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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* TYLER BALDWIN, CHEN CHANG,  
JOSHUA RICHARD VANGEEST,  
and MIKE DEREZIN<sup>1</sup>

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Appeal 2017–006243  
Application 13/781,569  
Technology Center 3600

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Before ANTON W. FETTING, MICHAEL W. KIM, and AMEE A. SHAH,  
*Administrative Patent Judges.*

FETTING, *Administrative Patent Judge.*

DECISION ON APPEAL

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<sup>1</sup> According to the Appeal Brief, the Real Party in Interest is LinkedIn Corp.  
App. Br. 2.

STATEMENT OF THE CASE<sup>2</sup>

Tyler Baldwin, Chen Chang, Joshua Richard VanGeest, and Mike Derezin (Appellants) seek review under 35 U.S.C. § 134 of a final rejection of claims 1–21, the only claims pending in the application on appeal. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

The Appellants invented a way of analyzing a social graph of a social networking service for the purpose of deriving, for each member in a group of members, a social proximity score representing a measure of how socially connected an individual member is to a particular entity or organization. Specification para. 2.

An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below (bracketed matter and some paragraphing added).

1. A method for  
displaying assignments of a set of companies,  
representing potentially new or existing customer  
accounts of a business organization, to individual sales  
representatives of a team of sales representatives for the  
business organization,  
the method comprising:  
[1] with a processor, calculating a social proximity score for  
each combination of sales representative,  
from the team of sales representatives,  
and company, from the set of companies,

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<sup>2</sup> Our decision will make reference to the Appellants’ Appeal Brief (“App. Br.,” filed October 5, 2016) and Reply Brief (“Reply Br.,” filed March 6, 2017), and the Examiner’s Answer (“Ans.,” mailed January 4, 2017), and Final Action (“Final Act.,” mailed July 5, 2016).

the social proximity score representing a measure of connection strength between the sales representative and the company,

the social proximity score being based on social networking data and derived by analyzing a social graph of a social networking service;

[2] with the processor, allocating each company in the set of companies to an individual sales representative with the highest social proximity score for the respective company that also satisfies each constraint in a set of rule-based constraints;

and

[3] on a display unit, displaying a mapping of each company in the set of companies to the individual sales representative to whom the respective company is allocated.

The Examiner relies upon the following prior art:

Morio	US 2010/0121684 A1	May 13, 2010
Narvaez	US 2010/0332290 A1	Dec. 30, 2010
Godwin	US 2012/0166303 A1	June 28, 2012
Pendergraft	US 8,249,903 B2	Aug. 21, 2012
Fisher	US 2014/0179354 A1	June 26, 2014

Claims 1–21 stand rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

Claims 1, 2, 3, 6, 8, 9, 11–13, 16, 18, 19, and 21 stand rejected under 35 U.S.C. § 102(e) as anticipated by Pendergraft.

Claims 4 and 14 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Pendergraft and Godwin.

Claims 5 and 15 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Pendergraft and Fisher.

Claims 7 and 17 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Pendergraft and Morio.

Claims 10 and 20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Pendergraft and Narvaez.

## ISSUES

The issues of eligible subject matter turn primarily on whether the claims recite more than abstract conceptual advice of what a computer is to provide without implementation details.

The issues of novelty matter turn primarily on whether the prior art describes salespeople and computing scores for each combination.

The issues of obviousness turn primarily on the anticipation rejection.

## FACTS PERTINENT TO THE ISSUES

The following enumerated Findings of Fact (FF) are believed to be supported by a preponderance of the evidence.

### *Facts Related to the Prior Art*

#### *Pendergraft*

01. Pendergraft is directed to generating a business relationship network for developing business relationships. Pendergraft 1:52–55.
02. Pendergraft does not describe sales people or calculating a score for each combination of entities.

ANALYSIS

*Claims 1–21 rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more*

Method claim 1 recites calculating social proximity score data, allocating (assigning) each company in a set of companies to an individual sales representative, and displaying a mapping of each company in the set of companies to the individual sales representative to whom the respective company is allocated. Thus, claim 1 recites analyzing, modifying, and displaying data. None of the limitations recite implementation details for any of these steps, but instead recite functional results to be achieved by any and all possible means. Data analysis, modification, display are all generic, conventional data processing operations to the point they are themselves concepts awaiting implementation details. The sequence of data analysis-modification-display is equally generic and conventional. The ordering of the steps is therefore ordinary and conventional. The remaining claims merely describe process parameters, with no implementation details.

The Supreme Court

set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts. First, [] determine whether the claims at issue are directed to one of those patent-ineligible concepts. [] If so, we then ask, “[w]hat else is there in the claims before us? [] To answer that question, [] consider the elements of each claim both individually and “as an ordered combination” to determine whether the additional elements “transform the nature of the claim” into a patent-eligible application. [The Court] described step two of this analysis as a 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 Corp. Pty. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014) (citing *Mayo Collaborative Services v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012)).

To perform this test, we must first determine whether the claims at issue are directed to a patent-ineligible concept. The Examiner determines the claims to be directed to “displaying assignments of a set of companies (as evidenced by the preamble of exemplary claim 1), a method of organizing human activity and an abstract idea.” Final Act. 4.

Although the Court in *Alice* made a determination as to what the claims were directed to, we find that this case’s claims themselves and the Specification provide enough information to inform one as to what they are directed to.

The preamble to claim 1 recites that it is “[a] method for displaying assignments of a set of companies, representing potentially new or existing customer accounts of a business organization, to individual sales representatives of a team of sales representatives for the business organization.” The steps in claim 1 result in displaying a mapping of each company in a set of companies to the individual sales representative to whom the respective company is allocated absent any technological mechanism other than a conventional computer for doing so. The Specification at paragraph 2 recites that the invention relates to “analyzing a social graph of a social networking service for the purpose of deriving, for each member in a group of members, a social proximity score representing a measure of how socially connected an individual member is to a particular entity or organization.” Thus, all this evidence shows that claim 1 is

directed to assigning sales representatives to companies, i.e., sales staffing. This is consistent with the Examiner's determination.

It follows from prior Supreme Court cases, and *Bilski* (*Bilski v. Kappos*, 561 U.S. 593 (2010)) in particular, that the claims at issue here are directed to an abstract idea. Like the risk hedging in *Bilski*, the concept of sales staffing is a fundamental business practice long prevalent in our system of commerce. The use of sales staffing is also a building block of ingenuity in sales management and delegation of work. Thus, sales staffing, like hedging, is an "abstract idea" beyond the scope of § 101. *See Alice Corp. Pty.*, 134 S. Ct. at 2356.

As in *Alice Corp. Pty.*, we need not labor to delimit the precise contours of the "abstract ideas" category in this case. It is enough to recognize that there is no meaningful distinction in the level of abstraction between the concept of risk hedging in *Bilski* and the concept of sales staffing at issue here. Both are squarely within the realm of "abstract ideas" as the Court has used that term. *See Alice Corp. Pty.*, 134 S. Ct. at 2357.

Further, claims involving data collection, analysis, and display are directed to an abstract idea. *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (holding that "collecting information, analyzing it, and displaying certain results of the collection and analysis" are "a familiar class of claims 'directed to' a patent ineligible concept"); *see also In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016). Claim 1, unlike the claims found non-abstract in prior cases, uses generic computer technology to perform data analysis, modification, and display and does not recite an improvement to a particular computer

technology. *See, e.g., McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314–15 (Fed. Cir. 2016) (finding claims not abstract because they “focused on a specific asserted improvement in computer animation”). As such, claim 1 is directed to the abstract idea of analyzing, modifying, and displaying data.

The remaining claims merely describe process parameters. We conclude that the claims at issue are directed to a patent-ineligible concept.

The introduction of a computer into the claims does not alter the analysis at *Mayo* step two. The Court in *Alice* held that

the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea “while adding the words ‘apply it’” is not enough for patent eligibility. Nor is limiting the use of an abstract idea “to a particular technological environment.” Stating an abstract idea while adding the words “apply it with a computer” simply combines those two steps, with the same deficient result. Thus, if a patent’s recitation of a computer amounts to a mere instruction to “implement[t]” an abstract idea “on . . . a computer,” that addition cannot impart patent eligibility. This conclusion accords with the preemption concern that undergirds our §101 jurisprudence. Given the ubiquity of computers, wholly generic computer implementation is not generally the sort of “additional feature[e]” that provides any “practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.”

*Alice Corp. Pty.*, 134 S. Ct. at 2358 (citations omitted).

“[T]he relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea [] on a generic computer.” *Alice Corp. Pty.*, 134 S. Ct. at 2359. They do not.

Taking the claim elements separately, the function performed by the computer at each step of the process is purely conventional. Using a

computer for analyzing, modifying, and displaying data amounts to electronic data query and retrieval—one of the most basic functions of a computer. All of these computer functions are well-understood, routine, conventional activities previously known to the industry. *See id.*; *see also Elec. Power Grp.*, 830 F.3d at 1355; *In re Katz Interactive Call Processing Patent Litigation*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (“Absent a possible narrower construction of the terms “processing,” “receiving,” and “storing,” . . . those functions can be achieved by any general purpose computer without special programming”). In short, each step does no more than require a generic computer to perform generic computer functions. As to the data operated upon, “even if a process of collecting and analyzing information is ‘limited to particular content’ or a particular ‘source,’ that limitation does not make the collection and analysis other than abstract.” *SAP Am. Inc. v. InvestPic LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018).

Considered as an ordered combination, the computer components of Appellants’ method add nothing that is not already present when the steps are considered separately. The sequence of data analysis-modification-display is equally generic and conventional or otherwise held to be abstract. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (sequence of receiving, selecting, offering for exchange, display, allowing access, and receiving payment recited an abstraction); *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378 (Fed. Cir. 2017) (sequence of data retrieval, analysis, modification, generation, display, and transmission); *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1339 (Fed. Cir. 2017) (sequence of processing, routing,

controlling, and monitoring). The ordering of the steps is therefore ordinary and conventional.

Viewed as a whole, Appellants' method claims simply recite the concept of sales staffing as performed by a generic computer. To be sure, the claims recite doing so by advising one to perform the assignment of sales staff by certain computations. But this is no more than abstract conceptual advice on the parameters for such sales staffing and the generic computer processes necessary to process those parameters, and do not recite any particular implementation.

The method claims do not, for example, purport to improve the functioning of the computer itself. Nor do they effect an improvement in any other technology or technical field. The 22 pages of Specification spell out different generic equipment<sup>3</sup> and parameters that might be applied using this concept and the particular steps such conventional processing would entail based on the concept of sales staffing under different scenarios. They do not describe any particular improvement in the manner a computer functions. Instead, the claims at issue amount to nothing significantly more than an instruction to apply the abstract idea of sales staffing using some unspecified, generic computer. Under our precedents, that is not enough to transform an abstract idea into a patent-eligible invention. *See Alice Corp. Pty.*, 134 S. Ct. at 2360.

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<sup>3</sup> The Specification describes personal computer (PC), a tablet PC, a set-top box (STB), a Personal Digital Assistant (PDA), a mobile telephone, a web appliance, a network router, switch or bridge, or any machine capable of executing instructions (sequential or otherwise) that specify actions to be taken by that machine. Spec. para. 49.

As to the structural claims, they are no different from the method claims in substance. The method claims recite the abstract idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same idea. This Court has long “warn[ed] . . . against” interpreting § 101 “in ways that make patent eligibility ‘depend simply on the draftsman’s art.’”

*Alice Corp. Pty.*, 134 S. Ct. at 2360.

As to Appellants’ Appeal Brief arguments, we adopt the Examiner’s determinations and analysis from Final Action 4–5 and Answer 2–3 and reach similar legal conclusions. We now turn to the Reply Brief.

We are not persuaded by Appellants’ argument that “the steps of claim 1, . . . , simply cannot be executed mentally or on paper, and therefore **cannot** be considered reciting human activity.” Reply Br. 2. Appellants contend the steps cannot be performed mentally because the claims recite the use of computer equipment. This is not an argument that the underlying process cannot be performed mentally, but only that the claims recite a computer context. Simply reciting such a context is insufficient to get past being an abstract idea. “The Supreme Court and this court have repeatedly made clear that merely limiting the field of use of the abstract idea to a particular existing technological environment does not render the claims any less abstract.”

*Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1259 (Fed. Cir. 2016).

We are not persuaded by Appellants’ argument that “the recited method for ‘displaying assignments of a set of companies’ is significantly more complicated, and specific, than hedging, is not a longstanding

commercial practice (in contrast with hedging), and is therefore *significantly more* than a mere abstract idea.” Reply Br. 2. The claims are specific only in the sense they are specified using words. The level of complexity is not dispositive. “The difficulty of the programming details for this functionality is immaterial because these details are not recited in the actual claims. The degree of difficulty in implementing an abstract idea in this circumstance does not itself render an abstract idea patentable.” *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1242 (Fed. Cir. 2016). Beyond that, as we determine *supra*, the claims are directed to using some computation to assign sales staff. Assigning sales staff is as old as organizational commerce.

We are not persuaded by Appellants’ argument that “the Examiner’s comparison of the present claims to *Digitech*<sup>4</sup> is erroneous.” Reply Br. 2. Appellants contend that *Digitech* did not have a step analogous to displaying the results. App. Br. 14. As we determine *supra*, simply displaying data is generic and conventional. This is borne out by our reviewing court.

[R]epresentative claim 14 is written in largely functional terms, claiming “a collection of instructions” that perform the functions of *displaying* a selection of available content on a graphical user interface and allowing the user to request streaming of that content. The claims thus do not go beyond “stating [the relevant] functions in general terms, without limiting them to technical means for performing the functions that are arguably an advance over conventional computer and network technology.” *Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016) (emphasis added) (citation omitted).

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<sup>4</sup> *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014).

*Claims 1, 2, 3, 6, 8, 9, 11–13, 16, 18, 19, and 21 rejected under 35 U.S.C.  
§ 102(e) as anticipated by Pendergraft*

We are persuaded by Appellants’ argument that “Pendergraft does not teach that the ‘resources’ stated in Pendergraft are sales representatives. “Further, . . . Pendergraft considers links that connect various nodes. However, Pendergraft does not explicitly form links between each combination of nodes.” App. Br. 17. The Examiner responds that

Pendergraft teaches sources and targets may be individuals that may be leveraged to generate business relationships and identify new opportunities for sales. See col 2, ln 36-56. Therefore, the sources are sales representatives. Furthermore, the identity or job function of a person does not change the functionality of the invention recited in the claims - any person with any job function or description could be substituted. A ‘person’ or ‘individual’ does not change the functionality of the claims based on job title. As stated in MPEP § 2131.02, a generic disclosure will anticipate a claimed species when the species can be at once envisaged from the disclosure. ‘Sales representatives’ are a species in the genus of ‘individuals.’ Therefore, the ‘individuals’ recited in Pendergraft anticipate the sales representatives recited in claims. The Appellant additionally contends that the recitation of “each combination” of sales representative distinguishes the claims from Pendergraft. Pendergraft generally teaches that the disclosed method could be applied to ‘one or more paths’ (see abstract), which is more than enough to read on “each combination.”

Ans. 4. Pendergraft describes business relationships but not sales representatives. The Examiner determines that individuals that may be leveraged to generate business relationships and identify new opportunities for sales are sales representatives. This is facially incorrect. Sales representatives may be species of such individuals, but the species is not the genus.

As to the contention that “any person with any job function or description could be substituted,” this is a finding for obviousness rather than anticipation, and more than that, the issue even in obviousness is whether any person would be, not could be, substituted. “[O]bviousness concerns whether a skilled artisan not only could have made but would have been motivated to make the combinations or modifications of prior art to arrive at the claimed invention.” *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015).

Examiner invokes MPEP § 2131.02 *supra* to show a generic disclosure will anticipate a claimed species when the species can be at once envisaged from the disclosure. The Examiner cites people as the disclosure and sales representatives as the species. The Examiner provides no reasoning as to why sales representatives would be immediately envisaged from a description of people. The genus of people is a population of 8 billion. We do not see how the species of sales representatives would be immediately envisaged from such a population.

Finally, the Examiner’s determination that Pendergraft generally teaches that the disclosed method could be applied to “one or more paths,” which is more than enough to read on “each combination” is a non-sequitur. Plural entities do not read on all entities.

*Claims 4 and 14 rejected under 35 U.S.C. § 103(a) as unpatentable over  
Pendergraft and Godwin*

These claims depend from the claims rejected under anticipation. The Examiner makes no determinations that the claims rejected under anticipation would be obvious in the alternative.

*Claims 5 and 15 rejected under 35 U.S.C. § 103(a) as unpatentable over  
Pendergraft and Fisher*

These claims depend from the claims rejected under anticipation. The Examiner makes no determinations that the claims rejected under anticipation would be obvious in the alternative.

*Claims 7 and 17 rejected under 35 U.S.C. § 103(a) as unpatentable over  
Pendergraft and Morio*

These claims depend from the claims rejected under anticipation. The Examiner makes no determinations that the claims rejected under anticipation would be obvious in the alternative.

*Claims 10 and 20 rejected under 35 U.S.C. § 103(a) as unpatentable over  
Pendergraft and Narvaez*

These claims depend from the claims rejected under anticipation. The Examiner makes no determinations that the claims rejected under anticipation would be obvious in the alternative.

#### CONCLUSIONS OF LAW

The rejection of claims 1–21 under 35 U.S.C. § 101 as directed to a judicial exception without significantly more is proper.

The rejection of claims 1, 2, 3, 6, 8, 9, 11–13, 16, 18, 19, and 21 under 35 U.S.C. § 102(e) as anticipated by Pendergraft is improper.

The rejection of claims 4 and 14 under 35 U.S.C. § 103(a) as unpatentable over Pendergraft and Godwin is improper.

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The rejection of claims 5 and 15 under 35 U.S.C. § 103(a) as unpatentable over Pendergraft and Fisher is improper.

The rejection of claims 7 and 17 under 35 U.S.C. § 103(a) as unpatentable over Pendergraft and Morio is improper.

The rejection of claims 10 and 20 under 35 U.S.C. § 103(a) as unpatentable over Pendergraft and Narvaez is improper.

#### DECISION

The rejection of claims 1–21 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). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2011).

AFFIRMED