UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE INC., Petitioner,

v.

NETWORK-1 TECHNOLOGIES, INC., Patent Owner.

> Case IPR2015-00348 Patent 8,656,441 B1

Before KEVIN F. TURNER, LYNNE E. PETTIGREW, and JON B. TORNQUIST, *Administrative Patent Judges*.

PETTIGREW, Administrative Patent Judge.

FINAL WRITTEN DECISION *35 U.S.C. § 318(a) and 37 C.F.R. § 42.73*

I. INTRODUCTION

In this *inter partes* review, instituted pursuant to 35 U.S.C. § 314, Google Inc. ("Petitioner") challenges the patentability of several claims of U.S. Patent No. 8,656,441 B1 (Ex. 1001, "the '441 patent"), owned by Network-1 Technologies, Inc. ("Patent Owner"). We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons discussed below, Petitioner has not shown by a preponderance of the evidence that claims 1–3, 6, 8–14, 18, 19, 21–27, 29, and 30 of the '441 patent are unpatentable.

A. Procedural History

Petitioner filed a Petition for *inter partes* review of claims 1–3, 6–14, 18, 19, 21–27, 29, and 30 of the '441 patent. Paper 2 ("Pet."). Patent Owner filed a Preliminary Response. Paper 5 ("Prelim. Resp."). On June 23, 2015, we instituted an *inter partes* review of claims 1–3, 6, 8–14, 18, 19, 21–27, 29, and 30 of the '441 patent on certain asserted grounds of unpatentability. Paper 6 ("Dec.").

After institution, Patent Owner filed a Patent Owner Response, Paper 17 ("PO Resp."), and Petitioner filed a Reply to the Patent Owner Response, Paper 20 ("Pet. Reply"). Subsequently, Patent Owner filed a paper identifying allegedly improper reply arguments in Petitioner's Reply, Paper 24, and Petitioner filed a response, Paper 25.

An oral hearing was held on March 9, 2016.¹ A transcript of the hearing has been entered into the record. Paper 29 ("Tr.").

B. Related Matters

The parties state that Patent Owner has asserted the '441 patent against Petitioner in *Network-1 Technologies, Inc. v. Google Inc. and YouTube, LLC*, No. 1:14-cv-02396 (S.D.N.Y.) (filed Apr. 4, 2014). Pet. 1; Paper 3, 2 (Patent Owner's Mandatory Notice). Petitioner states that

¹ A consolidated oral hearing was held for this proceeding and Cases IPR2015-00343, IPR2015-00345, and IPR2015-00347. *See* Paper 23.

YouTube, LLC, is a subsidiary of Petitioner and a real party-in-interest with respect to the Petition. Pet. 1. Patent Owner also has asserted related U.S. Patent No. 8,640,179 B1 ("the '179 patent"), U.S. Patent No. 8,205,237 B2 ("the '237 patent"), U.S. Patent No. 8,010,988 B2 ("the '988 patent"), and U.S. Patent No. 8,904,464 B1 ("the '464 patent") in the district court proceeding. *See* Paper 19, 2–3. The '179 patent, '237 patent, and '988 patent are the subject of *inter partes* reviews in Cases IPR2015-00343, IPR2015-00345, and IPR2015-00347, respectively, based on petitions filed by Petitioner. The '464 patent is the subject of a covered business method patent review in Case CBM2015-00113 based on a petition filed by Petitioner.

C. The '441 Patent

The '441 patent relates to a method of identifying a work, such as a digital audio or video file, without the need to modify the work. Ex. 1001, 1:47–52, 4:41–47. The identification can be accomplished by extracting features from the work and comparing the extracted features with records in a database. *Id.* at Abstract. Thereafter, an action associated with the work may be determined based on the identification of the work. *Id.* at 4:40–41.



Figure 1, reproduced below, illustrates steps of the claimed method:

Figure 1 of the '441 patent illustrating steps of the claimed method

D. Illustrative Claim

Claims 1, 13, and 25 of the '441 patent are independent. Claim 1 is illustrative of the subject matter of the challenged claims:

1. A computer system comprising:

one or more electronic communications devices;

one or more processors operatively connected to the one or more electronic communications devices; and

one or more computer readable media operatively connected to the one or more processors and having stored thereon computer instructions for carrying out the steps of:

(a) maintaining, by the computer system, a database comprising:

(1) first electronic data related to identification of one or more reference electronic works; and

(2) second electronic data related to action information comprising an action to perform corresponding to each of the one or more reference electronic works;

(b) obtaining, by the computer system, extracted features of a first electronic work;

(c) identifying, by the computer system, the first electronic work by comparing the extracted features of the first electronic work with the first electronic data in the database using a non-exhaustive neighbor search;

(d) determining, by the computer system, the action information corresponding to the identified first electronic work based on the second electronic data in the database; and

(e) associating, by the computer system, the determined action information with the identified first electronic work.

Ex. 1001, 24:46–25:7.

E. Asserted Grounds of Unpatentability

We instituted an *inter partes* review of claims 1–3, 6, 8–14, 18, 19,

21–27, 29, and 30 on the following grounds of unpatentability:

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Reference(s)	Basis	Challenged Claims
Conwell ²	35 U.S.C. § 102(e)	1–3, 6, 8–14, 19, 21–26, and 30
Ghias ³ and Philyaw ⁴	35 U.S.C. § 103(a)	1–3, 8, 10–14, 18, 19, 21–27, 29, and 30

II. DISCUSSION

A. Claim Construction

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, No. 15–446, slip op. at 13 (U.S. June 20, 2016). In our Institution Decision, we construed "a non-exhaustive . . . search" to mean "a search that locates a match without a comparison of all possible matches." Dec. 7. We disagreed with Petitioner's view that a search that conducts a comparison with all possible matches is nevertheless non-exhaustive if it does not compare all data within all possible matches. *Id.*

Patent Owner agrees with our adopted construction, emphasizing that a non-exhaustive search locates a match without a comparison of all possible matches but is not concerned with whether all data within all possible matches have been compared. PO Resp. 2–6. Petitioner does not challenge our adopted construction in its Reply. *See* Pet. Reply 3–5 (only addressing

² U.S. Patent No. 6,970,886 B1, issued Nov. 29, 2005 (Ex. 1009, "Conwell").

³ U.S. Patent No. 5,874,686, issued Feb. 23, 1999 (Ex. 1010, "Ghias").

⁴ U.S. Patent No. 6,098,106, issued Aug. 1, 2000 (Ex. 1014, "Philyaw").

construction of a different claim term). For this Final Written Decision, after considering the complete record, we maintain our construction of "a non-exhaustive . . . search" as "a search that locates a match without a comparison of all possible matches."

As explained below, the dispositive issue in this case is whether the asserted prior art references disclose a non-exhaustive search. Accordingly, no other claim terms require express construction.

B. Principles of Law

To prevail in challenging Patent Owner's claims, Petitioner must demonstrate by a preponderance of the evidence that the claims are unpatentable. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). A claim is anticipated if a single prior art reference either expressly or inherently discloses every limitation of the claim. *Orion IP, LLC v. Hyundai Motor Am.*, 605 F.3d 967, 975 (Fed. Cir. 2010). A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time of the invention to a person having ordinary skill in the art. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

C. Asserted Anticipation by Conwell

Petitioner contends that claims 1–3, 6, 8–14, 19, 21–26, and 30 are unpatentable under 35 U.S.C. § 102(e) as anticipated by Conwell. Pet. 21–

34. In support of this asserted ground of unpatentability, Petitioner relies on the testimony of Dr. Pierre Moulin. *Id.* (citing Ex. 1004 ¶¶ 83–88). In response, Patent Owner argues that Conwell fails to disclose certain limitations of independent claims 1, 13, and 25. PO Resp. 7–32. Patent Owner relies on the testimony of Dr. George Karypis for support. *Id.* (citing Ex. 2005 ¶¶ 331–85, 409–19). As explained below, we conclude that Petitioner has not shown by a preponderance of the evidence that Conwell anticipates claims 1–3, 6, 8–14, 19, 21–26, and 30 of the '441 patent.

1. Conwell

Conwell relates to a method for directing users of digital content to websites related to the content being played. Ex. 1009, Abstract. An identifier can be derived from the content, for example, by applying a hashing algorithm to some or all of the content to generate the identifier. *Id.* at 1:60–2:3. Conwell also discloses use of "hashing algorithms by which similar or related, but non-identical, inputs map to the same hash outputs." *Id.* at 4:64–5:3. Each identifier and corresponding URL are stored in a database that "can be conceptualized as a large look-up table." *Id.* at 3:43–45, Figs. 3–4. The entries in the database may be sorted by identifier, and the system may be keyed by identifier. *Id.* at 5:58–64.

When a user plays the digital content, such as a CD, DVD, or MP3 file, the identifier is generated and sent to the database, which uses the identifier to look up the corresponding URL in the database and sends that URL back to the user device. *Id.* at 1:60–62, 2:4–10, 3:46–60. In the event that the content identifier is not associated with a URL, for a small fee the user can create a web page to be associated with the content, where the web

page can include banner advertisements, sponsored links to online retailers, or other methods of generating revenue. *Id.* at 4:14–24, 4:30–34.

2. Analysis

Petitioner contends that Conwell discloses all of the limitations of independent claims 1, 13, and 25. Pet. 23–26, 28–29, 31–33; Pet. Reply 6– 12. Among other things, each independent claim requires identifying an electronic work by comparing extracted features or other representation of the work with data in a database using a "*non-exhaustive* neighbor *search*." Ex. 1001, 24:67, 26:22–23; 28:2 (emphases added). As discussed above, we have construed "a non-exhaustive . . . search" to mean "a search that locates a match without a comparison of all possible matches."

Patent Owner argues that the search processes disclosed in Conwell are not non-exhaustive, as required by independent claims 1, 13, and 25. PO Resp. 23–32. Patent Owner contends first that although Conwell teaches identifying a match using a look-up table, which can include entries sorted by identifier, Conwell does not expressly disclose using the look-up table to conduct a non-exhaustive search. *Id.* at 24 (citing Ex. 1009, 3:43–44, 5:59– 61, Fig. 3; Ex. 2005 ¶¶ 365–66). Patent Owner further argues that "[w]hile there are ways to search the lookup table disclosed in Conwell using a nonexhaustive approach, Conwell does not disclose such an approach." *Id.* at 26 (citing Ex. 2005 ¶ 369). We agree with Patent Owner that Conwell does not explicitly disclose a non-exhaustive search.

We also agree with Patent Owner that Conwell does not inherently disclose using the look-up table to conduct a non-exhaustive search. *See id.* at 27–31. As Patent Owner explains, Conwell does not teach any particular search algorithm or any "details as to how the exact-match search between

the hashed identifier of the work to be identified and the hashed identifiers in the reference database is actually performed." *Id.* at 28–29 (citing Ex. 1009, 3:43-62; Ex. 2005 ¶ 377). Moreover, although one passage from Conwell cited by Petitioner describes how a look-up table is maintained, Patent Owner points out that Conwell says nothing about how the table is searched. *Id.* at 31–32 (citing Ex. 1009, 5:58-64; Ex. 2005 ¶ 385).

Petitioner responds that anticipation does not require *ipsissimis verbis* recitation of claim limitations. Pet. Reply 9. Further, Petitioner contends, at the time the '441 patent was filed, "it was at least 'probable' that one skilled in the art would use a non-exhaustive lookup to conduct a database query." *Id.* However, the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993). Even if it would have been trivial to perform the look-up in Conwell using a non-exhaustive process, such a possible application does not demonstrate that Conwell expressly or inherently discloses a non-exhaustive search, as is required for anticipation.

Petitioner also argues that because the '441 patent explains that database lookups commonly employed binary searches, which are nonexhaustive, "Conwell's disclosure of a database query amounts to a disclosure of a 'non-exhaustive search." Pet. Reply 10 (citing Ex. 1001, 20:66–21:4). We disagree, as we are not persuaded the inventor of the '441 patent was describing all database lookups as non-exhaustive searches. Rather, as discussed at oral hearing, the inventor's description applies to a database with a large number of entries, and Petitioner has pointed to

nothing in Conwell itself that discloses a number of database entries or the type of search employed. Tr. 21:22–22:17.

Finally, Petitioner contends that the genus of searches is limited to two species—exhaustive and non-exhaustive—and a skilled artisan "would have envisaged a 'non-exhaustive' search as the *predominant* form of 'database query.'" Pet. Reply 11 (citing Ex. 2005 ¶ 371). Therefore, according to Petitioner, Conwell discloses a non-exhaustive search in substance. *Id.* (citing *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009)). We do not agree. Instead, we find persuasive the testimony of Dr. Karypis that the database look-up in Conwell may use exhaustive methods, and Conwell does not disclose any non-exhaustive approach. Ex. 2005 ¶¶ 367– 69. Although Petitioner alleges that Dr. Karypis's declaration is entitled to little weight because it "is replete with attorney argument presented in the guise of expert testimony," Pet. Reply 19, we are persuaded that his analysis of Conwell demonstrates that the look-up processes disclosed in Conwell need not be non-exhaustive.

For these reasons, we are not persuaded that Conwell discloses "a non-exhaustive neighbor search," as recited in independent claims 1, 13, and 25. Claims 2, 3, 6, 8–12, 14, 19, 21–24, 26, and 30 each depend from one of the independent claims and thus also include this limitation. Therefore, Petitioner has not demonstrated that Conwell discloses each and every limitation of claims 1–3, 6, 8–14, 19, 21–26, and 30. Accordingly, Petitioner has not shown by a preponderance of the evidence that Conwell anticipates claims 1–3, 6, 8–14, 19, 21–26, and 30 of the '441 patent.

D. Asserted Obviousness over Ghias and Philyaw

Petitioner contends that claims 1–3, 8, 10–14, 18, 19, 21–27, 29, and 30 are unpatentable under 35 U.S.C. § 103(a) as obvious over Ghias and Philyaw. Pet. 45–60. In support of its contentions, Petitioner relies on the testimony of Dr. Moulin. *Id.* (citing Ex. 1004 ¶¶ 117–28). In response, Patent Owner argues that the combination of Ghias and Philyaw fails to teach or suggest certain limitations of independent claims 1, 13, and 25. PO Resp. 32–48. Patent Owner relies on the testimony of Dr. Karypis for support. *Id.* (citing Ex. 2005 ¶¶ 236–45, 266–90, 387–407, 421–23). As explained below, we conclude that Petitioner has not shown by a preponderance of the evidence that claims 1–3, 8, 10–14, 18, 19, 21–27, 29, and 30 of the '441 patent would have been obvious over the combination of Ghias and Philyaw.

1. Ghias

Ghias relates to searching for melodies. Ex. 1010, Abstract. The system of Ghias receives a melody input through a microphone, converts it into a digitized representation based on relative pitch differences between successive notes, and searches a database of such representations for an approximate match. *Id.* The converted user input is "compared with all the songs" in the database. *Id.* at 5:66–6:2. Ghias also discloses that it is desirable to perform key-searching within the database using "an efficient approximate pattern matching algorithm." *Id.* at 6:7–11. According to Ghias, several algorithms having various running times have been developed that address the problem of approximate string matching. *Id.* at 6:23–35.

The results of the search are presented as a list of approximately matching melodies ranked by how well they match the query, or

alternatively just one best match. *Id.* at 2:50–59, 6:60–63. The number of approximate matches the system returns may depend on a preselected error tolerance applied to the search. *Id.* at 2:52–53, 6:63–7:1.

A user can identify the song of interest from the results of the query. *Id.* at 7:4–5. If the list is too large, the user can perform a new query on a restricted search list consisting of songs retrieved in a first query. *Id.* at 7:5–8.

2. Philyaw

Philyaw discloses extracting identifying information embedded into a broadcast signal and directing a computer to receive and display appropriate product information, such as an advertisement, based on the identifying information. Ex. 1014, Abstract, 1:66–2:8. This display is accomplished by having the computer query an Advertiser Reference Server, which has a database of product codes and associated URLs, and returns an advertiser's URL for display. *Id.* at 5:23–27, 5:52–58, 5:64–6:2.

3. Analysis

Petitioner contends that the combination of Ghias and Philyaw teaches all of the limitations of independent claims 1, 13, and 25. Pet. 46–52, 54– 55, 57–59; Pet. Reply 13–18. As discussed above, each independent claim requires identifying an electronic work by comparing extracted features or other representation of the work with data in a database using a "*nonexhaustive* neighbor *search*." Ex. 1001, 24:67, 26:22–23, 28:2 (emphases added). Petitioner relies solely on Ghias for teaching the claimed "nonexhaustive neighbor search." Pet. 47–48; Pet. Reply 13–15.

Patent Owner argues that Ghias fails to disclose a non-exhaustive search. PO Resp. 32–44. Patent Owner asserts that in searching for an

approximate match for a melody, Ghias's system compares the converted input melody with "all the songs" (i.e., songs converted to representations of relative pitch differences) in the database. *Id.* at 33; *see* Ex. 1010, 6:1–2. Patent Owner further points out that Petitioner's declarant, Dr. Moulin, agrees that "all the songs" in the database in Ghias are "all possible matches" for a search. PO Resp. 33 (citing Ex. 2006, 325:19–22); *see* Ex. 2005 ¶ 266. Patent Owner also cites testimony by Dr. Moulin in which he acknowledges that Ghias executes an exhaustive search, i.e., a comparison of the input melody to each of the possible matches, rather than a non-exhaustive search that does not perform a comparison to each possible match in the database. PO Resp. 34–35 (citing Ex. 2006, 327:3–328:4); *see* Ex. 2005 ¶ 267.

Notwithstanding Ghias's disclosure of a search that compares a work with "all the songs" in the database (i.e., all possible matches), and the testimony of Petitioner's declarant confirming that the described search is an exhaustive search, Petitioner nevertheless contends that Ghias discloses a non-exhaustive search as required by the independent claims. First, Petitioner argues that Ghias itself identifies all of its searches as nonexhaustive. Pet. 47–48; Pet. Reply 14–15. Specifically, Petitioner relies on the following description in Ghias:

Several [a]lgorithms have been developed that address the problem of approximate string matching. Running times have ranged from O(mn) for the brute force algorithm to O(kn) or O(nlog(m)[)], where "O" means "on the order of," m is the number of pitch differences in the query, and n is the size of the string (song).

Ex. 1010, 6:23–28. Thus, according to Petitioner, Ghias describes searches that are faster than brute force and, therefore, are non-exhaustive. Pet. 47–

48; Pet. Reply 14–15 (citing Ex. 2005 ¶ 82 (Patent Owner's declarant equating a brute force search with an exhaustive search); Ex. 2001 (definition of "brute-force search" equating the term with "exhaustive search")). We agree with Patent Owner, however, that the quoted passage from Ghias relates to comparing a work with a *single* record in the database, not to locating a match from among all the records in the database. *See* PO Resp. 37. Thus, the cited passage in Ghias does not describe a non-exhaustive neighbor search identifying a neighbor, as required by claims 1, 13, and 25.

Petitioner further argues that Ghias discloses that "[p]erformance may . . . be improved by <u>packing all the songs into one file</u>," so that the nonexhaustive (i.e., faster than brute force) search within a single record would apply to all of the concatenated records, making the search non-exhaustive with respect to all records (i.e., all possible matches) in the database. Pet. Reply 15. We agree with Patent Owner that this argument represents a "new theory" beyond that presented in the Petition with respect to the asserted unpatentability grounds based on Ghias. Paper 24, 3. *Compare* Pet. 47–48, *with* Pet. Reply 14–15. Accordingly, we do not address this new argument improperly raised for the first time in the Reply. *See* 37 C.F.R. § 42.23(b); *Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 2016 WL 2620512, at *8–9 (Fed. Cir. May 9, 2016) (concluding the Board did not abuse its discretion in refusing to consider reply brief arguments advocating a "new theory" of unpatentability under 37 C.F.R. § 42.23(b)).

Petitioner also contends the system in Ghias executes a nonexhaustive search when it performs a new query on a restricted search list containing songs retrieved in a first query. Pet. Reply 13–14. Patent Owner

argues that (1) using a "new query" in Ghias does not disclose the claimed non-exhaustive search, and (2) this theory should not be a basis for finding claims of the '441 patent unpatentable because it is based on reasoning in our Institution Decision that was not presented in the Petition. PO Resp. 37– 44. We need not address Patent Owner's second argument because we are persuaded by its first.

The figure provided in Petitioner's Reply is illustrative and is reproduced below:



Pet. Reply 13. As shown in the Figure from the Reply illustrating an example of multiple searches in Ghias, a first, exhaustive search is performed on the entire database, resulting in a restricted list of identified matches. A second search then is performed on the restricted list. As Patent Owner points out, the second search is an exhaustive search of Works A, C, D, and E because only Works A, C, D, and E are possible matches, as acknowledged by Petitioner's declarant, Dr. Moulin. Tr. 41:3–43:11; Ex. 2006, 325:13–21, 336:13–22; *see* Ex. 1010, 7:4–9; Ex. 2005 ¶ 288. If the first and second searches are viewed as separate and independent, each search is exhaustive of the dataset being searched because each compares the query to all possible matches. PO Resp. 39–41; *see* Ex. 2006, 335:13–336:12. Alternatively, if the second search is considered the second stage of a two-stage search, it depends on a first stage to generate a candidate set. Under this view, the two-stage search is exhaustive because it includes a first

stage that compares the query to all songs in the database, i.e., all possible matches. PO Resp. 41. We are persuaded by Patent Owner's argument that under either view, Ghias discloses an exhaustive search rather than a non-exhaustive search.

Petitioner argues that the subsequent searches in Ghias are nonexhaustive because they do not consider all songs. Pet. Reply 14. But as just discussed, we are persuaded each subsequent search is exhaustive because it searches all possible matches. For example, the second search shown in the figure above searches all possible matches (Works A, C, D, and E) because Work B is not a possible match. Tr. 42:8–14. Petitioner also argues that the queries from the first and second searches need not be the same, so that the results for the first query could exclude results that are not matches to the first query, but would be matches for the second query. Pet. Reply 14. As a result, Petitioner argues, the second search would not consider the excluded references, which are possible matches to the second query, and thus the second search would be non-exhaustive because it would not search all possible matches. *Id.* We are not persuaded by this line of reasoning. The second search still would be exhaustive of the dataset provided to the search algorithm. A search is not non-exhaustive simply because it does not seek matches outside of the records that are available to the search algorithm.

For these reasons, we are not persuaded that Ghias teaches "a nonexhaustive neighbor search," as recited in independent claims 1, 13, and 25. Claims 2, 3, 8, 10–12, 14, 18, 19, 21–24, 26, 27, 29, and 30 each depend from one of the independent claims and thus also include this limitation. Petitioner does not argue that "a non-exhaustive search" is taught or

suggested by Philyaw. Accordingly, Petitioner has not shown by a preponderance of the evidence that claims 1–3, 8, 10–14, 18, 19, 21–27, 29, and 30 of the '441 patent would have been obvious over the combination of Ghias and Philyaw.

III. CONCLUSION

Based on the evidence and arguments, Petitioner has not demonstrated by a preponderance of the evidence that (i) claims 1–3, 6, 8–14, 19, 21–26, and 30 are unpatentable under 35 U.S.C. § 102(e) as anticipated by Conwell, or (ii) claims 1–3, 8, 10–14, 18, 19, 21–27, 29, and 30 are unpatentable under 35 U.S.C. § 103(a) as obvious over Ghias and Philyaw.

IV. ORDER

Accordingly, it is:

ORDERED that claims 1–3, 6, 8–14, 18, 19, 21–27, 29, and 30 of the '441 patent have not been shown to be unpatentable; and

FURTHER ORDERED that, because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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