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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

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Appeal 2017-003500<sup>1</sup>  
Application 13/770,452<sup>2</sup>  
Technology Center 3600

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Before PHILIP J. HOFFMANN, KENNETH G. SCHOPFER, and  
TARA L. HUTCHINGS, *Administrative Patent Judges*.

HUTCHINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner’s final rejection of claims 1–40. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> Our decision references Appellants’ Appeal Brief (“App. Br.,” filed July 12, 2016) and Reply Brief (“Reply Br.,” filed Dec. 28, 2016), and the Examiner’s Answer (“Ans.,” mailed Nov. 4, 2016) and Final Office Action (“Final Act.,” mailed Feb. 12, 2016).

<sup>2</sup> Appellants identify YellowJacket, Inc. as the real party in interest. App. Br. 1.

## CLAIMED INVENTION

Appellants' claimed invention "generally relates to a system for trading and analyzing derivative products, and[,] more particularly, [to] software that aggregates, organizes, parses and extracts market data for trading information from trading networks." Spec. ¶ 2.

Claims 1 and 21 are the independent claims on appeal. Claim 1, reproduced below with bracketed notations added, is illustrative of the claimed subject matter:

1. A system comprising:
  - [(a)] one or more computer devices;
  - [(b)] at least one graphical user interface configured to send and receive at least one unstructured message over the Internet via instant messaging, the unstructured message comprising one or more component parts of a transaction;
  - [(c)] one or more server computers in communication with the one or more computer devices, said one or more server computers each comprising memory storing code and at least one processor executing the code, said code configured to activate
    - [(d)] a market data recognition module when the at least one unstructured message is received via the at least one graphical user interface, the market data recognition module comprising computer-readable instructions stored on a non-transitory computer readable storage medium and executed by at least one processor, the computer-readable instructions, when executed, causing the market data recognition module to automatically:
      - [(e)] determine a deal status using one of a counterparty history and a counterparty activity;
      - [(f)] pair the at least one received unstructured message with contextual information using at least the deal status;
      - [(g)] identify the one or more component parts of the at least one received unstructured message;

[(h)] parse the at least one received unstructured message into the identified component parts;

[(i)] create an identifying object comprising the identified component parts; and

[(j)] create at least one editable electronic order ticket comprising the identifying object.

### REJECTIONS

Claims 1–40 are rejected under 35 U.S.C. § 101 as judicially excepted from statutory subject matter.

Claims 1, 3, 7, 16–18, 21, 23, 27, and 36–38 are rejected under 35 U.S.C. § 112(a) as failing to comply with the written description requirement.

Claims 1 and 21 are rejected under 35 U.S.C. § 112(b) as indefinite.

Claims 1–6, 20–26, and 40 are rejected under 35 U.S.C. § 103 as unpatentable over Ajitsaria (US 2003/0061149 A1, pub. May 27, 2003) and Feilbogen (US 2002/0023045 A1, pub. Feb. 21, 2002).

Claims 7–10 and 27–30 are rejected under 35 U.S.C. § 103(a) as unpatentable over Ajitsaria, Feilbogen, and Rose (US 2002/0133453 A1, pub. Sept. 19, 2002).

Claims 11–14 and 31–34 are rejected under 35 U.S.C. § 103(a) as unpatentable over Ajitsaria, Feilbogen, Rose, and Annunziata (US 2008/0215477 A1, pub. Sept. 4, 2008).

Claims 15, 16, 18, 19, 35, 36, 38, and 39 are rejected under 35 U.S.C. § 103(a) as unpatentable over Ajitsaria, Feilbogen, Rose, Annunziata, and Cushing (US 7,162,447, iss. Jan. 9, 2007).

Claims 17 and 37 are rejected under 35 U.S.C. § 103(a) as unpatentable over Ajitsaria, Feilbogen, Rose, Annunziata, and Albert (US 2007/0118455 A1, pub. May 24, 2007).

## ANALYSIS

### *Judicially-Excepted Subject Matter*

Appellants argue the pending claims as a group. App. Br. 5–20. We select independent claim 1 as representative. The remaining claims stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101 to include an implicit exception: “[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).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (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 Corp.*, 573 U.S. at 217. The first step in that analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.* If the claims are not directed to a patent-ineligible concept, e.g., an abstract idea, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered “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.” *Id.* (quoting *Mayo*, 566 U.S. at 79, 78).

The Court acknowledged, in *Mayo*, that “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Mayo*, 566 U.S. at 71. Therefore, the Federal Circuit has instructed that claims are to be considered in their entirety to determine “whether their character as a whole is directed to excluded subject matter.” *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)).

The USPTO recently published revised guidance on the application of § 101. 2019 REVISED PATENT SUBJECT MATTER ELIGIBILITY GUIDANCE, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Revised Guidance”).<sup>3</sup> That guidance revised the USPTO’s examination procedure with respect to the first step of the *Mayo/Alice* framework such that a claim will generally be considered directed to an abstract idea if (1) the claim recites subject matter falling within one of the following groupings of abstract ideas: (a) mathematical concepts; (b) certain methods of organizing human activity, e.g., a fundamental economic practice; and (c) mental processes (“Step 2A, Prong One”), and (2) the claim does not integrate the abstract idea into a practical application, i.e., apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception

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<sup>3</sup> The Revised Guidance is effective as of January 7, 2019, and applies to all applications, and to all patents resulting from applications, filed before, on, or after January 7, 2019.

(“Step 2A, Prong Two”). *See* Revised Guidance 54–55. The Revised Guidance references MANUAL OF PATENT EXAMINING PROCEDURE (“MPEP”) §§ 2106.05(a)–(c) and (e)–(h) in describing the considerations that are indicative that an additional element or combination of elements integrates the judicial exception, e.g., the abstract idea, into a practical application. *Id.* at 55. If the recited judicial exception is integrated into a practical application, as determined under one or more of these MPEP sections, the claim is not “directed to” the judicial exception.

Only if the 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 “[a]dds a specific limitation or combination of limitations” that is not “well-understood, routine, conventional activity in the field” or simply “appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception” (“Step 2B”). *Id.* at 56. With the legal principles outlined above, and the 2019 Revised Guidance in mind, we turn to the Examiner’s § 101 rejection.

In rejecting the pending claims under § 101, the Examiner determined that claim 1 is directed to an abstract idea encompassed by limitations (e) through (j), which the Examiner characterized as a method of organizing human activity and, therefore, an abstract idea. *See* Final Act. 18. The Examiner further determined that this abstract idea is similar to the concept of “comparing new and stored information and using rules to identify options” identified by the court as abstract in *SmartGene, Inc. v. Advanced Biological Labs., SA*, 555 F.App’x 950 (Fed. Cir. 2014) because, like the claims in *SmartGene*, Appellants’ claims compare new information (an

unstructured message) to stored information (deal status and counterparty activity) using rules (pairing rules, parsing rules) to identify options (a suitable electronic order ticket comprising identifying objects). Final Act. 18–19. The Examiner also determined that the abstract idea is similar to the concept of “data recognition and storage” identified by the court as abstract in *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343 (Fed. Cir. 2014) because, like the claims in *Content Extraction*, Appellants’ claims collect/detect data (an unstructured message, deal status, counterparty activity, counterparty history, parsed identified component parts) and store the information (within a suitable electronic order ticket comprising identifying objects). *Id.* at 19. The Examiner further determined that the claims do not include additional elements that are sufficient to ensure the claims amount to significantly more than the abstract idea. *Id.* at 22. Specifically, the “claim elements merely add specific limitations that are well-understood, routine and conventional in the field, and fail to add unconventional steps that confine the claims to a particular useful application.” *Id.*

In so doing, the Examiner notified Appellants of the reasons for the rejection under 35 U.S.C. § 101 in a sufficiently articulate and informative manner as to meet the notice requirement of 35 U.S.C. § 132, thereby establishing a prima facie case of patent ineligibility. *See In re Jung*, 637 F.3d 1356, 1363 (Fed. Cir. 2011) (holding that the USPTO carries its procedural burden of establishing a prima facie case when its rejection satisfies the notice requirements of 35 U.S.C. § 132 by notifying the applicant of the reasons for the rejection, “together with such information and references as may be useful in judging the propriety of continuing

prosecution”). Therefore, we are not persuaded by Appellants’ argument (App. Br. 17–18) that the Examiner has not met the burden of establishing a rejection under 35 U.S.C. § 101.

*Judicial Exception*

The Federal Circuit has explained that “the ‘directed to’ inquiry applies a stage-one filter to claims, considered in light of the [S]pecification, based on whether ‘their character as a whole is directed to excluded subject matter.’” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (quoting *Internet Patents Corp.*, 790 F.3d at 1346). Here, the Specification is titled “METHOD AND SYSTEM FOR COLLECTING AND PARSING MARKET DATA FROM VARIOUS SOURCES.” The Specification describes that the invention “generally relates to a system for trading and analyzing derivative products, and more particularly, [to] software that aggregates, organizes, parses and extracts market data for trading information from trading networks.” Spec. ¶ 2. The Specification describes in the Background section that conventional methods of communicating indications of interest and/or pricing information related to derivative contracts in the voice broker market include voice communications and instant messenger (“IM”). *Id.* ¶ 6. Brokers may receive and access multiple instant messages simultaneously, and transmitting information via IM provides a written record of the information, making IM an uprising favorite for communicating indications of interest. *Id.*

Nonetheless, IM technology suffers deficiencies in the voice broker market. *Id.* ¶ 7. Namely, IM communications are unstructured text (i.e., textual information that does not comply with or follow any particular order,

sequence or syntax). *Id.* ¶ 8. Because the text does not have a particular structure, conventional electronic trading systems cannot automatically process and extract relevant information in the text of the IM communication. *Id.* ¶ 8. Appellants' invention seeks to recognize, parse, and extract relevant information from unstructured IM text and convert the unstructured text into structured data that can be easily organized for presenting to users. *Id.* ¶ 10. It also seeks to convert the unstructured text into a format that can be processed and integrated with all types of electronic systems and modules. *Id.* ¶ 11.

With this context in mind, claim 1 recites the following limitations: “[receiving] at least one unstructured message [comprising one or more component parts of a transaction (limitation (b))]” (limitation (d)); “determine a deal status using one of a counterparty history and a counterparty activity” (limitation (e)), “pair the at least one received unstructured message with contextual information using at least the deal status” (limitation (f)); “identify the one or more component parts of the at least one received unstructured message” (limitation (g)); “parse the at least one received unstructured message into the identified component parts” (limitation (h)), “create an identifying object comprising the identified component parts” (limitation (i)); and “create the at least one editable electronic order ticket comprising the identifying object” (limitation (j)). These limitations, under their broadest reasonable interpretation in light of the Specification, recite rules or instructions to process a message comprising one or more component parts of a transaction to create an order ticket, i.e., a commercial interaction, which is a method of organizing human activity and, therefore, an abstract idea. *See* Revised Guidance 52. These

limitations also could be performed in the human mind, which is a mental process and, therefore, recites a series of steps for evaluating data to create an order ticket, which is a mental process, and, therefore, an abstract idea.

*Id.*

*Practical Application*

Under the Revised Guidance, if a claim recites a judicial exception (e.g., method of organizing human activity, a mental process), it must then be analyzed to determine whether the recited judicial exception is integrated into a practical application of that exception. Revised Guidance 54.

Specifically, we identify whether there are any additional elements recited in the claim beyond the judicial exception, and evaluate the additional elements individually and in combination to determine whether they integrate the exception into a practical application. *Id.* at 54–55.

Here, claim 1 additionally recites “one or more computer devices” (limitation (a)); “at least one graphical user interface configured to send and receive at least one unstructured message over the Internet via instant messaging, the unstructured message comprising one or more component parts of a transaction” (limitation (b)); “one or more server computers in communication with the one or more computer devices, said one or more server computers each comprising memory storing code and at least one processor executing the code, said code configured to activate [a market data recognition module]” (limitation (c)); and a “market data recognition module [(“MDR”)] comprising computer-readable instructions stored on a non-transitory computer readable storage medium and executed by at least one processor, the computer-readable instructions, when executed, causing the

market data recognition module to automatically [perform limitations (e) through (j)]” (limitation (d)).

We find no indication in the Specification, nor do Appellants direct us to any indication, that these additional elements implement the abstract idea with a specialized computer hardware or other inventive computer components, i.e., a particular machine, or that the claimed invention is implemented using other than generic computer components to perform generic computer functions. Instead, these elements are described in the Specification at a high level of generality, i.e., as generic computer components. *See, e.g.*, Spec. ¶¶ 36–39, 86–89. And “after *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.” *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014).

We also find no indication in the Specification that the claimed invention effects a transformation or reduction of a particular article to a different state or thing. Nor do we find anything of record, short of attorney argument, that attributes an improvement in technology and/or a technical field to the claimed invention or that otherwise indicates that the claimed invention integrates the abstract idea into a “practical application,” as that phrase is used in the 2019 Revised Guidance. *See* Revised Guidance 55. Instead, the additional limitations generally link the identified abstract idea to a particular technological environment (e.g., instant messaging) or field of use, and/or add pre- or post-solution activity (e.g., send/receive at least one

unstructured message) to the abstract idea, which is insufficient to integrate the abstract idea into a practical application. *See id.*

Appellants argue that claim 1 is not directed to an abstract idea because it improves the functioning of a computer, analogous to the patent eligible claims in *Enfish*. App. Br. 6–11; *see also* Reply Br. 4–5. According to Appellants, claim 1 improves the functioning of a computer system “by providing a mechanism that enables the claimed computer system to receive and process data messages that were otherwise not processable, and convert those data messages into electronic forms that are suitable for use and editing by external systems.” App. Br. 7. Specifically, Appellants assert that the claimed MDR module “represents a technological innovation and advancement in computer systems that enable them to process *more and more types* of information than before.” *Id.* Appellants contend that the MDR module increases the computer system’s throughput and operating efficiency by processing any unstructured data message, and converting objects within unstructured data messages into electronic order tickets that are suitable for use and editing by external sources. *Id.* at 8.

But we are not persuaded that the MDR having computer-readable instructions stored on a non-transitory computer readable storage medium (limitation (d)) and the execution by a process of the MDR’s computer-readable instructions (limitations (e) through (j)) improves the functioning of a computer itself or otherwise provides an improvement to another technology or technical field comparable to the claims in *Enfish*. *See Enfish*, 822 F.3d at 1336, 1339 (holding claims focused on a self-referential table for a computer database designed to improve the way a computer stores and retrieves data in memory were directed to a specific improvement in the way

computers operate). Instead, Appellants make clear that claim 1 focuses on improving a process for a commercial interaction, i.e., an abstract idea.

Namely, a broker receives unstructured data messages from a trader by telephone and in-person voice conversations, as well as unstructured IM communications; analyzes the information through a series of mental steps that could be performed in the human mind and/or with pen and paper; and creates an order for a transaction based on the results of the data collection and analysis. *See* Spec. ¶¶ 5–6; *see also id.* ¶¶ 7–8 (describing that conventional IM communications have enhanced workflow between traders and brokers, but conventional electronic trading systems cannot “automatically process and extract” relevant information in unstructured data messages). By way of attorney argument, Appellants assert that this conventional approach performed by a human results in “discarded data, missed opportunities and inefficient use of resources.” (App. Br. 8, citing Spec. ¶¶ 5, 8, 9). Ostensibly, Appellants contend that claim 1 improves electronic trading systems by enabling unstructured data messages communicated via IM technology to be processed automatically by the MDR module (a software module), instead of mentally by a human. Yet, the improvements touted by Appellants concern making a broker faster and more efficient with creating an order based on an unstructured message from a customer on behalf of a customer. This is not a technical solution to a technical problem or an improvement in the functioning of a computer or other technical field. Instead, it is an implementation of the abstract idea in a particular technological environment.

Implementing limitations (e) through (j), as recited in claim 1, as computer-readable instructions executed by a processor, may well improve

the speed and accuracy in creating order tickets from an unstructured message over prior art systems that processed such messages mentally by a human. However, the use of a computer to implement an abstract idea (a commercial interaction) is insufficient to render a claim patent eligible. *See Enfish*, 822 F.3d at 1335–35; *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (“relying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible”).

We are not persuaded by Appellants’ argument that claim 1 is patent-eligible under *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016). App. Br. 11–12. The claims at issue in *BASCOM* were directed to a “content filtering system for filtering content retrieved from an Internet computer network,” which the court held to be an abstract idea. *BASCOM*, 827 F.3d at 1348–49. However, the court further held that the ordered combination of limitations transformed the abstract idea into a practical application of that abstract idea. *Id.* at 1352. Namely, a non-conventional and non-generic arrangement of known, conventional pieces, such as a local client computer and a remote ISP server, resulted in “a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user.” *Id.* at 1350.

Appellants contend that claim 1 is analogous to the claims in *BASCOM* because it recites an ordered combination of steps performed by the MDR module for processing and converting unstructured messages, which, as described by Appellants above in the context of *Enfish*, results in a technical improvement upon prior art processes. App. Br. 11. However, we are not persuaded, for the same reasons described above in the context of

*Enfish*, that claim 1’s MDR module provides a “technical improvement,” as opposed to an improvement in a commercial interaction for which computer components are used in their ordinary capacity.

Appellants’ reliance on *DDR Holdings* also fails to persuade us of Examiner error. *See* App. Br. 12–13. In *DDR Holdings*, the Federal Circuit held that the claims were directed to statutory subject matter because they claimed a solution “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks,” i.e., 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. We are not persuaded that a comparable situation is presented here.

Appellants argue that claim 1 is patent-eligible under *DDR Holdings*, because it is “necessarily rooted in computer technology” and “overcome[s] a computer-centric problem specifically arising in the realm of computer networks and the Internet.” App. Br. 12. Specifically, Appellants contend that the MDR module is activated when an unstructured message is received, and then it processes, parses, and converts the message into an editable electronic order ticket that is capable of being processed. *Id.* (citing Spec. ¶¶ 46–47). Appellants’ invention, thus, seeks to automatically process and extract relevant information included in an unstructured message, and structure that information for processing by other systems. Spec. ¶¶ 6, 8–9. Processing unstructured data to create an order ticket does not embody a problem “rooted in computer technology” or even a problem unique to computers or computer networks. App. Br. 12.; *see* Spec. ¶¶ 5–6 (describing

that brokers in conventional systems recognize, parse, and extract information from unstructured messages communicated by voice over a telephone). We find no technological improvement at issue in claim 1, analogous to *DDR Holdings*' change to the routine, conventional functioning of Internet hyperlink protocol. *DDR Holdings*, 773 F.3d at 1257. Instead, claim 1 requires nothing more than implementing the abstract idea on a "computer system." *Compare with id.* (the claims at issue did not simply use computers to serve a conventional business purpose).

Appellants argue that the claims are analogous to the patent-eligible claims in *Diamond v. Diehr*, 450 U.S. 175 (1981). App. Br. 13–14. Appellants contend that "the claimed computer provides a mechanism, like *Diehr*, for determining and controlling when the MDR module is activated and what functions it performs." *Id.* at 13. And the MDR module, in turn, transforms unstructured messages to "create[] something what was not there — an order ticket — much like the rubber mold in *Diehr*." *Id.* Yet, Appellants' claim 1 involves a commercial interaction that receives one form of data (an unstructured message), and processes the data to create another form of data (an electronic order ticket). *Diehr*, in contrast, involved transforming a particular article (uncured rubber) to a different state or thing (precision-molded synthetic rubber products). *Diehr*, 450 U.S. at 177. Claim 1 does not recite a transformation of a particular article to a different state or thing, analogous to *Diehr*'s transformation of uncured synthetic rubber into precision-molded synthetic rubber products. *See Revised Guidance 55, n.28*

Appellants further argue that claim 1 is analogous to patent-eligible claim 2 of Example 21 of the July 2015 Update on Subject Matter

Eligibility.<sup>4</sup> *See* App. Br. 14–16. Seeking to draw an analogy with claim 2 of Example 21, Appellants contend that Appellants’ claim 1 “recite[s] activating components for time sensitive processes, i.e., activating the MDR module to reformat unstructured messages into a data format suitable for time-sensitive trading (i.e., an editable electronic order ticket).” *Id.* at 14. Yet, similar to the claims in *DDR Holdings*, claim 2 of Example 21 “addresses the Internet-centric challenge of alerting a subscriber with time sensitive information when the subscriber’s computer is offline.” *July 2015 Update* 4. Claim 2 solves this Internet-solution by transmitting an alert over a wireless communication channel to activate the stock viewer application, thereby enabling the connection of the remote subscriber to the data source when the subscriber comes online. *Id.* Put simply, claim 2 of Example 21, like the claims in *DDR Holdings*, solves an Internet-centric problem with a solution that is necessarily rooted in computer technology. *Id.* As described above, here, we find no analogous Internet-centric problem.

In the Reply Brief, Appellants additionally argue that the Federal Circuit in *McRO* “made clear that automation both constitute[s] a technological improvement and is patent eligible.” Reply Br. 7 (emphasis omitted). Appellants suggest that any difference between a human process and the process performed by the MDR module, renders the claims patent eligible. *See id.* at 7–8. Yet, the Federal Circuit premised its determination that the claimed invention in *McRO* was patent-eligible because it was

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<sup>4</sup> *See* July 2015 Update, Appendix 1: Examples (available at <https://www.uspto.gov/sites/default/files/documents/ieg-july-2015-app1.pdf>) (hereinafter “*July 2015 Update*”).

directed to a “technological improvement over the existing, manual 3–D animation techniques” through the use of “limited rules in a process specifically designed to achieve an improved technological result in conventional industry practice.” *McRO*, 837 F.3d at 1316. In *McRO*, an improvement in computer animation was realized using rules to define an output morph weight set stream as a function of phoneme sequence and time of said phoneme sequence, obviating the need of human animators to make visual and subjective determinations for the morph weight sets. *Id.* at 1306, 1313. In this sense, *McRO* is akin to *DDR Holdings*, *Enfish*, and similar decisions that have held claims patent-eligible where the claimed invention provided a technological improvement in industry practice. In contrast, here, Appellants do not identify, and we do not find, any specific rules analogous to those in *McRO* that enabled a computer to generate computer-animated characters.

We also are not persuaded by Appellants’ argument that the present claims are similar to those at issue in *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288 (Fed. Cir. 2016). Reply Br. 6. In *Amdocs*, the Federal Circuit held the claim patent-eligible because it “entail[ed] an unconventional technological solution (enhancing data in a distributed fashion) to a technological problem (massive record flows which previously required massive databases).” *Amdocs*, 841 F.3d at 1300. Namely, “[t]he solution require[d] arguably generic components, including network devices and ‘gatherers’ which ‘gather’ information.” But the court concluded that these generic components provided an enhancing limitation for specifying how the data is processed before placement in a database. *Id.* at 1301. The court further concluded that this “enhancing limitation necessarily require[d]

that these generic components operate in an unconventional manner to achieve an improvement in computer functionality.” *Amdocs*, 841 F.3d at 1300-01.

Appellants argue that the present claims are analogous to those in *Amdocs* because the

presence of the claimed recognizer module causes the claimed system (which may comprise generic computer components) to operate unconventionally to enhance data (i.e., converting unstructured data in unstructured IM messages into an editable electronic order ticket), which in turn improves the operation of the computer system / functionality (discussed in detail above).

Reply Br. 6. But, as described above, we are not persuaded that the MDR’s performance of limitations (e)–(j), as recited in claim 1, for converting an unstructured message into an electronic order ticket is a technological process, technological improvement, or improvement to the operation of a computer system, rather than an improvement to an abstract idea.

Appellants argue that claim 1 is patent-eligible because it does not preempt the abstract idea of “parsing messages.” App. Br. 15–16; *see also* Reply Br. 9–10. However, preemption is not the sole test for patent-eligibility. Although the Supreme Court has described “the concern that drives [the exclusion of abstract ideas from patent eligible subject matter] as one of pre-emption,” *Alice Corp.*, 573 U.S. at 216, 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 Corp.*, 573 U.S. at 216). “[P]reemption may signal patent ineligible subject matter, [but] the absence of complete preemption does not demonstrate patent eligibility.” *Id.*

Appellants also argue that claim 1 recites elements that are applied by a particular machine — a specialized MDR module that performs functions to convert unstructured messages into editable electronic orders. App. Br. 16. Yet, the claimed MDR module includes computer-readable instructions stored on a non-transitory computer medium and are executed by at least one processor for performing the abstract idea embodied by limitations (e) through (j). None of these components, considered individually or in combination, indicates that a particular machine is required to perform limitations (e) through (j). Moreover, Appellants do not direct us to any indication in the Specification that the operations recited in claim 1 require any particular machine. *See, e.g.*, Spec. ¶¶ 12, 38–39 (describing the computer components in high level terms).

Appellants attempt to analogize claim 1 to the patent-eligible claims in *McRO*, 837 F.3d 1299 because it recites “a set of rules for converting unstructured messages that achieve a technological improvement with very specific claim limitations that are distinct from prior art processes and improves upon prior art processes.” Reply Br. 5. In *McRO*, the Federal Circuit addressed claims directed to “[a] method for automatically animating lip synchronization and facial expression of three-dimensional characters.” *McRO*, 837 F.3d at 1307. For example, claim 1 of *McRO* recites a method for automatically animating lip synchronization and facial expression of 3-D characters comprising, among other things, “obtaining a first set of rules that define output morph weight set stream as a function of phoneme sequence

and time of said phoneme sequence.” *Id.* at 1307–08. The court reviewed the Specification of the patent at issue and found that, rather than invoking the computer merely as a tool, “[c]laim 1 of the [asserted] patent is focused on a specific asserted improvement in computer animation.” *Id.* at 1314. The court found that the plain focus of the claim was on an improvement to computer functionality itself, not on economic or other tasks for which a computer is used in its ordinary capacity.

Unlike claim 1 of *McRO*, Appellants’ claim 1 does not recite specific rules with specific characteristics that improve computer animation techniques or some other technology. Instead, limitations (e) through (j) of Appellants’ claim 1 each recite a desired result without the requisite technical details to indicate any improvement in technology. For example, instead of presenting any specific rules for parsing the unstructured message, limitation (h) recites the desired functionality to be achieved “parse the at least one received unstructured message into the identified component parts.” Likewise, limitation (g) recites “identifying the . . . component parts” without specifying any particular technique for accomplishing the desired result.

Likewise, to the extent Appellants argue that the MDR called for in limitation (d) effects a transformation or reduction of a particular article to a different state or thing (*see* App. Br. 16), we disagree. The MDR merely uses a computer to perform the abstract idea recited in limitations (e) through (j). We do not find, and Appellants do not identify, any transformation of a particular article to a different state or thing, analogous to the transformation of uncured synthetic rubber into precision-molded

synthetic rubber products in *Diehr*, for example. *See* Revised Guidance 54, n.28.

We find no indication in the record that attributes the additional elements recited in claim 1 to an improvement in computer technology and/or functionality, to implementing the abstract idea with a particular machine that is integral to the claim, that effects a transformation or reduction of a particular article to a different state or thing, that applies the abstract idea in some other meaningful way beyond linking the use of the abstract idea to a particular technological environment, or that otherwise indicates that the claimed invention integrates the abstract idea into a “practical application,” as that phrase is used in the Revised Guidance.

*Inventive Concept*

Appellants argue that claim 1 recites significantly more than the abstract idea because it recites a novel component (the MDR module) including a novel set of specific rules that did not exist in prior art electronic trading systems that “literally improves the functioning of the computer network architecture by providing new functionality (e.g., the ability to process unstructured instant messaging data to be leveraged/processed by various components of the network).” Reply Br. 4–5; *see also id.* at 6 (“This novel set of rules was not performed, either electronically or by a human, in prior systems.”). Yet, these limitations, even if novel and non-obvious, recite no elements beyond the abstract idea. Although the second step in the *Mayo/Alice* framework is termed a search for an “inventive concept,” the analysis is not an evaluation of novelty or non-obviousness, but rather, a search for “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 Corp.*, 573 U.S. at 217–18 (alteration in original). A novel and non-obvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90. Here, Appellants have not identified, and we do not find, any additional elements recited in claim 1 that, individually or in combination, provide significantly more than the abstract idea. At best, the additional elements limit the abstract idea to a particular technological environment and/or field of use.

Accordingly, we sustain the rejection of independent claim 1 under 35 U.S.C. § 101. We also sustain the rejections of claims 2–40, which fall with claim 1.

#### *Written Description*

The Examiner rejects claims 1, 3, 7, 16–18, 21, 23, 27, and 36–38 under 35 U.S.C. § 112(a) as failing to comply with the written description requirement. Final Act. 22–32; *see also* Ans. 12–14. The written description requirement requires that the disclosure of the application relied upon reasonably convey 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 written description requirement is met when the disclosure “allow[s] one skilled in the art to visualize or recognize the identity of the subject matter purportedly described.” *Enzo Biochem, Inc. v. Gen-Probe Inc.*, 323 F.3d 956, 968 (Fed. Cir. 2002).

The Examiner finds that claims 1, 7, 16–18, 21, 27, and 36–38 recite computer-implemented functional claim language with respect to the claimed “market data recognition module” (claims 1, 7, 21, 27), the claimed

“user interface” (claims 3 and 23), and the claimed “one or more server computers” (claims 16–18 and 36–38) that is not adequately supported by the Specification. Final Act. 23–32 (citing Spec. ¶¶ 44, 46–48, 50, 55, 64, 76, 83, 84, 88, 90, 94–100). With respect to each of these claim elements, the Examiner acknowledges that the Specification describes the functionality of the claim element, but finds more explicit technical detail necessary to show possession. *See id.*; *see also* Ans. 12 (“the Examiner did not reject the claims because the disclosure failed to ‘describe literally’ the claim elements” (emphasis added)). For example, referencing MDR functionality described at paragraphs 46–47 of the Specification, the Examiner finds that the Specification fails to describe *how* structure data is normalized and correlated or what a template library looks like. *See* Final Act. 26; *see also*, e.g., *id.* at 30 (finding that paragraph 94 of the Specification fails to describe “how the server computer actually transmits the order ticket to a determined electronic and/or floor-based exchange”).

Appellants identify Figures 1–3B and paragraphs 10–13, 38, 41, 44–47, 50, 51, 55, 64, 76, 83, 84, 86–90 as providing support for the claimed elements. App. Br. 2–4, 18–19. We find that the portions of the Specification identified by Appellants and additionally identified by the Examiner provide sufficient written description support to show possession of the claimed invention. In particular, the written description shows Appellants had possession of a system that includes the claimed market data recognition module, user interface, and one or more server computers. We agree with Appellants that the skilled artisan would recognize possession from at least the cited disclosures. The Examiner’s demand for more

explicit support in the Specification, specifying additional detail, is unnecessary.

Therefore, we do not sustain the Examiner's rejection of claims 1, 3, 7, 16–18, 21, 23, 27, and 36–38 as lacking sufficient written description support.

### *Indefiniteness*

The Examiner rejects independent claims 1 and 21 under 35 U.S.C. § 112(b) because the Examiner finds that the term “unstructured message” is vague and indefinite. Final Act. 32–33; *see also* Ans. 14. In particular, the Examiner finds that the phrase “unstructured message . . . comprising structure and quotes on structure . . . comprising one or more component parts” is indefinite. Final Act. 32. As an initial matter, neither claim 1 nor claim 21 recites that an unstructured message comprises “structure and quotes on structure.” Further, we agree with Appellants that one of ordinary skill in the art would understand, in light of the Specification, that an “unstructured message” refers to a message, such as an instant message, that contains textual information that does not comply with or follow any particular order, sequence or syntax. *See* App. Br. 19–20; *see also* Reply Br. 10–11 (citing Spec. ¶¶ 8, 45, 46); Spec. ¶¶ 8 (describing an instant message as a message that includes unstructured textual information), 45 (describing parsing an unstructured message to recognize textual information, such as a quote on a structure (i.e., an off-exchange contract type)).

Therefore, we do not sustain the rejection of claims 1 and 21 under 35 U.S.C. § 112(b) as indefinite.

*Obviousness*

We are persuaded by Appellants' argument that the Examiner erred in rejecting independent claims 1 and 21 under 35 U.S.C. § 103(a) because Feilbogen does not teach or suggest a market data recognition module that "create[s] at least one editable electronic order ticket comprising the identifying object" as recited in claim 1's limitation (j), and similarly recited in claim 21. App. Br. 21–22. The Examiner finds that Ajitsaria teaches parsing an instant message into a standardized deal, but does not appear to disclose creating at least one editable electronic order ticket. Final Act. 37 (citing Ajitsaria ¶¶ 60, 157, 572). However, the Examiner finds that Feilbogen teaches collecting and parsing market data from various sources, including conversations between traders, and creating an editable electronic order ticket. *Id.* (citing Feilbogen ¶¶ 8, 77, claim 3). The Examiner determines that it would have been obvious to modify Ajitsaria's system to include placing the standardized deal into an editable electronic order ticket, as taught by Feilbogen, because doing so would enable more efficient fulfillment of a desired trade. *Id.* at 38.

Feilbogen relates to a method and system for initiating, negotiating, completing, and settling trades. Feilbogen ¶ 2. In the Background section, Feilbogen describes that computerized systems, such as Reuters and Bloomberg, serve as electronic portals (i.e., trading interfaces) for conducting trading electronically between counterparts (i.e., two separate entities or parties). *Id.* ¶¶ 3, 6. A counterpart subscribes to a portal and conducts business with other counterparts connected to the same portal. *Id.* ¶ 7. To conduct business with a counterpart who subscribes to a different portal, a subscription to the different portal is required. *Id.* The portal uses

secure, dedicated lines to transmit data between counterparts using portal-specific data formats. *Id.* ¶ 8. The portal enables the parties to engage in an exchange of trade information for negotiating and finalizing the particular details of a trade using a portal-specific data format. *Id.* The portal can parse to determine the trade information that the customer and price provider wish to exchange. *Id.* After the transaction is completed and accepted by both counterparties, the system generates an electronic ticket containing the trade details. *Id.* Individual portal windows allow a conversation between the price provider and the customer, creation of a trade ticket based on a conversation between the customer and price provider or based on trade details electronically received in the window. *Id.* ¶ 77. Thus, we agree with Appellants that the portions of Feilbogen cited by the Examiner teach creating an order ticket, but fail to teach that the ticket is “editable.” *See* App. Br. 21–22.

In response to Appellants arguments, the Examiner determines that Ajitsaria teaches that orders are “editable,” and that Feilbogen also teaches that a trade ticket is editable. Ans. 17 (citing Ajitsaria ¶¶ 83, 84, 98–100; Feilbogen ¶¶ 77–79). We have reviewed the cited portions of Ajitsaria and Feilbogen. Yet, nothing in the cited portions teaches the argued limitation.

In view of the foregoing, we do not sustain the Examiner’s rejection of independent claims 1 and 21 and dependent claims 2–6, 20, 22–26, and 40 under 35 U.S.C. § 103(a).

The Examiner’s rejections of claims 7–19 and 27–39 under 35 U.S.C. § 103(a) do not cure the deficiency in the rejection of independent claims. Therefore, we do not sustain the rejections of claims 7–19 and 27–39 under

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35 U.S.C. § 103(a) for the same reasons described with respect to the independent claims.

#### DECISION

The Examiner's rejection of claims 1–40 under 35 U.S.C. § 101 is affirmed.

The Examiner's rejection of claims 1, 3, 7, 16–18, 21, 23, 27, and 36–38 under 35 U.S.C. § 112(a) as failing to comply with the written description requirement is reversed.

The Examiner's rejection of claims 1 and 21 under 35 U.S.C. § 112(b) as indefinite is reversed.

The Examiner's rejections of claims 1–40 under 35 U.S.C. § 103(a) as unpatentable are reversed.

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