

or

at least one content identifier obtained from the electronic database and at least one indication of the absence of a respective likely match between a respective audio data sample and an audio data representation in the electronic database;

See the discussion of the similar language of claim 1(c) above.

(c) scrubbing the raw play stream by analyzing sample sequence data of the raw play stream to determine whether to change a result of the sequence of content identification results in view of a pattern of the sample sequence data of the raw play stream compared to an expected pattern of sample sequence data; and

See the discussion of the similar language of claim 1(d) above.

(d) generating a clean play stream from the raw play stream by making any changes to the raw play stream that are determined to be made by the scrubbing.

See the discussion of the similar language of claim 1(e) above.

Claim 10:

The computer program product of claim 9 wherein sample sequence data includes at least one of log times, content identifiers, and content offsets.

See the discussion of the similar language of claim 2 above.

Claim 13:

The computer program product of claim 9 wherein the computer program product further comprises instructions for generating a clean play list from the clean play stream.

See the discussion of the similar language of claim 5 above.

Claim 14:

The computer program product of claim 9 wherein the plurality of audio data representations include a plurality of audio signatures.

See the discussion of the similar language of claim 6 above.

Claims 7 and 15 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,581,658 to O'Hagan et al. (hereinafter also referred to as O'Hagan or '658 (Exhibit D)) as evidenced by Merriam-Webster.com Dictionary/Thesaurus, in view of U.S. Patent Application No. 2007/0168409 to Cheung (hereinafter also referred to as Cheung or '409 (Exhibit F)) as applied to claims 1 and 9 above, and further in view of U.S. Patent Application No. 2002/0083060 to Wang et al (hereinafter also referred to as Wang or '060 (Exhibit H)).

Claim 7:

The media measurement method of claim 1 wherein an audio data representation of the plurality of audio data representations includes a plurality of signal landmarks.

Claim 15:

The computer program product of claim 9 wherein an audio data representation of the plurality of audio data representations includes a plurality of signal landmarks.

O’ Hagan discloses the plurality of audio data representations including audio signatures, as discussed with respect to claims 1(a). O’Hagan also discloses querying an electronic database and comparing extracted signatures to reference signatures to classify extracted signatures. O’Hagan does not explicitly describe audio data representations that include “signal landmarks,” Wang is directed to a system and method for matching an audio sample to an audio sample in a database even when audio is highly distorted or contains a high level of noise. Ex. H, Abstract, [0002]. Wang discloses that matching is enhanced by comparing “fingerprints” at particular locations of the audio. Ex. H, [0018]. The locations used for analysis are “reproducibly computable locations ... called ‘landmarks,’” where “each fingerprint represents a number of features of the media sample at each location.” Ex. H, [0020]. An audio sample is captured, and its landmarks and fingerprints are computed. Ex. H, Fig. 1, steps 12 and 14, [0039], [0050], [0065]. See also Ex. H, [0039], [0040], [0048]-[0049], [0051], [0084], [0085]. To modify O’Hagan’s signatures to have associated landmarks and to use those landmarks for classifying the signatures, as taught by Wang, would be obvious to one of ordinary skill in the art in order to advantageously provide additional information relating to the signatures that improves matching accuracy. Moreover, the modification would have been, at least, the use of a known technique (e.g., Wang’s teaching of landmarks) to improve similar devices in the same way (e.g., to improve matching accuracy in recognition systems that use signatures or fingerprints, like O’Hagan’s and Wang’s).

¹³ See footnote ???.

Patentability/Confirmation

Claims 3 and 11 are confirmed.¹⁴ Contrary to the Request, col. 7, lines 28-39 describe a process of initial matching patterns in a large scale market where once a match is made using broadcast source features of a channel, broadcast features of the same channel are also used for matching subsequent samples until one such match fails, whereupon broadcast features of other channels are used for pattern recognition, i.e. not for scrubbing initial pattern configuration results.

Conclusion

Extensions of Time

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to “an applicant” and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that reexamination proceedings “will be conducted with special dispatch” (37 CFR 1.550(a)). Extension of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

Notification of Concurrent Proceedings

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a), to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving

¹⁴ The terminology “channel data” in both claim 3 and 11 is interpreted in light of col. 9, lines 57-59 of ‘768, i.e. “particular CD albums, broadcasts, or other particular storage or transmission media carrying a particular sequence of content.”

US Patent No. 8,510,768 throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

Amendment in Reexamination Proceedings

Patent owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c).

Submissions

In order to insure full consideration of any amendments, affidavits or declarations or other documents as evidence of patentability, such documents must be submitted in response to the first Office action on the merits (which does not result in a close of prosecution). Submissions after the second Office action on the merits, which is intended to be a final action, will be governed by the requirements of 37 CFR 1.116, after final rejection and by 37 CFR 41.33 after appeal, which will be strictly enforced.

Information Disclosure Statement

Various IDS were submitted by Patent Owner on April 16, 2024.

Prior art is evaluated in accordance with the policy of MPEP 2256, which states: "Where patents, publications, and other such items of information are submitted by a party (patent owner or requester) in compliance with the requirements of the rules, the requisite degree of consideration to be given to such information will be normally limited by the degree to which the

party filing the information citation has explained the content and relevance of the information. The initials of the examiner placed adjacent to the citations on the form PTO/SB/08A and O8B or its equivalent, without an indication to the contrary in the record, do not signify that the information has been considered by the examiner any further than to the extent noted above.”

Service of Papers

After filing of a request for *ex parte* reexamination by a third party requester, any document filed by either the patent owner or the third party requester must be served on the other party (or parties where two or more third party requester proceedings are merged) in the reexamination proceeding in the manner provided in 37 CFR 1.248. The document must reflect service or the document may be refused consideration by the Office. See 37 CFR 1.550(f).

Correspondence

All correspondence relating to this *ex parte* reexamination proceeding should be directed:

By Mail to:	Mail Stop <i>Ex Parte</i> Reexam Central Reexamination Unit Commissioner for Patents United States Patent & Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450
By FAX to:	(571) 273-9900 Central Reexamination Unit
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Any inquiry concerning this communication should be directed to the Central Reexamination Unit at telephone number 571-272-7705.

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