UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte JACOB E. PECHENIK, GREGORY S. CAMPBELL,
DOUGLAS E. MILLER, and BLAKE A. BARNES

_____

Appeal 2017-004126
Application 12/942,073
Technology Center 3600

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Before CYNTHIA L. MURPHY, AMEE A. SHAH, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

SHAH, *Administrative Patent Judge*.

DECISION ON APPEAL[1]

The Appellants[2] appeal under 35 U.S.C. § 134(a) from the Examiner's
final decision rejecting claims 1, 6, 8–15, 18, 20, 23, 25–36, and 38–51,
which are all of the pending claims. We have jurisdiction under 35 U.S.C.
§ 6(b).

We AFFIRM.

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[1] Throughout this decision, we refer to the Appellants' Appeal Brief
("Appeal Br.," filed May 3, 2016), Reply Brief ("Reply Br.," filed Jan. 17,
2017), and Specification ("Spec.," filed Nov. 9, 2010), and to the
Examiner's Answer ("Ans.," mailed Nov. 18, 2016) and Final Action
("Final Act.," mailed Feb. 12, 2016).
[2] According to the Appellants, the real party in interest is YellowJacket, Inc.
Appeal Br. 1.

STATEMENT OF THE CASE

The Appellants' invention "generally relates to a system for trading and analyzing derivative products, and more particularly, software that aggregates, organizes, parses and extracts market data for trading information from Over-The-Counter (OTC) networks." Spec. ¶ 2.

Claims 1 and 20 are the independent claims on appeal. Claim 20 (Appeal Br. 17–18 (Claims App.)) is illustrative of the subject matter on appeal and is reproduced below (with added bracketing for reference):

> 20.   A method for collecting and using market data, the method comprising:
>
> in at least one computer comprising memory and a processor,
>
> [(a)] sending at least one unstructured message via a graphical user interface message over the Internet;
>
> [(b)] receiving the at least one unstructured message via a central computing system, said unstructured message including at least one structure, the structure comprising a derivative contract description;
>
> [(c)] automatically activating a market data recognition (MDR) module when the unstructured message is received;
>
> [(d)] automatically activating a data recognizer to identify at least one component of the received unstructured message;
>
> [(e)] automatically activating a parser to parse the received unstructured message into the identified components;
>
> [(f)] automatically activating a pricing service to automatically break down the structure into component parts, automatically pricing each component part, and assigning an aggregate premium to the aggregate structure calculated from premiums of each component part;

[(g)] translating and arranging the identified components into a standardized arrangement; and

[(h)] causing display of the standardized arrangement.

REJECTIONS

I.   Claims 1, 6, 8–15, 18, 20, 23, 25–36, and 38–51 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

II.   Claims 1, 6, 8–15, 18, 20, 23, 25–36, and 38–51 stand rejected under pre-AIA 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

III.   Claims 1, 6, 8–15, 18, 20, 23, 25–36, and 38–51 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Wong et al. (US 2003/0028468 A1, pub. Feb. 6, 2003) (hereafter "Wong") and Keen, JR., et al. (US 2006/0026091 A1, pub. Feb. 2, 2006) (hereafter "Keen").

ANALYSIS

Rejection I – 35 U.S.C. § 101

The Appellants argue the claims as a group for this rejection. *See* Appeal Br. 4, 11. We select claim 20 as representative of the group; claims 1, 6, 8–15, 18, 23, 25–36, and 38–51 stand or fall therewith. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Under 35 U.S.C. § 101, a patent may be obtained for "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." The Supreme Court has "long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. Pty.*

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v. CLS Bank Int'l, 134 S. Ct. 2347, 2354 (2014) (quoting *Ass'n for*
Molecular Pathology v. Myriad Genetics, Inc., 569 U.S. 576, 588–89
(2013)).

The Supreme Court in *Alice* reiterated the two-step framework, set
forth previously in *Mayo Collaborative Services v. Prometheus*
Laboratories, Inc., 566 U.S. 66, 78–79 (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 that analysis is to "determine whether the claims at
issue are *directed to* one of those patent-ineligible concepts." *Id.* (emphasis
added) (citing *Mayo*, 566 U.S. at 79). If so, the second step is to consider
the elements of the claims "individually and 'as an ordered combination'" to
determine whether the additional elements "'transform the nature of the
claim' into a patent-eligible application." *Id.* (quoting *Mayo*, 566 U.S.
at 78–79).

The first step requires a consideration of the claims "in their entirety
to ascertain whether their character as a whole is directed to excluded
subject matter." *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d
1343, 1346 (Fed. Cir. 2015). The question is whether the claims as a whole
"focus on a specific means or method that improves the relevant technology"
or are "directed to a result or effect that itself is the abstract idea and merely
invoke generic processes and machinery." *McRO, Inc. v. Bandai Namco*
Games Am. Inc., 837 F.3d 1299, 1314 (Fed. Cir. 2016). In other words, the
claims are assessed as to whether they "do no more than describe a desired
function or outcome, without providing any limiting detail that confines the
claim to a particular solution to an identified problem." *Affinity Labs of*

Tex., LLC v. Amazon.com Inc., 838 F.3d 1266, 1269 (Fed. Cir. 2016) *cert. denied*, 137 S. Ct. 1596 (2017).

The second step of the *Mayo/Alice* framework 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.'" *Alice*, 134 S. Ct. at 2355 (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73).

Under the first step of the *Alice/Mayo* framework, the Examiner determines that claim 20 is "directed to the abstract idea of determining a price on a structure." Final Act. 7. Under the second step of the *Mayo/Alice* framework, the Examiner determines that the elements of claim 20, individually or as an ordered combination, do not amount to significantly more than the above-identified abstract idea. *See* Final Act. 8–9.

The Appellants contend that the claim is "directed to solving the computer-centric problem of translating and processing electronic messages of varying formats" (Appeal Br. 8) and argue that

> the ordered-combination of features recited in the claims is patent-eligible under 35 USC § 101 because, at a minimum: (1) the claims are necessarily rooted in computer technology and they overcome a computer-centric problem specifically arising in the realm of computer networks, which render them patent-eligible under the rationale of *DDR Holdings, LLC v. Hotels.com, L.P.*, [773 F.3d 1245] (Fed. Cir. Dec. 5, 2014); (2) the claims recite "specialized computer components" that, at a minimum, convert whatever abstract idea may exist into a meaningful application thereof; (3) the claims include features such as activating specialty modules, which is patent-eligible under *Diamond v. Diehr*, 450 U.S. 175 (1981); (4) the features such as activating specialty modules are also comparable to patent-eligible Example 21 from the July 2015 Update on Subject Matter Eligibility; (5) the claims are not directed to an

abstract idea as evidenced by lack of preemption; and/or (6) the alleged abstract idea is applied by use of a particular machine.

Id. at 4. As discussed below, we disagree.

The Specification provides evidence as to what the claimed invention is directed. Here, the Specification is titled "METHOD AND SYSTEM FOR COLLECTING AND USING MARKET DATA FROM VARIOUS SOURCES." The Background section of the Specification provides that the "invention generally relates to a system for trading and analyzing derivative products, and more particularly, software that aggregates, organizes, parses and extracts market data for trading information." Spec. ¶ 2. The claimed invention addresses the needs for "standardizing the trading process and automating distribution such that the display of the OTC market data is in a secure and compliant environment" and for "automating post-trade functions, such as entering trades into clearing and other systems." *Id.* ¶ 11.

Claim 20 provides for a "method for collecting and using market data, the method comprising: in at least one computer comprising memory and a processor," (a) sending data of an unstructured message over the Internet, (b) receiving the message data at a central computing system, (c) automatically activating a module when the data is received, (d) automatically activating a data recognizer, (e) automatically activating a parser, (f) automatically activating a pricing service, (g) translating and arranging component data into a standardized arrangement, and (h) causing display of the standardized arrangement. *See* Appeal Br. 17–18 (Claims App.). The computer that performs these functions comprises computer system 1 having user computers and a server computer connected via a

network. Spec. ¶¶ 38–39; *see also* Appeal Br. 3 (citing Spec. ¶¶ 38–39, Figs. 1, 2).

The claim does not recite the algorithm for, or how, the identifying, parsing, and translating functions, i.e., steps (d), (e), and (g), are performed. And the Specification does not provide technological details or algorithms for how to perform these functions. The Appellants rely on paragraphs 43, 46–48, 52, 53, 55, and 83 of the Specification as support for these limitations. These paragraphs simply discuss that translating is performed (*see* Spec. ¶ 43), data are recognized by the "market data recognition (MDR) feature" (*id.* ¶¶ 46, 52), unstructured text is converted into usable quotes using "[v]irtually any process" (*id.* ¶¶ 46, 55), parsing data (*id.* ¶¶ 47, 53, 83), that the identifying component uses textual information, extracts data, and creates an identifier object (*id.*), and performing any process on the resulting data (*id.* ¶ 48). There is no further specification of particular technology for performing the steps. *See Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1263 (Fed. Cir. 2016); *see also Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016) (focusing on whether the claim is "an improvement to [the] computer functionality itself, not on economic or other tasks for which a computer is used in its ordinary capacity").

Considering the claim in light of the Specification and on its "character as a whole" (*Enfish*, 822 F.3d at 1335), we determine that claim 20 is directed to collecting and using market data by identifying, parsing, and organizing data, pricing structures, translating and arranging the

organized data, and displaying the results of the translating and arranging.[3]
The claim here is akin to ones our reviewing court has deemed abstract in
Electric Power Grp. LLC v. Alstom S.A., 830 F.3d 1350, 1353–54 (Fed.
Cir. 2016) (gathering and analyzing information by steps people go through
in their minds, or by mathematical algorithms, of a specific content and
displaying the results), *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d
1138, 1147 (Fed. Cir. 2016), *cert. denied.*, 138 S. Ct. 71 (2017) ("method of
changing one description of a level sensitive latch (i.e., a functional
description) into another description of the level sensitive latch (i.e., a
hardware component description) by way of a third description of that very
same level sensitive latch (i.e., assignment conditions)"), and *Novo
Transforma Techs., LLC v. Sprint Spectrum L.P.*, 2015 WL 5156526,
at *2–3 (D. Del. Sept. 2, 2015), *aff'd*, 669 F. App'x 555 (Fed. Cir. 2016)
(claim reciting generating a payload, defining parameters, converting the
payload into a different form, and delivering the converted payload directed
to the abstract idea of translation). Here, the claim involves nothing more
than determining a price on an item by sending, receiving, identifying,
recognizing, parsing, manipulating, translating, arranging, and displaying
data without any particular inventive technology — an abstract idea.
See Elec. Power, 830 F.3d at 1354.

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[3] We note that although our description of the abstract idea may differ
slightly from that of the Examiner, "[a]n abstract idea can generally be
described at different levels of abstraction." *Apple, Inc. v. Ameranth, Inc.*,
842 F.3d 1229, 1240 (Fed. Cir. 2016). The Board's "slight revision of its
abstract idea analysis does not impact the patentability analysis." *Id.* at
1241.

We disagree with the Appellants' contention that the claim is "necessarily rooted in computer technology and [it] overcome[s] a computer-centric problem specifically arising in the realm of computer networks, which render[s it] patent-eligible under the rationale of *DDR Holdings*." Appeal Br. 4; *see also id.* at 5, 10; Reply Br. 3–4. In *DDR Holdings*, the Federal Circuit determined that the claims addressed the problem of retaining website visitors who, if adhering to the routine, conventional functioning of Internet hyperlink protocol, would be transported instantly away from a host's website after clicking on an advertisement and activating a hyperlink. *DDR Holdings*, 773 F.3d at 1257. The Federal Circuit, thus, held that the claims were directed to statutory subject matter because they claim a solution "necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks." *Id.* The court cautioned that "not all claims purporting to address Internet-centric challenges are eligible for patent." *Id.* at 1258. And the court contrasted the claims to those at issue in *Ultramercial*, in that, in *DDR Holdings*, the computer network was not operating in its "normal, expected manner" and the claims did not "recite an invention that is . . . merely the routine or conventional use of the Internet." *Id.* at 1258–59.

In contrast, here, the Appellants specify the problem the claim addresses is prior art systems' "inability to distribute and receive electronic messages in a timely and efficient manner" (Appeal Br. 4 (citing Spec. ¶ 5)) due to the varying formats of electronic messages generated and transmitted from varying sources and results on the systems being "unable to process the incoming electronic messages, which in turn creates unfair delays that

prevent the timely processing (e.g., analysis) of these electronic messages (*Id.*) and/or prevent any processing altogether" (*id*). The Specification, at paragraph five, discusses that the conventional method of quoting custom derivative structures via phone or instant messaging has many disadvantages such as the dealers not all receiving the quote at the same time, the dealer not knowing whether the quote is new or an update, and time lost in reformatting the information. But, the Specification does not indicate that prior art systems were *unable* to "distribute and receive electronic messages in a timely and efficient manner"; rather, the Specification indicates a desire that the timeliness and efficiency needs to be improved. Further, the Specification does not discuss existing problems with network architecture. *Cf.* Reply Br. 4–5. Although the distribution and delivery of messages here is computer-centric, distributing and receiving messages in a more timely and efficient manner is not a problem rooted in technology arising out of computer networks, but rather a problem that existed prior to the Internet and computers. *See Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) ("[O]ur precedent is clear that merely adding computer functionality to increase the speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea."). And, "[i]ncompatible communication types have existed since before the emergence of computers and the Internet." *Novo Transforma*, 2015 WL 5156526, at *3.

Also, unlike *DDR Holdings*, here, the purported solution requires a generic computer system with a memory and processor operating in their normal capacities to perform the functions of sending and receiving data, activating modules/software to identify, parse, and organize data, pricing

each part, translating and arranging data, and displaying the arrangement. *See* Spec. ¶¶ 38–40. The Appellants do not direct attention to, and we do not see, where the Specification provides that the computer system processing device acts in an abnormal manner or outside of its ordinary capacity. Rather, the claim recites an invention that is merely the routine or conventional use of a generic computer. *See Versata Dev. Grp., Inc. v. SAP America, Inc.*, 793 F.3d 1306, 1334–35 (Fed. Cir. 2015) (use of general purpose computer to implement abstract idea of using organizational and group hierarchies to determine a price was not rooted in computer technology to solve a problem specifically arising in computer technology); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1097 (Fed. Cir. 2016); *DDR Holdings*, 773 F.3d at 1258–59.

We also are not persuaded by the Appellants' argument that "the claim[] recite[s] 'specialized computer components' that, at a minimum, convert whatever abstract idea may exist into a meaningful application thereof" (Appeal Br. 5; *see also* Reply Br. 4), particularly because "the additional translation and conversion functions clearly amount to significantly more" (*id.* at 6; *see also* Reply Br. 2). The "MDR module that carries out the specialized functions [of] . . . identifying, translating and converting component parts (within unstructured messages) into a standardized arrangement" (Appeal Br. 6) is a "market data recognition (MDR) feature" (Spec. ¶ 46) of software implemented by the generic computer system (*see id.* ¶¶ 38, 43). We note that the claim does not recite a "conversion" function. And, as discussed above, the claim does not recite the algorithm for, or how, the identifying, parsing, and translating functions, i.e., steps (d), (e), and (g), are performed. Performing the identifying,

translating, and converting functions using a generic computer do not comprise an inventive concept. *See Content Extraction & Transmission LLC v. Wells Fargo*, 776 F.3d 1343, 1348–49 (Fed. Cir. 2014) (identifying and recognizing data are not inventive concepts); *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1370 (Fed. Cir. 2018) (parsing is not an inventive concept); *Novo Transforma*, 2015 WL 5156526, at *3 (translating is not an inventive concept); *cf.* Reply Br. 5. We further note that the Appellants do not direct attention to, and we do not see, where the Speciation or the claim discusses "highly specialized electronic financial communication network architectures." Reply Br. 4.

We disagree with the Appellants' contention that the claim is analogous to those of *Diehr*. *See* Appeal Br. 6–7. The claims in *Diehr* were directed to a process for curing synthetic rubber, and recited a series of steps (e.g., installing rubber in a press, closing the mold, constantly determining the temperature of the mold, constantly recalculating the appropriate cure time through the use of the Arrhenius equation and a digital computer, and automatically opening the press at the proper time) that together provided a significant and novel practical application of the well-known Arrhenius equation and transformed uncured synthetic rubber into a new state or thing. *See Diehr*, 450 U.S. at 184–87. The Court determined that although the invention employed a well-known equation, it used that equation in a process designed to solve a technological problem in conventional industry practice. *Alice Corp.*, 134 S. Ct. 2348 (citing *Diehr*, 450 U.S. at 177). The claims in *Diehr* were, thus, patent-eligible because they improved an existing technological process. *Id.* The Appellants contend that the claim here "recite[s] special purpose modules, including an MDR module that

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controls a data recognizer, a parser and a data converter, and a pricing service. Much like *Diehr*, the MDR router module is opened (or activated) only upon receipt of a message that is unstructured." Appeal Br. 7. However, merely taking a manual, mental, or computer-implemented action is not transforming the data from one form to another, such as a molded product, and is not patent eligible, as the Supreme Court made clear in *Gottschalk v. Benson*, 409 U.S. 63, 71–72 (1972). In contrast to the situation in *Diehr*, opening or activating the software of the MDR module does not result in any analogous transformation of matter from one state (i.e., raw rubber) to another (i.e., a molded product). And the claim does not provide details on the technological processes for recognizing data, parsing, pricing, and opening a module such that a technological process is changed or improved. Rather, any change or improvement lies in the abstract idea. The Appellants' assertion that "system resources may be conserved" (Appeal Br. 7) is unsupported and, further, does not explain how a technological process is changed or improved.

We further are not persuaded by the Appellants' argument that "the claimed features of activating specialty modules are also comparable to patent-eligible Example 21 from the July 2015 Update on Subject Matter Eligibility [hereafter "Update"]." Appeal Br. 7. In that example, the limitations related to "transmitting an alert over a wireless communication channel to activate the stock viewer application, which causes the alert to display and enables the connection of the remote computer to the data source over the Internet when the remote subscriber computer comes online" were considered to "add more than generally linking the use of the abstract idea (the general concept of organizing and comparing data) to the Internet,

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because they solve an Internet-centric problem with a claimed solution that is necessarily rooted in computer technology, similar to the additional elements in *DDR Holdings*." Update, Appendix I, 4. In contrast, here, as discussed above, the limitations do not solve an Internet-centric problem with a solution necessarily rooted in computer technology.

In response to the Appellants' argument that "the claim[is] not directed to an abstract idea as evidenced by lack of preemption" (Appeal Br. 8; *see also* Reply Br. 6), we note that although the Supreme Court has described "the concern that drives this exclusionary principle[, i.e., the exclusion of abstract ideas from patent eligible subject matter,] as one of pre-emption" (*see Alice*, 134 S. Ct. at 2354), characterizing preemption as a driving concern for patent eligibility is not the same as characterizing preemption as the sole test for patent eligibility. "The Supreme Court has made clear that the principle of preemption is the basis for the judicial exceptions to patentability" and "[f]or this reason, questions on preemption are inherent in and resolved by the § 101 analysis." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (citing *Alice*, 134 S. Ct. at 2354). Although "preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility." *Id.*

We find unpersuasive the Appellants' argument that "the alleged abstract idea is applied by use of a particular machine and it provides improvements to the functioning of the computer itself." Appeal Br. 9. As discussed above, the Specification, including the claims, does not provide technological details on the manner in which the steps of the method are performed nor any details on how the processor or system itself is improved.

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The claim does not recite a particular way of programming or designing the processor/component to recognize, parse, or translate data, but instead merely claims the functional results. *Apple*, 842 F.3d at 1241. The Appellants' assertion that "the claimed invention avoids delays and breakdowns caused in conventional systems as a result of receiving electronic messages in varying formats" (Appeal Br. 10) is unsupported and does explain how the invention technologically improves the computer.

Moreover, an abstract idea does not transform into an inventive concept just because the prior art does not disclose or suggest it. *See Mayo*, 566 U.S. at 90; *cf.* Reply Br. 4. "Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry." *Ass'n for Molecular Pathology*, 569 U.S. at 591. Indeed, "[t]he 'novelty' of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter." *Diehr*, 450 U.S. at 188–89.

We also find unpersuasive the Appellants' arguments that the claim is "patent eligible under the tenants [sic] of *McRO, Enfish, Bascom* and *Amdocs (Israel).*" Reply Br. 6; *see also id.* at 7–8 (citing *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016)), *BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016), *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288 (Fed. Cir. 2016).

In *McRO*, the claims were directed to a specific improvement in computer animation and used rules to "transform[] a traditionally subjective process performed by human artists into a mathematically automated process

executed on computers," not simply the use of the computer. *FairWarning*, 839 F.3d at 1094 (citing *McRO*, 837 F.3d at 1314). The claim here recites an invention that is merely the routine or conventional use of a generic computer. *See FairWarning*, 839 F.3d at 1097.

In *Enfish*, the court determined the claims were directed to a self-referential table for a computer database and were directed to "a specific improvement to the way computers operate." *Enfish*, 822 F.3d at 1336. Conversely, here, the claims are not directed to an improvement in the way computers operate. At best, they improve a way of providing information using the ordinary capabilities of a general purpose computer. *See Elec. Power*, 830 F.3d at 1354. As discussed above, the Specification does not provide details on the technological manner in which the steps are performed, including the identifying, parsing, and translating functions.

In *BASCOM*, the court determined that "an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces." *BASCOM*, 827 F.3d at 1350. In that case, the installation of a filtering tool at a specific location, remote from the end users, with customizable filtering features specific to each end user, provided an inventive concept in that it gave the filtering tool both the benefits of a filter on a local computer and the benefits of a filter on the ISP server. *Id.* We find no analogous non-conventional, non-generic arrangement of known, conventional pieces within a network or an achievement of a technical improvement. Instead, the claim recites results-focused limitations to identify, parse, price, and translate data.

In *Amdocs*, the court determined that the claim contained an inventive concept because it "entails an unconventional technological solution

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(enhancing data in a distributed fashion) to a technological problem
(massive record flows which previously required massive databases)."
Amdocs, 841 F.3d at 1300. The claim's limitation of enhancing a record
"necessarily require[d] that the[] generic components operate in an
unconventional manner to achieve an improvement in computer
functionality." *Id.* at 1300–01. Here, as discussed above, there is no such
unconventional technological solution to a technological problem that
achieves an improvement in computer functionality.

Based on the foregoing, we sustain the rejection under 35 U.S.C.
§ 101 of claim 20, and of claims 1, 6, 8–15, 18, 23, 25–36, and 38–51, which
fall with claim 20.

Rejection II– 35 U.S.C. § 112, first paragraph

The Examiner rejects claims 1, 6, 8–15, 18, 20, 23, 25–36, and 38–51
as failing to comply with the written description requirement. Specifically,
the Examiner finds "the Specification does not sufficiently identify how the
invention achieves the claimed function of *automatically activating* a market
data recognition module, and as a result, *automatically activating* the data
recognizer/ parser/ data converter, when an unstructured message is
received" (Final Act. 10–11) and does not "mention the concept of
automation" (Ans. 4).

The Appellants contend that the Specification provides adequate
description at paragraphs 46 and 47. Appeal Br. 11; Reply Br. 8.

To satisfy the written description requirement, the patent disclosure
must "reasonably convey[ ] to those skilled in the art that the inventor had
possession of the claimed subject matter as of the filing date." *Ariad*

Pharms., Inc. v. Eli Lilly & Co., 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). The question is whether "the specification [ ] describe[s] the invention in sufficient detail so 'that one skilled in the art can clearly conclude that the inventor invented the claimed invention as of the filing date sought.' *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997) [ ]." *In re Alonso*, 545 F.3d 1015, 1019 (Fed. Cir. 2008). The Specification must describe the claimed subject matter, although it need not contain the exact wording used in the claim. *See Lockwood*, 107 F.3d at 1572.

After careful consideration of the paragraphs cited by the Appellants, we agree with the Examiner that the Specification does not describe in sufficient detail that the inventor invented the claimed automatic activation of a data recognizer, a parser, and a pricing service to break down the message structure, as recited in limitations (c)–(f) of independent claim 20, and similarly recited in independent claim 1. The Specification provides that the "market data recognition (MDR) feature . . . can recognize structures and quotes on structures" (Spec. ¶ 46), "is also capable of recognizing incoming and outgoing quote messages between users and non-users" (*id.*), "has the ability to recognize bids and offers" (*id.* ¶ 47), and "provides for an inline chat message capability to add a quote to a structure" (*id.*). "The collection of quotes for the structure may automatically be updated with any recognized incoming or outgoing bids and/or offers, according to a user's preferences." *Id.* "The identifying component may use the contextual information to configure its operation or set default behaviors and settings." *Id.* The Specification uses the term "activate" only once in describing that "a contact's communication window may be opened or activated." Spec.

¶ 66. Thus, the Specification provides support for the MDR feature to include recognizing data and structures, updating quote data, identifying data, and parsing/converting text data. However, we do not see, and the Appellants do not adequately explain, how or where the Specification describes that the module is automatically *activated* upon receiving a message or that the MDR automatically *activates* a recognizer, parser, or pricing module, structure, or function. To the extent the Appellants argue that "automatically" means that the functions are "automatically perform[ed] . . . when certain conditions are met" (Reply Br. 8), we note that the Specification, including the original claims and the claims currently at issue, does not recite that certain conditions must be met for the functions to be performed. Rather, the Specification, including the claims, simply provides for receiving data and performing functions on that data.

Based on the foregoing, we sustain the rejection under 35 U.S.C. § 112 of claims 1, 6, 8–15, 18, 20, 23, 25–36, and 38–51.

Rejection III – 35 U.S.C. § 103(a)

The Appellants argue the claims as a group for this rejection. *See* Appeal Br. 4, 11. We select claim 20 as representative of the group; claims 1, 6, 8–15, 18, 23, 25–36, and 38–51 stand or fall therewith. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The Appellants contend that the Examiner's rejection is in error because: (1) "Wong fails to disclose or describe the elements for which it is cited, including the claimed market data recognition (MDR) module, data recognizer, parser, data converter and pricing service module" (Appeal Br. 11 (emphases omitted); (2) Wong does not disclose breaking down

messages to identify and price component parts (*id.* at 13); and (3) the combination of Wong and Keen "fails to disclose unstructured messages or an ability to process such messages" (*id.* at 11, 13–14). After careful review of the Appellants' arguments as presented in the Appeal and Reply Briefs, we are not persuaded of Examiner error.

The Examiner finds that Wong teaches a computer memory and processor that send and receive a message, the message including at least one structure comprising a derivative contract description, as partially recited in limitations (a) and (b), that automatically activate a market data recognition ("MDR") module when the message is received, as partially recited in limitation (c), the MDR module activating a data recognizer and a parser, as partially recited in limitations (d) and (e), and activating a pricing service to break down the structure, price each component part, and assign a premium to the structure, as recited in limitation (f), and that translate and arrange the identified parts into a standardized arrangement, as recited in limitation (g). *See* Final Act. 12–13 (citing Wong ¶ 15, Fig. 2). The Examiner acknowledges that Wong does not teach sending and receiving an unstructured message including at least one structure, identifying a component of the unstructured message, parsing the unstructured message into components, and displaying the standardized arrangement. *See id.* at 13–14. However, the Examiner relies on Keen for teaching these elements, concluding that one of ordinary skill in the art would have applied the known technique of Keen to the invention of Wong because it "would have yielded predictable results and resulted in an improved invention . . . because applying said technique allows a customer unfamiliar with the syntax of the pricing engine to request a price quote, thus improving the

invention's overall user convenience." *Id.* at 14 (citing Keen ¶¶ 29–31, 33, 34, 36, 51, Figs. 3, 6).

We find unpersuasive of Examiner error the Appellants' argument that Wong fails to teach a market data recognition (MDR) module, data recognizer, parser, data converter and pricing service module. Appeal Br. 11. The Appellants simply summarize Wong's paragraph 15 and argue that "no skilled artisan would equate the teachings of Wong with the elements of Claim 1," because "Wong is directed to a completely different technology (e.g., creating new securities) that is literally opposed to the technology covered by the claimed invention (e.g., processing unstructured messages of varying formats and identifying unknown component parts within the unstructured messages)." *Id.* at 12–13. As discussed above, the Examiner relies on the combination of Wong and Keen to teach these elements. The test for obviousness is not what any one reference would have suggested, but rather what the combined teachings of the references would have suggested to those of ordinary skill in the art. *See In re Keller*, 642 F.2d 413, 426 (CCPA 1981). "[O]ne cannot show non-obviousness by attacking references individually were, as here, the rejections are based on combinations of the references." *Id.* (citation omitted). The Appellants do not provide sufficient evidence or technical reasoning to rebut the Examiner's findings as to what the prior art teaches.

To the extent the Appellants argue that Wong is non-analogous art (*see* Appeal Br. 12–13), our reviewing court has set forth a two-prong test for determining whether a prior art reference is analogous: (1) whether the reference is from the same field of endeavor as the claimed invention, and (2) if the reference is not within the same field of endeavor, whether the

reference is reasonably pertinent to the particular problem with which the inventor is involved. *In re Klein*, 647 F.3d 1343 (Fed. Cir. 2011). The Appellants do not state the field of endeavor for Wong or the current invention. To the extent the Appellants aver that Wong is in the field of endeavor of "creating new securities" whereas the Appellants' invention is in the field of endeavor of "processing unstructured messages of varying formats and identifying unknown component parts within the unstructured messages" (Appeal Br. 12–13), we disagree. Both Wong and the Appellants' invention are in the field of endeavor of trading financial products such as derivative securities/products. *See* Wong, Title, Abstract, ¶¶ 1, 4; Spec. ¶¶ 2–4, 36. As such, we find that Wong is analogous art.

We also find unpersuasive of error the Appellants' argument that Wong and Keen, alone or in combination, fail to teach performing the claimed functions. *See* Appeal Br. 12–14. Wong discloses "a method for providing customized derivative securities," the custom securities being based on received data regarding desired risk-return value and field and type of investment, and that are priced according to current market prices. Wong, Abstract, ¶ 4. Based on the provided data, a structuring engine defines a product comprised of components and determines the components' prices. *Id.* ¶ 15. Keen discloses an automated system and method "allowing traders, etc. to use instant messaging (IM) (or other non-FIX based) communications to input trading instructions directly into a broker's Order Management System (OMS) for managing/executing trades." Keen, Abstract, ¶ 2. Figure 6 "illustrates exemplary IM chat windows, a trade blotter, and an OMS graphical user interface" (*id.* ¶ 19) so that messages can be sent and received (*id.* ¶¶ 29, 33). A trader server receives IM communications that

are incompatible with the sell-side brokerage's order management system and converts them into communications the management system can understand, interpret, and/or accept. *Id.* ¶ 31. The trader server "scans the IM communication to determine whether the IM communication includes, or likely includes, trading instructions" such as predetermined keywords. *Id.* ¶ 34. If it does not, then the communication is transmitted to the recipient and/or stored. *Id.* ¶ 35. If it is likely to include an instruction, then the IM is parsed "to identify trade parameters of the trading instructions." *Id.* ¶ 36.

The Examiner relies on the combination of Wong and Keen (*see* Final Act. 13–14; Ans. 4–5) to teach "breaking down messages (whether unstructured or otherwise) to identify and price (unknown) component parts" (Appeal Br. 13). The Appellants argue that Wong does not teach this limitation and that Keen does not teach unstructured messages (*see id.* at 13–14), but do not argue why the combination of Wong and Keen does not teach the recited limitations. Contrary to the Appellants' assertion, the Specification does not provide that an "unstructured message" "refers to a lack of organization, arrangement, sequence, attributes or format of text. In other words, unstructured text does not have a standardized format and/or is not arranged in any particular sequence nor does it necessarily need to include any particular information, terms, data markers and/or attributes." *Id.*; *see also* Reply Br. 9. Rather, the Specification provides no particular definition of an "unstructured" message. Paragraph 45 discusses that "unstructured text is entered into an IM screen . . . [and] sent to a user in the form of a text message from a non-user." The ordinary and customary meaning of "unstructured" is lacking structure or organization, such as not formally organized in a set or conventional pattern. Merriam-Webster

Online Dictionary, https://www.merriam-webster.com/dictionary/
unstructured, retrieved Sept. 20, 2018.

When we viewing the term "unstructured" in light of the
Specification, we agree with the Examiner that Keen's messages that may or
may not contain trading terms lack a formal structure or organization,
similar to the text message of the Appellants' Specification. We disagree
that Keen's messages are contrary to the Appellants' invention "where no
key trading terms and/or cadence are needed in order to process and/or
display text messages." Appeal Br. 14. As noted above, in Keen, if there
are no trading terms, the message is passed to the recipient, i.e., processed
and/or displayed. And, although key terms and cadences may not be
required, the claims do not recite that they cannot be included.

We further find unpersuasive the Appellants' argument that the
Examiner "fails to provide any description or even explanation as to _why_ one
of skilled in the art would be motivated to combine these references, or even
how the combination could be made to realize or produce a fully functioning
system, as claimed by the Appellants." Reply Br. 9. As discussed above,
the Examiner determines that one of ordinary skill in the art would modify
Keen with the teachings of Wong "because applying said technique allows a
customer unfamiliar with the syntax of the pricing engine to request a price
quote, thus improving the invention's overall user convenience." Final
Act. 14. The Appellants do not provide any specific argument or reasons
why the Examiner's provided reasoning is in error.

Based on the foregoing, we sustain the rejection under 35 U.S.C.
§ 103 of claim 20, and of claims 1, 6, 8–15, 18, 23, 25–36, and 38–51, which
fall with claim 20.

DECISION

The Examiner's rejection of claims 1, 6, 8–15, 18, 20, 23, 25–36, and 38–51 under 35 U.S.C. § 101 is AFFIRMED.

The Examiner's rejection of claims 1, 6, 8–15, 18, 20, 23, 25–36, and 38–51 under 35 U.S.C. § 112 is AFFIRMED.

The Examiner's rejection of claims 1, 6, 8–15, 18, 20, 23, 25–36, and 38–51 under 35 U.S.C. § 103(a) is AFFIRMED.

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