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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RODDY MCKEE BULLOCK

Appeal 2018-009156
Application 14/664,843
Technology Center 2100

Before ERIC S. FRAHM, STEVEN M. AMUNDSON, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

CYGAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1, 2, 4, 5, 7–18, and 20–22. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Roddy M. Bullock. Br. 1.

CLAIMED SUBJECT MATTER

The claims are directed to a device, system, and method for presenting supplemental information on a display. Spec. 3:18–25. Claim 1 is illustrative (underlining omitted):

1. A device comprising:

a display;

one or more processors;

one or more computer-readable media;

a provider interaction module maintained on the one or more computer-readable media and executed on the one or more processors to receive, from a computing device of a digital work provider, a digital work and supplemental information corresponding to the digital work, the supplemental information including an index of objects identified in the digital work and prestored content related to at least one of the objects;

a digital work display module maintained on the one or more computer-readable media and executed on the one or more processors to display the digital work on the display; and

a supplemental information display module maintained on the one or more computer readable media and executed on the one or more processors to display the supplemental information on the display in response to a user selection of an object in the digital work displayed on the display, the supplemental information including a visual representation of a location of one or more occurrences of the object in the digital work.

Claim 5 sets forth a method having limitations commensurate to those in claim 1. Claim 15 sets forth a system having limitations directed towards generating the supplemental information that is received by the device of claim 1:

15. A system comprising:

one or more processors;

one or more computer-readable media;

a supplemental information generation module maintained on the one or more computer-readable media and executed on the one or more processors to perform operations that include:

parsing a digital work to identify items in the digital work as candidates for designation as objects in the digital work; and
generating supplemental information for the digital work, the supplemental information including an index for the objects identified in the digital work, the index including locations of one or more occurrences of the objects in the digital work; and
a delivery module maintained on the one or more computer-readable media and executed on the one or more processors to deliver the digital work and the supplemental information for the digital work to an electronic device.

Dependent claims 2, 4, 7–14, 16–18, and 20–22 each incorporate the limitations of their respective independent claims. Claims 3, 6, and 19 have been cancelled during prosecution.

REFERENCES

Name	Reference	Date
Eberhard et al. ("Eberhard")	US 6,331,867 B1	Dec. 18, 2001
Sherman	US 2009/0106206 A1	Apr. 23, 2009 (issued); Sept. 24, 2008 (filed)
Horowitz et al. ("Horowitz")	US 6,122,647	Sept. 19, 2000

REJECTION(S)

- A. Claims 1, 2, 4, 5, 7–18, and 20–22 are rejected under 35 U.S.C. § 101 as lacking patent-eligible subject matter.
- B. Claims 1, 2, 4, 5, 7–13, 15, 16, 18, and 20–22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Eberhard and Sherman.
- C. Claims 14 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Eberhard, Sherman, and Horowitz.

OPINION

A. Claim Construction

Claim 1 recites, in addition to a display, processor(s), and computer-readable media, three “modules” stored on the media and executed on the processor(s). These are the “provider interaction module,” the “digital work display module,” and the “supplemental information display module.” The record does not indicate whether these terms have been construed under 35 U.S.C. § 112 ¶ 6.² In construing these terms, we are guided by the Specification, and in particular, the Appellant’s identification of those portions of the Specification that support those terms.

With respect to the “provider interaction module,” which, as claimed, performs the function of receiving digital work and supplemental

² We need not, for purposes of resolving the 35 U.S.C. §§ 101 and 103 inquiries on the facts before us, resolve the issue of whether the claims are in 35 U.S.C. § 112 ¶ 6 form, and the corollary issues of whether the claims meet the requirements of 35 U.S.C. § 112 ¶ 2 and written description under 35 U.S.C. § 112 ¶ 1. Should further prosecution occur, inquiry into such issues may be appropriate.

information, Appellant identifies support at page 11, lines 5–8 of the Specification. Br. 2. The Specification at this section states, in full:

example, but in an e-book “flipping” is cumbersome. Using “back” buttons, or a search feature and a mini-keyboard make the equivalent of “flipping pages” burdensome. In the enhanced e-book of the present invention, however, the problem is solved by providing context-specific information about people and places simply by selecting the

The “provider interaction module” is, thus, equated to an e-book structure that does not use “back” buttons or a search feature and a mini-keyboard, but does provide information by selecting. Appellant’s Specification further explains that the disclosed invention is implemented on an e-book reader, listing numerous “[c]urrent e-book readers” without limiting the invention to any of those readers. Spec. 6:11–23. The Specification further states that the enhanced e-book reader can have a touchscreen and E-ink Vizplex technology, listing various types of technology from different sources that are suitable for the present invention. *Id.* at 6:34–8:7. The Specification states that current e-books, and traditional books converted to e-books, “can be modified to be an enhanced e-book of the present invention by making modification to the source file of the electronic work” or “by the incorporation in the device memory additional files,” which may be of “any known format.” *Id.* at 6:1–7. The Specification further describes the selection function as being implemented by “[a]ny known method, and any future-developed methods, of selecting a term, word, phrase or section of a screen on an electronic device.” *Id.* at 8:8–10. Appellant has further stated that the “receiving” function of the “provider interaction module”

can be practiced by a user by, for example, downloading a digital work from a provider’s web server, such as downloading

a digital book from Amazon’s website, as is well known in the field of e-books.

Appellant’s Remarks to Non-Final Rejection, Aug. 31, 2017, at 9.

Based upon the entirety of the record, we construe the structure of the “provider interaction module” as that of a “current” e-book having structure so as to download digital information as is well known in the field of e-books.

With respect to the “digital work display module,” performing the claimed function of displaying a digital work on a display, Appellant identifies support at page 5, lines 13–16 of the Specification. Br. 2. The Specification at this section states, in full:

Detailed Description of the Invention As used herein, the term “reader” or “e-book reader” is used with reference to electronic devices used for presenting reading material to a human reader. Thus, a distinction is intended to be made throughout between a “reader”, referring to a

The “digital work display module” is thus structurally equated to an electronic device used for presenting reading material to a human reader. In view of the entirety of the record, we construe the “digital work display module” as having a structure of a “current” e-book reader that uses one of the display structures enumerated in the Specification for displaying a digital work, such as an e-book, on a display.

With respect to the “supplemental information display module,” performing the claimed function of displaying supplemental information on a display in response to a user selection, Appellant identifies support at page 9, lines 1–4 of the Specification. Br. 2. The Specification at this section states, in full:

existing formats, and the enhanced e-book reader of the present invention can employ executable instructions in memory to display existing source file formats, as well as any compatible future-developed formats. Current e-books are essentially converted print books. That is, current e-books are

The “supplemental information display module” is thus structurally equated to executable instructions on an electronic device used for presenting existing (or yet-to-be-developed) file formats. As noted, *supra*, the Specification equates the structure of displaying to the structure provided by current e-books, and equates the structure of selecting to the structure of any known (or yet-to-be-developed) methods of selecting a term, word, phrase, or section of a screen on an electronic device. In view of the entirety of the record, we construe the “supplemental information display module” as having a structure of a “current” e-book reader that uses one of the display structures enumerated in the Specification for displaying a digital work, such as an e-book, on a display, using any known method for selecting information displayed.

Claim 15 recites, in addition to processor(s) and computer-readable media, a “supplemental information generation module” that performs operations of parsing a digital work and generating supplemental information including an index for the objects identified in the digital work, and a “delivery module” to deliver the digital work and supplemental information to an electronic device.

With respect to the “supplemental information generation module,” Appellant identifies support at page 12, lines 17–23 of the Specification.

Br. 3. The Specification at this section states, in full:

or an online blog might, for example, wish to augment a story with context-specific information generated specifically for the

context of the online story (as opposed to “canned” or generic links to people and place names, as is currently utilized in online journalism). Thus, a political writer may, in a story about US Presidents and their flaws mention President Clinton with selectable context-specific information displayable upon selection stating, “Recall President Clinton was impeached for his hands-on approach to Oval Office affairs.”

The Specification further indicates that the augmentation is performed by a journalist, an author, or by a reader; i.e., that a human may generate the specifically generated information. Spec. 11:17–18, 12:16–20. The parsing operation is identified as being supported by the Specification at page 14, lines 7–18, which describes methods of presenting the generated information (“pop-up” window, widget, speech bubble, audible presentation). However, the referenced portion of the Specification does not directly disclose how the digital work is parsed by a processor, only that audible information may be “in the form of voice-recorded audio files, or computer-generated voice output of text files.” Spec. 14:9–12. In view of the entirety of the record, we construe the “supplemental information generation module” as having a structure in which the processor is instructed to augment identified terms in a digital work with generated information.

With respect to the “delivery module,” Appellant states, “the system of processors and computer-readable media of a digital work provider (well known in the art) “‘facilitat[es] downloading the electronic file to e-book readers,’ *i.e.*, *delivers* the digital work and the supplemental information for the digital work to an electronic device, as claimed in [c]laim 15.”

Appellant’s Remarks to the Non-Final Rejection, Aug. 31, 2017, at 10.

Based upon the entirety of the record, we construe the structure of the

“delivery module” as that of a “current” e-book having structure so as to download digital information as is well known in the field of e-books.

B. Rejection Under 35 U.S.C. § 101

We have reviewed the Examiner’s subject-matter eligibility rejection (Final Act. 3–5) in light of Appellant’s contentions that the Examiner has erred (Br. 5–14). Further, we have reviewed the Examiner’s response to Appellant’s arguments (Ans. 22–26). We are not persuaded by Appellant that the Examiner erred in rejecting the pending claims 1, 2, 4, 5, 7–18, and 20–22 under 35 U.S.C. § 101.

Appellant presents three contentions of error in the Final Action. Br. 4. First, Appellant contends that the rejection fails to consider the claims as a whole, overgeneralizing the claims. *Id.* Second, Appellant contends that the rejection’s citations to case law are less relevant than the Federal Circuit’s reasoning in *Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc.*, 880 F.3d 1356, 1363 (Fed. Cir. 2018). *Id.* Third, Appellant contends that the rejection neglects to consider the lack of preemption reflected in Appellant’s claims. *Id.*

With respect to Appellant’s third contention of error, we are not persuaded by Appellant’s preemption argument because preemption concerns are addressed by the Supreme Court’s eligibility framework as applied here, *infra. Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (stating “[w]here a patent’s claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, . . . preemption concerns are fully addressed and made moot”). A lack of complete preemption does not make the claims any less abstract. *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (“[T]hat the

claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract.”).

1. Principles of Law

Patent-eligible subject matter is defined in 35 U.S.C. § 101 of the Patent Act, which recites:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

There is, however, an implicit, longstanding exception to patent-eligible subject matter in 35 U.S.C. § 101: “[l]aws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (citation omitted). This exception precludes patenting of “the basic tools of scientific and technological work” from which all inventions spring. *Id.* at 216–17 (quotation marks and citation omitted). Invention or discovery under § 101 is distinguished as being the application of such tools to an end otherwise satisfying the requirements of the patent statute. *See Gottschalk v. Benson*, 409 U.S. 63, 67 (1972).

The Supreme Court has established a framework for this eligibility determination. Where a claim is directed towards a law of nature, natural phenomena, or abstract idea, the elements of the claim as a whole must ensure that the claim, in practice, amounts to significantly more than a patent on the law of nature, natural phenomena, or abstract idea itself. *Alice*, 573 U.S. at 217–18. In applying this eligibility analysis, our reviewing court has stated, “the decisional mechanism courts now apply is to examine earlier cases in which a similar or parallel descriptive nature can be seen[,] . . . the

classic common law methodology for creating law when a single governing definitional context is not available.” *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016) (citation omitted).

To address the growing body of precedent, the USPTO recently published revised examination guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50, 50 (Jan. 7, 2019) (hereinafter “2019 Guidance”). The 2019 Guidance seeks to improve the clarity of the subject-matter-eligibility analysis and improve consistency of this analysis across the USPTO. *Id.*

Under the 2019 Guidance, we first look to whether the claim is directed to a judicial exception because:

- (1) the claim recites a law of nature, natural phenomenon, or abstract idea, the last of which includes certain groupings, identified as mathematical concepts, certain methods of organizing human activity, and mental processes; and
- (2) the claim as a whole fails to recite additional elements that integrate the judicial exception into a practical application (*see* Manual of Patent Examination Procedure (hereinafter “MPEP”) §§ 2106.05(a)–(c), (e)–(h) (9th ed. rev. 08.2017 Jan. 2018).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim: adds a specific limitation beyond the judicial exception that are not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or instead,

simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See 2019 Guidance, *passim*.

2. “*Recites an Abstract Idea*”

In the Final Action, the Examiner described claim 1 as being directed to a judicial exception, described as “receiving a digital work and supplemental information; displaying the supplemental information on the display in response to a user selection of an object in the digital work, the supplemental information including a visual representation of a location of one or more occurrences of the object in the digital work.” Final Act. 3. The Examiner found these limitations similar to those that have been identified as abstract by the Federal Circuit. *Id.* (citing, for “collecting, displaying and manipulating data,” *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363 (Fed. Cir. 2015); for “collecting information, analyzing it and displaying certain results of the collection and analysis,” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016); for “generating tasks; storing rules for determining task to be completed upon an event,” *Accenture Glob. Servs., GmbH v. Guideware Software, Inc.*, 728 F.3d 1336 (Fed. Cir. 2013); for “generating a rule for monitoring data; applying the rule to the data to determine if an event occurred; providing notification of the event,” *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089 (Fed. Cir. 2016)).

Appellant, in their first contention of error, characterizes the Examiner’s identification of the judicial exception, as being “a particular visualization of data in an electronic device,” which Appellant alleges to be

a “gross oversimplification.” Br. 6. Appellant characterizes the abstract idea in *Electric Power* as “processes of information collection and analysis” that were “directed to the problem-to-be-solved rather than the actual and concretely defined solution to the problem.” *Id.* Appellant contends that Appellant’s claims are directed to a particular means for achieving the goals, and not to those goals themselves. *Id.* at 7. Appellant argues that claim 1 (as well as the other appealed claims) does not merely collect information and analyze it. *Id.* at 8.

In Appellant’s second contention of error, Appellant analogizes the present claims to *Core Wireless* in that “the claimed invention was an *improved user interface rather than the abstract idea of an index.*” Br. 8. Appellant contends that, like *Core Wireless*, Appellant’s claims are like *Core Wireless* in that they are directed to “a specific manner of displaying a limited set of information to the user, rather than using conventional user interface methods to display a generic index on a computer.” *Id.* at 10.

Under the 2019 Guidance, we first determine whether the claim recites one or more limitations corresponding to mathematical concepts, certain methods of organizing human activity, and mental processes. 2019 Guidance, 84 Fed. Reg. at 52. Although Appellant contends that the claims are not directed to an abstract idea, Appellant does not contend that the claims do not recite an abstract idea. Appellant characterizes claim 1 as similar to the claimed invention in *Core Wireless* (Br. 8–12). However, the Federal Circuit did not characterize the claimed invention in *Core Wireless* as failing to recite an abstract idea; instead, the court stated that “the generic idea of summarizing information certainly existed prior to the invention.” *Core Wireless*, 880 F.3d at 1362. We determine that, like the invention in

Core Wireless, the claimed invention recites summarizing information, which, in the claimed invention, is a type of mental process that can practically be performed in the human mind. Accordingly, we do not find error in the Examiner’s determination that the claims recite an abstract idea.

3. “*Directed to an Abstract Idea*”

Having found the claims to recite an abstract idea, we next determine whether the claims are directed to that abstract idea. Appellant relies upon alleged improvements and efficiencies, *citing* in particular the improved abilities of enhanced e-book technology in “the type of information available to the human reader, as well as the manner in which it is accessed.” Br. 11 (*citing* Spec. 9). Appellant contends that these may be described “exactly as the Federal Circuit described *Core Wireless*’ disclosure in which the ‘disclosed invention *improves the efficiency of using the electronic device by bringing together “a limited list of common functions and commonly accessed stored data,” which can be accessed directly from the main menu.*” *Id.* at 11–12.

In *Core Wireless*, the claimed invention specified particular technological functionality in the form of “an application summary that can be reached directly from [a] menu” such that the summary window “is displayed while the one or more applications are in an un-launched state.” *Core Wireless*, 880 F.3d at 1362–63. The court in *Data Engine Technologies* characterized the claimed invention in *Core Wireless* as not “merely directed to the abstract idea of indexing information,” but instead providing “an improved user interface for electronic devices” such that the claim “was directed to ‘an improvement in the functioning of computers.’”

Data Engine Techs. LLC v. Google LLC, 906 F.3d 999, 1009 (Fed. Cir. 2018).

In *Data Engine Technologies*, the court addressed a set of claims directed to a specific method of navigating three-dimensional spreadsheets through the use of tabs. *Id.* at 1008–09. The inventive tabs permitted easy access to spreadsheet workspaces that previously required a user to “search through complex menu systems” and “memorize frequently needed commands.” *Id.* at 1008. Certain claims “require[d] at least one user-settable identifying character to label the notebook tab and describes navigating through the various spreadsheet pages . . . that are identified by their tabs.” *Id.* The court found the claims to require a “specific interface and implementation for navigating complex three-dimensional spreadsheets using techniques unique to computers.” *Id.* at 1009. The court distinguished the claimed invention from one that would merely recite “a generic method of labeling and organizing” spreadsheet data. *Id.* at 1008–09.

The court in *Data Engine* further addressed claims that recited “associating each of the cell matrices with a user-settable page identifier” without “the specific implementation of a notebook tab interface.” *Id.* at 1012. The court held that these were claims not limited to the “specific technical solution and improvement in electronic spreadsheet functionality” set forth in the eligible tab claims and were, thus, found ineligible. *Id.*

Appellant here argues improved abilities of enhanced e-book technology in “the type of information available to the human reader, as well as the manner in which it is accessed.” Br. 11. However, Appellant has not shown that the claimed invention is commensurate in scope with the type of “specific interface and implementation for navigating” as presented in *Core*

Wireless. Instead, Appellant’s claimed invention relies upon a “provider interaction module,” structurally comprising well-known e-book downloading technology, a “digital work display module,” structurally comprising currently available e-book display technology, and a “supplemental information display module,” structurally comprising the display structures of a “current” e-book reader using any known method for selecting information displayed. *See supra* Section A.

Rather than presenting a specific interface and implementation for navigating, as in *Core Wireless*, Appellant’s claimed invention is of similar character to the patent-ineligible claims in *Data Engine* that associated data with a certain location, but lacked a specific technical improvement in functionality. *Data Engine*, 906 F.3d at 1012. Appellant has not pointed to any effect of the combination of limitations additional to the identified abstract idea, characterized by the Specification as known e-book, display, and selection technology, that provides an improvement in e-book technology. The additional limitations of Appellant’s claim 1 merely require that supplemental information, i.e., information not contained within the displayed e-book, be displayed upon selection. However, Appellant has not persuasively shown an improvement to e-book technology. Instead, construing the claims under guidance provided by Appellant and on the record, Appellant’s claimed invention relates certain data to certain locations, and uses “current” technology to access that data. Under USPTO Guidance, and our reviewing court’s precedent, this is not enough to demonstrate an improvement to e-book technology.

4. *Significantly More Than the Abstract Idea*

Where a claim is directed to an abstract idea, the additional limitations of the claim may provide an inventive concept so as to provide subject-matter eligibility. An inventive concept may be shown where a limitation or combination of limitations is more than well-understood, routine, conventional activity.

As discussed, *supra*, claim 1 contains the additional limitations of a generic display, processor(s), and computer-readable media, three “modules” stored on the media and executed on the processor(s). These are the “provider interaction module,” the “digital work display module,” and the “supplemental information display module.” Taken individually, the limitations of a generic display, processor(s) and computer-readable media have been found to be conventional computer components for accessing and displaying data, such that they do not provide eligibility to an otherwise ineligible abstract idea. *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1334 (Fed. Cir. 2015); *OIP Techs.*, 788 F.3d at 1363. As discussed, Appellant’s Specification has defined the “provider interaction module,” the “digital work display module,” and the “supplemental information display module” as comprising current or known technology for receiving, displaying, and selecting data. *Supra* Section A. Accordingly, none of the additional limitations, taken individually, provide subject matter eligibility.

When viewed as an ordered combination, claim 1 at most presents a device for presenting a different type of information on a display, i.e., a visual representation of a location of occurrence(s) of an object in a digital work. However, Appellant has not persuaded us that such information requires more than the conventionally described components performing

their conventional activities to display information relating to a digital work. Aside from the informational content of the data being displayed, the structure of claim 1 contains elements that, viewed as a whole, comprise an e-book that does not perform operations that are disclosed in the Specification to be different from the ordinary course of operations in an e-book. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1258 (Fed. Cir. 2014) (finding claims eligible because they “override[] the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink”). Accordingly, Appellant has not persuasively shown that any individual additional limitation, or the ordered combination of additional limitations, amounts to more than well-understood, routine, conventional activity. We, therefore, determine that claim 1 is ineligible under 35 U.S.C. § 101.

5. *Claims 2, 4, 5, and 7–14*

Appellant does not argue separately the limitations of dependent claims 2 and 4; accordingly, they stand or fall with claim 1, and the rejection of those claims under § 101 is sustained. Claim 5, and its dependent claims 7–14, are directed to a method having similar scope to that of claim 1. Appellant contends that the rejection under § 101 of claims 5 and 7–14 should be reversed for the same reasons as for claim 1. Br. 8, 12. The limitations of claim 5 are analogous to those of claim 1, including “storing . . . a digital work and supplemental information,” “presenting the digital work on a display,” “receiving a selection of a first object,” and “presenting . . . supplemental information on the display in response to the selection of the first object.” These limitations are of sufficiently similar scope to those of claim 1, and in the absence of argument from Appellant to distinguish the

subject-matter eligibility of those claims, we determine that those claims lack subject-matter eligibility for the same reasons as set forth as for claim 1.

6. *Claims 15–18 and 20–22*

With respect to claim 15, Appellant has not separately argued the subject matter eligibility of claim 15 or its dependent claims 16–18 and 20–22. Br. 8, 12. Claim 15 recites, in addition to generically claimed processor(s) and computer-readable media, a “supplemental information generation” module the performs operations of parsing a digital work and generating supplemental information including an index for the objects identified in the digital work, and a “delivery module” to deliver the digital work and supplemental information to an electronic device. We determine that claim 15 recites the same abstract idea as claim 1, for the same reasons as set forth *supra* at Section B(2).

As discussed (*supra* Section A), the “supplemental information generation module” is a structure in which the processor is instructed to augment a digital work with context-specific information, and the “delivery module” is that of a “well-known” system of processors and computer-readable media. Appellant describes advantages that may be gained by a reader’s knowledge of the augmented context-specific information, including being “reminded of the relationship and significance of a place to a story’s plotline.” Spec. 12:11–12. However, Appellant has not persuasively explained how this advantage is tied to any specific improved technology in claim 15, in view of the generically claimed processor(s) and computer-readable-media, their “well-known” arrangement to deliver digital work and supplemental information to an electronic device, and the supplemental information generation module that is disclosed, at best, as

collecting and indexing human-generated content, as applied to the field of use of e-book readers.

Much like claim 1, the scope of claim 15 sets forth an arrangement more similar to that found ineligible in *Data Engine*, as associating data with a certain location, than to that found eligible in either *Core Wireless* or *DDR*. We are, therefore, not persuaded by Appellant that claim 15 is directed to an improvement in e-book technology. Accordingly, we determine that claim 15 is directed to an abstract idea. We further determine that when viewed individually, the generically claimed processor(s) and computer-readable media are conventional computer components for accessing and displaying data, such that they do not provide eligibility to an otherwise ineligible abstract idea. *Versata*, 793 F.3d at 1334; *OIP Techs.*, 788 F.3d at 1363. Appellant has described the “delivery module” as being well known, and the “supplemental information generation module” to comprise collecting human-generated content, which, as data gathering, does not provide eligibility to an otherwise ineligible abstract idea. The indexing function is not an additional limitation here as it is considered part of the abstract idea. A “claimed invention’s use of the ineligible concept,” e.g., an abstract idea, “cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.” *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018). Accordingly, the additional limitations, considered individually, do not provide subject matter eligibility.

When viewed as an ordered combination, Appellant has not persuaded us that the additional limitations of claim 15 require more than the conventionally described components performing their conventional activities to gather and deliver information relating to a digital work.

Consequently, Appellant has not persuasively shown that any individual additional limitation, or the ordered combination of additional limitations, amounts to more than well-understood, routine, conventional activity. Accordingly, we determine that claim 15, and its dependent claims 16–18 and 20–22, which were not argued separately, are ineligible subject matter under 35 U.S.C. § 101.

For the above-described reasons, we sustain the Examiner’s rejection of claims 1, 2, 4, 5, 7–18, and 20–22 under 35 U.S.C. § 101 as lacking patent-eligible subject matter.

C. Rejections Under 35 U.S.C. § 103

We have reviewed the Examiner’s obviousness rejections (Final Act. 6–23) in light of Appellant’s contentions that the Examiner has erred (Br. 14–20). Further, we have reviewed the Examiner’s response to Appellant’s arguments (Ans. 26–31). We are not persuaded by Appellant that the Examiner erred in rejecting the pending claims 1, 2, 4, 5, 7–18, and 20–22 under 35 U.S.C. § 103(a).

Appellant contends error in the Examiner’s obviousness rejection, alleging that (1) Appellant’s defined use of the term “supplemental information” was not considered in finding that Eberhard teaches the features associated with this term, and (2) Appellant’s defined use of the term “location” was not considered in finding that Sherman teaches the features associated with this term. Br. 5.

With respect to claims 1, 2, 4, 5, 7–13, 15, 16, 18, and 20–22, the Examiner has determined that the combination of the teachings and suggestions of Eberhard and Sherman renders those claims obvious. With respect to representative claim 1, the Examiner has determined that Eberhard

teaches or suggests a display, processor(s), computer-readable media, and a reader device receiving digital works from network sites and supplemental information that may be combined with the associated digital work, wherein the digital work is displayed on a display, and wherein the supplemental information can be displayed when a user selects a term and gets associated information. Final Act. 6–7. The Examiner has determined that Eberhard fails to expressly disclose the supplemental information including an index of objects identified in the digital work and representative of a location of one or more occurrences of the object in the digital work. *Id.* at 8. The Examiner has determined that Sherman provides the missing teachings, in the form of a lookup table for associating entries of supplemental information with key entries of terms. *Id.* (citing Sherman ¶ 25). The Examiner further has determined that Sherman teaches or suggests the supplemental information including a visual representation of a location of one or more occurrences of the object in the digital work, through Sherman’s use of highlighting previous and later occurrences of a selected term. *Id.* (citing Sherman ¶¶ 35–57, 357–359)

Appellant first contends that “supplemental information” should be read as limited only to context-specific information; i.e., “information generated or tailored to inform a human reader with respect to a term, word, or phrase within a specific context in the reading material.” Br. 15; Spec. 19:16–18. Appellant contends that such information must be altered from standard or general content and is, therefore, not taught by content from a dictionary such as taught or suggested by Eberhard. *Id.* at 15–16.

We are not persuaded by Appellant’s argument that the Specification limits the claim term “supplemental information” only to information that

must be altered from standard or general content. The Specification defines context-specific information as including the definition of a term as it is used in context, which may not differ from the general dictionary definition of a term where there are not multiple definitions of that term. Spec. 12:35–13:4. Based upon this explanation, context-specific information may simply be selected content, rather than altered content. Accordingly, Appellant has not distinguished a “context-specific” definition from Eberhard’s provision of a definition from a pre-specified technical field-specific reference, such as a medical dictionary, or a custom reference. Final Act. 27; Eberhard 9:6–12.

Additionally, the Examiner has relied on features from Sherman to be incorporated to “obtain more, context-relevant information about particular terms.” Final Act. 8–10 (*citing* Sherman ¶¶ 11–12). Sherman teaches a “Progressive Reference” in which a reader tapping on a word will call up information appropriate to where the user saw the text in the source material. Sherman ¶¶ 11–12. Such information is specific to the context of the position of the word in the text, such that information on a word at page 72 of the second volume in a series will reflect all that has been revealed up to page 72, and nothing beyond that. *Id.* To the extent that Appellant argues solely that Eberhard lacks a teaching of context-relevant information, and has not addressed the Examiner’s reliance on Sherman, it is well established that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. *In re Keller*, 642 F.2d 413 (CCPA 1981); *In re Merck & Co., Inc.*, 800 F.2d 1091 (Fed. Cir. 1986).

Furthermore, the claim term “supplemental information” is not limited to Appellant’s disclosed, but not claimed, exemplary context-specific information. Our reviewing court has stated:

Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.

SuperGuide Corp. v. DirecTV Enters., Inc., 358 F.3d 870, 875 (Fed. Cir. 2004).

Appellant’s Specification discusses an embodiment in which context-relevant information is used as part of an enhanced search feature. Spec. 19:26–20:6. Context-specific information is disclosed as being “supplemental information created to supplement a base work, and added to a base work to provide memory-refreshing information.” *Id.* at 19:29–32. The Specification presents context-specific information as a type of supplemental information; i.e., supplemental information that is added for the specific purpose of providing memory-refreshing information. Other disclosed embodiments cause additional information, such as dictionary, rhymes, or thesaurus operations to be performed by touching a word on the touchscreen. *Id.* at 8:16–27. Even though “context-specific information” is the sole embodiment mentioning supplemental information, it is nevertheless improper to import the narrower type of context-relevant information into the claims. *See Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1371 (Fed. Cir. 2003).

We further agree with the Examiner’s determination that Appellant has not explicitly defined the term “supplemental information” in the

Specification. Ans. 27. Where the Specification is ambiguous as to whether the inventor used claim terms inconsistent with their ordinary meaning, the ordinary meaning will apply. *Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1370 (Fed. Cir. 2005). We are not persuaded by Appellant that the term “supplemental information” has been unambiguously limited to context-specific information, instead of representing an umbrella category of information of which context-specific information is one type of supplemental information.

Moreover, claim 1 is a claim to a system, which is defined by its structural limitations, and not by the operations it performs. *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469 (Fed. Cir. 1990) (“[A]pparatus claims cover what a device *is*, not what a device *does*.”). Even if Appellant’s claims were limited to context-specific information, claim 1 is defined by the structural limitations of the claimed “provider interaction module” and “supplemental information display module.” These modules are construed in light of the Specification as comprising “current” e-book structure that receives digital information and displays digital information, including visual representation of the occurrences of the object in the digital work. *Supra* at 7. Appellant has not explained how, nor do we determine that, the structures corresponding to the “provider interaction module” and “supplemental information module” are distinguished by the informational content that is being received and displayed. Consequently, even if the “supplemental information” were limited to context-specific information and not general dictionary-derived information, Appellant has not structurally distinguished claim 1 from the combined teachings of Eberhard and Sherman.

Appellant next contends that Sherman’s teaching of “displaying ‘a sentence with the last occurrence of the [searched for] text’” is not teaching of a “visual representation of *a location* of one or more occurrences of an object in the digital work” as set forth in claim 1. Br. 17. Specifically, Appellant argues that the visual representation of a sentence is not a visual representation of a location, and that Sherman does not teach a showing of where in a base work that a given term appears. *Id.* at 18.

We are not persuaded by Appellant’s arguments. The Examiner has determined that Sherman teaches a lookup table that associates terms with their locations in a text. Ans. 29 (*citing* Sherman ¶ 25). We find this position supported by Sherman, in that the lookup table functions as an index that associates a “Key Entry,” defined as a word or group of words representing a person, place, thing, idea, or action from a digital work, with the page number, line number, or other locational information. Sherman ¶ 25. Sherman further indicates that a user may use a find function that, upon the user’s selection of a key word, “immediately highlights and travels to the first appearance of the word or the next appearance.” *Id.* ¶ 357; Final Act. 8. Appellant has not explained persuasively how traveling to the location of a word, and highlighting that word, does not teach or suggest showing where in a base work that a given term appears. Accordingly, we are not persuaded of error in the Examiner’s reliance on Sherman for teaching or suggesting the contested limitations.

We further disagree with Appellant’s contention that the combination of Eberhard and Sherman does not teach all of the limitations of claim 1. Br. 30. For the reasons set forth above, we determine that the Examiner has

shown the combination of Eberhard and Sherman to teach or suggest all of the limitations of claim 1.

Appellant does not separately argue the limitations of dependent claims 2 and 4; accordingly, they stand or fall with claim 1, and the rejection of those claims under § 103(a) is sustained. Claim 5, and its dependent claims 7–13, are directed to a method having similar scope to that of claim 1. Appellant contends that the rejection under § 103(a) of claims 5 and 7–13 should be reversed for the same reasons as for claim 1. Br. 19–20. The limitations of claim 5 are analogous to those of claim 1, including “storing . . . a digital work and supplemental information,” “presenting the digital work on a display,” “receiving a selection of a first object,” and “presenting . . . supplemental information on the display in response to the selection of the first object.” These limitations are of similar scope to those of claim 1, with Appellant providing the same arguments as for claim 1, arguing that Sherman does not teach an “index [that] includes respective locations of occurrences of a plurality of objects.” For the same reasons as set forth for claim 1 (excepting the reasons relating to claim 1 as a “system”), and because we agree with the Examiner’s determination that Sherman teaches the claimed index in the form of Sherman’s above-described lookup table (Ans. 29), we determine that those claims are obvious over the combination of Eberhard and Sherman.

With respect to claim 15, and its dependent claims 16, 18, and 20–22, Appellant contends that the combination of Eberhard and Sherman suffers from the same defects as for claim 1, and additionally that Sherman does not teach supplemental information that includes locations of one or more occurrences of objects. Br. 17. However, for the same reasons as set forth

for the rejection of claim 1, *supra*, and because we agree with the Examiner's determination that Sherman teaches the claimed index in the form of Sherman's above-described lookup table (Ans. 29), we are not persuaded by Appellant's arguments. Furthermore, we determine that the Examiner has shown the teachings or suggestions of the remaining elements of claim 15 and its dependent claims, including processor(s) and computer-readable media, a "supplemental information generation module" that performs operations of parsing a digital work and generating supplemental information including an index for the objects identified in the digital work, and a "delivery module" to deliver the digital work and supplemental information to an electronic device. Final Act. 14–21. Accordingly, we determine that Appellant has not shown error in the Examiner's determination that claims 15, 16, 18, and 20–22 are obvious over the combination of Eberhard and Sherman.

With respect to claims 14 and 17, the Examiner relies upon the base combination of Eberhard and Sherman, in view of Horowitz. Final Act. 21–22. Appellant contends that the rejection of claims 14 and 17 is in error for the same reasons as alleged for claims 5 and 15. Br. 20. For the same reasons set forth in finding no error in the Examiner's rejection of claims 5 and 15, we find no error in the rejection of claims 14 and 17.

For the above-described reasons, we sustain the Examiner's rejections of claims 1, 2, 4, 5, 7–18, and 20–22 as being obvious under 35 U.S.C. § 103(a).

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1, 2, 4, 5, 7–18, 20–22	101	Eligibility	1, 2, 4, 5, 7–18, 20–22	
1, 2, 4, 5, 7–13, 15, 16, 18, 20–22	103(a)	Eberhard, Sherman	1, 2, 4, 5, 7–13, 15–16, 18, 20–22	
14, 17	103(a)	Eberhard, Sherman, Horowitz	14, 17	
Overall Outcome			1, 2, 4, 5, 7–18, 20–22	

TIME PERIOD FOR RESPONSE

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

AFFIRMED