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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PAUL RICHARD KRISTOFF, HAROLD LEE, JASON STONE, HENRY FU, and MARCUS PHILIP TIDWELL

Appeal 2018-004423
Application 13/075,906[1]
Technology Center 2100

Before HUNG H. BUI, JON M. JURGOVAN, and MICHAEL M. BARRY, *Administrative Patent Judges*.

BUI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants seek our review under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1, 2, 4–11, and 13–17. Claims 3 and 12 are cancelled, and claims 18–20 are withdrawn. App. Br. 15–18 (Claims App'x). We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.[2]

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[1] According to Appellants, the real party in interest is Teradata US, Incorporated. App. Br. 2.

[2] Our Decision refers to Appellants' Appeal Brief ("App. Br.") filed October 9, 2017; Reply Brief ("Reply Br.") filed March 23, 2018; Examiner's Answer ("Ans.") mailed January 23, 2018; Final Office Action ("Final Act.") mailed May 5, 2017; and original Specification ("Spec.") filed March 30, 2011.

STATEMENT OF THE CASE

Appellants' invention relates to "a method for independent attribute filtering within a database interface." Spec. ¶ 5. According to Appellants,

> [a] graphical user interface (GUI) tool [i.e., an interface, shown in Figure 3, for a user to access a backend database] is presented to a user for interacting with an underlying database. The GUI tool includes a field selection and attribute selections for the field. The user selects a field and an attribute for that field and is presented with a first list of values retrieved from the database for the selected attribute. Next, the user selects a filter for the attribute within the GUI tool and a second reduced list of values is presented to the user within the GUI tool representing the filtered first list of values acquired by applying the filter.

Abstract.

Claims 1 and 10 are independent. Claim 1 illustrates the claimed subject matter, as reproduced below with disputed limitations in *italics*:

> 1. A method implemented and programmed within a non-transitory computer-readable storage medium and processed by a processor, the processor configured to execute the method, comprising:
>
> presenting a graphical user interface (GUI) tool to a user, the GUI tool acting as an interface for the user to access a database;
>
> receiving, from the user, a field selection for a field of the database within the GUI tool in response to the user browsing the GUI for the field;
>
> obtaining, from the user, an attribute selection for an attribute assigned to the field within the GUI tool;
>
> displaying within the GUI tool a first list of attribute values retrieved from the database and assigned to the attribute for the field;

> *acquiring, from the user, an attribute filter, the attribute filter acquired from the user as one or more conditions that reduces a set of information defined by the field;*
>
> *filtering the first list to present a reduced second list of attribute values within the GUI tool by applying the filter against the first list*, wherein the reduced second list of attribute values is obtain from the first list of attributes presented to the user within the GUI tool and the one or more conditions for the attribute filter acquired from the user within the GUI tool and displaying the reduced set of information within the GUI;
>
> selecting, by the user, attribute values from said second list of attribute values; and
>
> *executing a query against said database using said attribute values selected from said second list of attribute values*.

App. Br. 14 (Claims App'x).

REJECTION AND REFERENCES

(1) Claims 1, 2, 4–11, and 13–17 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to an abstract idea without significantly more. Final Act. 2.

(2) Claims 1, 2, 4–11, and 13–17 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Racovolis (US 2006/0248109 A1; published Nov. 2, 2006) and Okogun (US 2011/0265038 A1; published Oct. 27, 2011). Final Act. 3–9.

ANALYSIS

35 U.S.C. § 101: Claims 1, 2, 4–11, and 13–17

In *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014), the Supreme Court reiterates an analytical two-step framework

previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 79 (2012), "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice*, 134 S. Ct. at 2355. The first step in the analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts," such as an abstract idea. *Id.* If the claims are directed to eligible subject matter, the inquiry ends. *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016).

If the claims are directed to a patent-ineligible concept, the second step in the analysis is to consider the elements of the claims "individually and 'as an ordered combination'" to determine whether there are additional elements that "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (citing *Mayo*, 566 U.S. at 79, 78). In other words, the second step is to "search for an 'inventive concept'—*i.e.*, an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'" *Id.* (citing *Mayo*, 566 U.S. at 72–73).

In rejecting claims 1, 2, 4–11, and 13–17 under 35 U.S.C. § 101, the Examiner determines these claims are directed to an abstract idea of "filtering data of a database" and describes "a generic filtering tool [incorporated into a generic graphical user interface (GUI)] for filtering a set of data based on generic conditions." Final Act. 2; Ans. 3. According to the Examiner, these claims include limitations that are analogous or similar to the filtering of content as discussed in *Bascom*. *Id.* (citing *Bascom Global*

Internet Servs., Inc. v. AT&T Mobility LLC, 827 F.3d 1341, 1350 (Fed. Cir. 2016)).

The Examiner also determines

> [t]he claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the claims are directed to a graphical user interface that displays the filtering content and the filtering tools.

Final Act. 2.

Alice/Mayo—Step 1 (Abstract Idea)

Turning to the first step of the *Alice* inquiry, Appellants do not dispute the Examiner's determination that the claims are directed to an abstract idea; instead, Appellants argue the Examiner has oversimplified the claims, ignored limitations recited in the claims, and failed to consider the Specification and drawings in interpreting and understanding the claims. App. Br. 6. In addition, Appellants argue, like the claims in *Enfish* (822 F.3d at 1339), their claims "provide a specific functional improvement to query construction and execution within a database interface system - an improvement to the capabilities and utilization of the database interface system." Reply Br. 3.

Appellants' arguments are not persuasive for several reasons. First, the Examiner is required to review all claims at some level of generalization and characterize whether those claims are directed to an abstract idea under *Alice* step 1. However, there is no single definition of "abstract idea." As the Federal Circuit succinctly put it:

> The problem with articulating a single, universal definition of "abstract idea" is that it is difficult to fashion a workable definition to be applied to as-yet-unknown cases with as-yet-unknown inventions.

Amdocs (Israel) Ltd. v. Openet Telecom, Inc., 841 F.3d 1288, 1294 (Fed. Cir. 2016). Because there is no single definition of an abstract idea, the Federal Circuit instructs us "to examine earlier cases in which a similar or parallel descriptive nature can be seen—what prior cases were about, and which way they were decided." *Id.* at 1294 (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016); *accord* USPTO Memorandum, *July 2015 Update: Subject Matter Eligibility* (2015), https://www.uspto.gov/sites/default/files/documents/ieg-july-2015-update.pdf ("USPTO Memorandum") (instructing Examiners that "a claimed concept is not identified as an abstract idea unless it is similar to at least one concept that the courts have identified as an abstract idea"). In this case, the Examiner did just what she was required to do under the USPTO Memorandum and has characterized the claims as required pursuant to *Alice*.

Second, Appellants' reliance on *Enfish* is misplaced. In *Enfish*, the claims were directed to an improved database architecture, i.e., a self-referential table — "a specific type of data structure designed to improve the way a computer stores and retrieves data in memory." *Enfish*, 822 F.3d at 1339. Such a data structure has several distinct advantages over conventional relational databases, including: (1) faster searching of data than would be possible with the conventional relational model (*see* U.S. Patent No. 6,151,604 ("*Enfish* '604 patent"), 1:55–59, 2:66–3:6); (2) more effective storage of data other than structured text, such as storage of images and unstructured text (*Enfish* '604 patent 2:16–22, 2:46–52); and (3) more flexibility in configuring the database (*Enfish* '604 patent 2:27–29).

In *Enfish*, the Federal Circuit characterized the "directed to" inquiry as a stage-one filter to the claims, "considered in light of the specification,

based on whether 'their character as a whole is directed to excluded subject matter.'" *Enfish*, 822 F.3d at 1335. In particular, the Federal Circuit interpreted the "directed to" inquiry as asking "whether the claims are directed to an *improvement to computer functionality* versus being directed to an abstract idea." *Id.* (emphasis added). "[T]he focus of the claims is on the specific asserted improvement in computer capabilities (i.e., the self-referential table for a computer database)." *Id.* at 1335–36. Based on the "plain focus of the claims," the Federal Circuit reached the conclusion that *Enfish's* claims were directed to "a specific improvement to the way computers operate, embodied in the self-referential table," and, as such, were more than a mere abstract idea. *Id.* at 1336. Because the Federal Circuit found step 1 of the *Alice* two-step analysis was satisfied, *Alice* step 2 was not required. *Id.*

In contrast to *Enfish*, Appellants' claims and Specification are directed to an abstract idea of "filtering data of a database" and describes "a graphical user interface [GUI] that serves as a tool with field input means [filter mechanism] for filtering data." Final Act. 2; Ans. 3. As correctly recognized by the Examiner, "[t]he user interface components such as fields and lists displayed to the user" "allow the user to make field selections in the GUI tool to customize how data is filtered based on the choices of a user." Ans. 3. None of these user interface components as recited in Appellants' claims 1 and 10 are intended to improve the performance of a computer or solve a problem specific to computers or computer networks. Appellants' Specification and arguments do not demonstrate the claims "improve the way a computer stores and retrieves data in memory," as the claims in *Enfish* did via a "self-referential table for a computer database." *See Enfish*, 822

F.3d at 1336, 1339. Likewise, none of the steps recited in Appellants' claims 1 and 10, nor the rest of Appellants' Specification supply any description or explanation as to how these user interface components such as fields and lists are intended to provide: (1) a "solution . . . necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks," as explained by the Federal Circuit in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014); (2) "a specific improvement to the way computers operate," as explained in *Enfish* (822 F.3d at 1336); or (3) an "unconventional technological solution . . . to a technological problem" that "improve[s] the performance of the system itself," as explained in *Amdocs* (841 F.3d at 1300, 1302).

Accordingly, we agree with the Examiner that claims 1, 2, 4–11, and 13–17 are directed to an abstract idea of "filtering data of a database."

Alice/Mayo—Step 2 (Inventive Concept)

In the second step of the *Alice* inquiry, Appellants argue, like the claims in *Bascom* (827 F.3d at 1350), "the specific sequence of steps" recited in claims 1 and 10 contains an "inventive concept" because (1) the combination of steps or elements recited for constructing and executing a query within a data warehouse "provides meaningful benefits within a data warehouse system, and amounts to significantly more than a method for using a graphical user interface that displays filtering content and filtering tools"; and (2) like the "the unique combination of elements presented in independent claim 1 satisfies [the requirement of § 101]." App. Br. 8.

Appellants' arguments are persuasive only in part. For example, *Bascom* (U.S. Patent No. 5,987,606 ("*Bascom* '606 patent")) describes a

particular arrangement of filtering software at a specific location, remote from the end-users, with customizable filtering features specific to each end user. The filtering software enables individually customizable filtering at the remote ISP server by taking advantage of the technical ability of the ISP server to identify individual accounts and associate a request for Internet content with a specific individual account. *Bascom* '606 patent 4:35–38.

The Federal Circuit recognized that *Bascom's* installation of an Internet content filter at a particular network location is "a technical improvement over prior art ways of filtering such content" because such an arrangement advantageously allows the Internet content filter to have "both the benefits of a filter on a local computer and the benefits of a filter on the ISP server" and "give[s] users the ability to customize filtering for their individual network accounts." *Bascom*, 827 F.3d at 1350, 1352. According to the panel, *Bascom's* claims "do not preempt the use of the abstract idea of filtering content on the Internet or on generic computer components performing conventional activities." *Id.* Instead, *Bascom's* claims "carve out a specific location for the filtering system (a remote ISP server) and require the filtering system to give users the ability to customize filtering for their individual network accounts." *Id.* As such, "an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces." *Id.* at 1350.

In contrast to *Bascom*, Appellants' claims and Specification are directed to "a generic filtering tool [incorporated into a generic graphical user interface (GUI)] for filtering a set of data based on generic conditions." Final Act. 2; Ans. 3. According to Appellants' Specification, "the GUI tool [is provided] as a marketing segmentation tool that is used for developing

custom segments for marketing campaigns of an enterprise [i.e., a company]." Spec. ¶ 12. For example, when a user/customer is shopping online, via a GUI to access a retailer's database, the GUI is provided with a field selection (e.g., "Sales Associates"), attribute selections (i.e., available attributes such as "name," "store number," "associate identifier," "gender" and "phone number"), and an "attribute filter mechanism" (present within the GUI the same way as a field selection mechanism and an attribute selection mechanism) to permit a user/customer to filter a product list across category-specific attributes for better selection and search results. Spec. ¶¶ 13–15, 23–24, 34–35.

Nevertheless, we find Appellants' incorporation of an attribute filter mechanism into a graphical user interface (GUI) to filter data in a database sufficiently transforms the abstract idea (i.e., "filtering data of a database") into "a particular, practical application of that abstract idea," as discussed by the Federal Circuit in *Bascom* (827 F.3d at 1352). For this reason alone, we find the combination of elements recited in Appellants' claims 1 and 10 contains an "inventive concept" and recites something "significantly more" to transform the abstract concept (i.e., "filtering data of a database") into a patent-eligible application. *Alice*, 134 S. Ct. at 2357. Accordingly, we do not sustain the Examiner's rejection of claims 1, 2, 4–11, and 13–17 under 35 U.S.C. § 101.

35 U.S.C. § 103(a): Claims 1, 2, 4–11, and 13–17

In support of the obviousness rejection of claims 1 and 10, the Examiner finds Racovolis teaches virtually all aspects of Appellants' claimed method, including presenting a graphical user interface (GUI) tool

to a user, shown in Figures 1–2, to allow the user to select a particular field (for example, calendar fields within Microsoft® Outlook®) and attributes (for example, labels and categories, shown in Figures 3–4) and use a filtering module (shown in Figure 2) to filter an original list of attribute values and present a reduced list of attribute values. Final Act. 3–4 (citing Racovolis ¶¶ 14, 15, 22, Figs 1, 5).

Racovolis' Figure 2 shows graphical user interface (GUI) tool 210 to enable a user to use filter module 224 to filter data (e.g., calendar information) from database 252, as reproduced below:

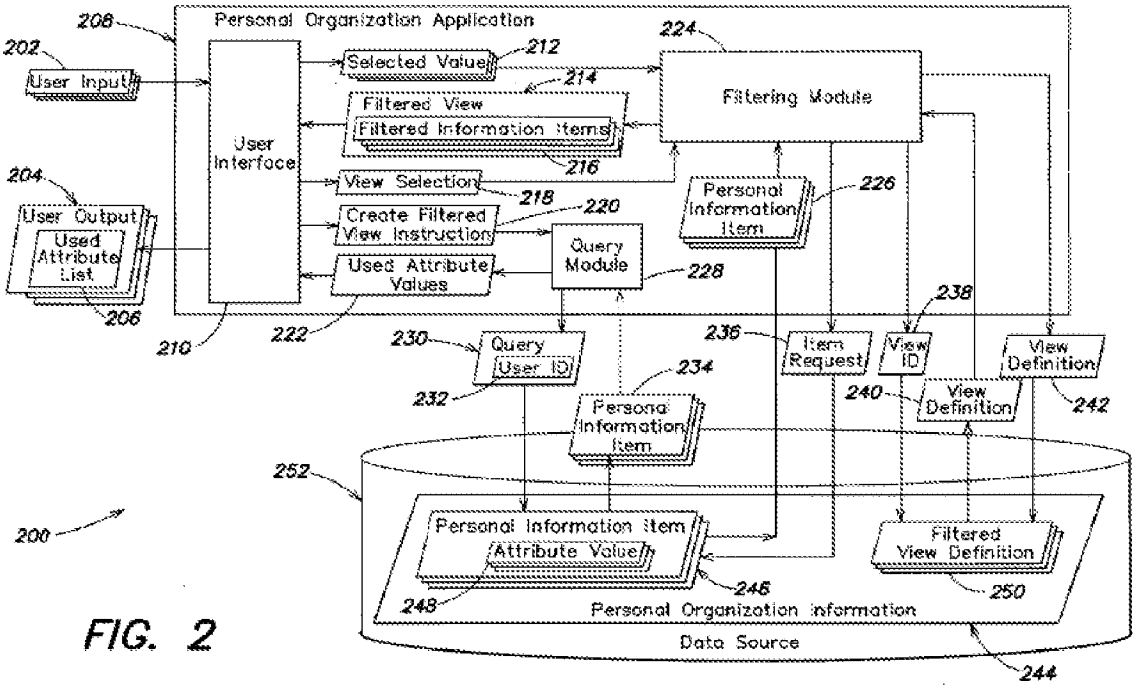

FIG. 2

Racovolis' Figure 4 shows a user's selection of attributes (e.g., labels and categories), via filter module 224, to filter data (e.g., calendar information) from a database, as reproduced below:

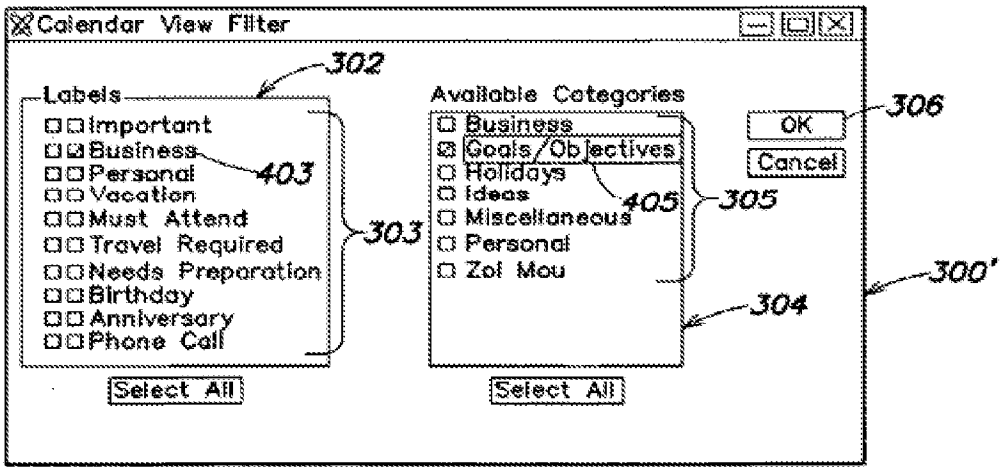

FIG. 4

Racovolis also teaches filtering an original list of attribute values and present a reduced list of attribute values, as shown in steps 608–610 of Figure 6. Racovolis ¶¶ 82–83.

While not necessary, the Examiner relies on Okogun for expressly teaching the limitation:

> filtering the first list to present a reduced second list of attribute values within the GUI tool by applying the filter against the first list, wherein the reduced second list of attribute values is obtain from the first list of attributes presented to the user within the GUI tool and the one or more conditions for the attribute filter acquired from the user within the GUI tool and displaying the reduced set of information within the GUI

as recited in claim 1 (similarly recited in claim 10) in order to support the conclusion of obviousness. Final Act. 4–5 (citing Okogun, Figs. 5–6, 10). Like Racovolis, Okogun also teaches the use of a filter mechanism for a mobile application via a graphical user interface (GUI), shown in Figures 5 and 10, to allow a user to filter data items on data fields so that only a subset of data items (data list) may be presented on a display. *See* Okogun ¶¶ 55–58.

Appellants dispute the Examiner's factual findings regarding Racovolis and Okogun. App. Br. 9–12. In particular, Appellants argue the cited paragraphs 22–23 of Racovolis do not teach or suggest "acquiring, from the user, an attribute filter, the attribute filter acquired from the user as one or more conditions that reduces a set of information defined by the field" as recited in claim 1. *Id.* at 9–11. Appellants acknowledge paragraphs 22–23 of Racovolis teaches a GUI tool that "enables a user to create a filtered view of personal information items," but argue: (1) "R[a]covolis fails to teach or suggest this second list of attribute values"; (2) "[t]he filtered view of personal items discussed in Racov[o]lis is ***not*** equivalent to Applicant's second list of attribute values, from which attribute values are selected for use in a database query"; and (3) "[t]he personal items are ***not*** attributes, and the list of personal items is ***not*** a list, second list, or reduce[d] set of attribute values." *Id.* at 11 (emphasis added).

Appellants also argue the cited Figure 5, element 506 of Racovolis does not teach or suggest the claimed "executing a query against said database using said attribute values selected from said second list of attribute values" as recited in claim 1, or alternatively, "executing a query against said database using attribute values selected from said filtered attribute values by said user" as recited in claim 10. App. Br. 12. According to Appellants, Racovolis' Figure 5 only shows "a user interface display including a filtered view of personal organization information" and not execution of any query. *Id.*

Separately, Appellants argue the cited Figures 5 and 6 of Okogun do not teach "an attribute filter and a reduced second list obtained from the first list." *Id.* According to Appellants, "the list of messages[, as disclosed by

Okogun,] is equivalent to a list of attribute values, as recited in claims 1 and 10." *Id.*

Appellants' arguments are not persuasive. Instead, we find the Examiner has provided a full response to Appellants' arguments, supported by evidence. Ans. 4–5. As such, we adopt the Examiner's findings and explanations provided therein. *Id.* For example, Racovolis teaches the use of filtering module 224, shown in Figure 2, to filter data items into a subset of data items and, as such, teaches the claimed "acquiring, from the user, an attribute filter, the attribute filter acquired from the user as one or more conditions that reduces a set of information defined by the field" and "filtering the first list to present a reduced second list of attribute values within the GUI tool by applying the filter against the first list" as recited in claims 1 and 10. *See* Racovolis ¶¶ 14, 15, 22–23, 68–70, 73, Figs 1, 5.

As recognized by the Examiner, "Figure 4 [of Racovolis] discloses a selected second list of filtered items such as 'Business,' 'Goals/Objectives' which represent a second list." Ans. 4 (citing Racovolis ¶¶ 64–69, Fig. 4). In other words, "[t]he checked items represent a second list of filtered attribute values that are selected by the user." *Id.* Similarly, "[s]tep 610 of Figure 6 [of Racovolis] displays the result of the executed query from the second list of attributes and displaying only the personal information items from the filtered set of attributes." *Id.* (citing Racovolis, Fig. 6). Contrary to Appellants' arguments, "[t]he reduced set of the checked items in Figure 4 [of Racovolis] represents a second list of a second set of attribute values" as recited in Appellants' claims 1 and 10. *Id.* at 5.

In the Reply, Appellants continue to argue "[i]t is not seen that the

list of categories 305 shown in Figure 4 [of Racovolis] . . . as a selected second list of filtered items, is a reduced list of the list of labels 303, or a reduced list of the list of categories shown in Figure 3" and "[t]he list of categories 305 shown in Figure 4, is not generated by 'filtering the first list to present a reduced second list of attribute values within the GUI tool by applying the filter against the first list.'" Reply Br. 5–6. Appellants' argument is misplaced. The checked items in labels 302 and categories 304, shown in Figure 4 of Racovolis, such as "Business" and "Goal/Objectives" attributes, represent Appellants' claimed "reduced second list of attribute values."

For these reasons, we are not persuaded of Examiner error. Accordingly, we sustain the Examiner's obviousness rejection of claim 1, and similarly claim 10, and their respective dependent claims 2, 4–9, 11, and 13–17, which Appellants do not argue separately.

CONCLUSION

On the record before us, we conclude Appellants have demonstrated the Examiner erred in rejecting claims 1, 2, 4–11, and 13–17 under 35 U.S.C. § 101, but have not with respect to the Examiner's rejection under 35 U.S.C. § 103(a).

DECISION

As such, we reverse the Examiner's rejection of claims 1, 2, 4–11, and 13–17 under 35 U.S.C. § 101. However, we affirm the Examiner's rejection of claims 1, 2, 4–11, and 13–17 under 35 U.S.C. § 103.

Because we have affirmed at least one ground of rejection with respect to each claim on appeal, we affirm the Examiner's decision rejecting claims 1, 2, 4–11, and 13–17. *See* 37 C.F.R. § 41.50(a)(1).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED