UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/513,410	10/14/2014	William Brandon George	AD01.4347US01	3819

111003 7590 05/30/2018

Adobe / Finch & Maloney PLLC
50 Commercial Street
Manchester, NH 03101

EXAMINER
LELAND III, EDWIN S

ART UNIT	PAPER NUMBER
2677	

NOTIFICATION DATE	DELIVERY MODE
05/30/2018	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@finchmaloney.com
nmaloney@finchmaloney.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte WILLIAM BRANDON GEORGE, KEVIN GARY SMITH, and WALTER CHANG

Appeal 2018-000407
Application 14/513,410[1]
Technology Center 2600

Before JOHN A. EVANS, JAMES W. DEJMEK, and STEVEN M. AMUNDSON, *Administrative Patent Judges*.

DEJMEK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–3, 5–7, 9, 11, 13–18, and 20–25. Appellants have canceled claims 4, 8, 10, 12, and 19. App. Br. 17–22. We have jurisdiction over the remaining pending claims under 35 U.S.C. § 6(b).

We reverse.

---

[1] Appellants identify Adobe Systems Incorporated as the real party in interest. App. Br. 1.

STATEMENT OF THE CASE

Introduction

Appellants' disclosed and claimed invention relates to "consumer segmentation, and more specifically to methods for using natural language processing techniques to define, manipulate, and interact with consumer segmentation." Spec. ¶ 1. According to the Specification, existing consumer segmentation tools are complex to use and may require specialized training and knowledge. Spec. ¶ 10. Thus, rather than adhering to a formalistic syntax required by a particular consumer segmentation tool, the Specification discloses using a natural language segmentation query. Spec. ¶ 11. In a disclosed embodiment, the "query is parsed to identify individual grammatical tokens which are then correlated with specific segment token types through the use of a token repository." Spec. ¶ 11. Segment token types are used to construct a formal segment definition having the required structure to access consumer segmentations by a content provider. Spec. ¶ 13.

Claim 1 is illustrative of the subject matter on appeal and is reproduced below:

> 1. A method for consumer segmentation that comprises:
>
> parsing a received natural language query into a plurality of received grammatical tokens;
>
> accessing a token repository that correlates certain grammatical tokens with one or more segment token types;
>
> identifying a first received grammatical token that also exists in the token repository;

correlating the first received grammatical token with a particular segment token type based on a correlation that is defined in the token repository;

correlating a second received grammatical token with a raw value segment token type, wherein the second received grammatical token does not exist in the token repository;

identifying a modified second grammatical token that (a) exists in the token repository, (b) is correlated with the raw value segment token type, and (c) represents a closest matching grammatical token based on the second received grammatical token;

obtaining a segment definition structure that comprises a plurality of segment token type placeholders arranged in a logical order;

mapping the first grammatical token and the modified second grammatical token onto the segment definition structure based on a location of a matching segment token type placeholder within the segment definition structure; and

rendering a segment definition that corresponds to the received natural language query, conforms to the segment definition structure and comprises the first grammatical token and the modified second grammatical token.

The Examiner's Rejection

Claims 1–3, 5–7, 9, 11, 13–18, and 20–25 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 3–4.

ANALYSIS[2]

Appellants dispute the Examiner's conclusion that the claims are directed to patent-ineligible subject matter under 35 U.S.C. § 101. App. Br. 4–16; Reply Br. 2–7. In particular, Appellants contend the claims are directed to "a consumer segmentation framework that automatically converts a natural language query to a computer-readable segment definition using a combination of rules that are specifically defined in the claims." App. Br. 5. More specifically, Appellants assert the claims recite a limited set of rules used in a specially designed process to realize a technological improvement within a conventional industry practice. App. Br. 13. According to Appellants, the specialized rules enable the automation of consumer segmentation, such as from a natural language query, rather than requiring complex tools, requiring specialized training and knowledge, to define, manipulate, and interact with consumer segmentations. App. Br. 13; *see also* Spec. ¶ 12. As discussed below, we are persuaded by Appellants' arguments.

Under the Supreme Court's two-step framework, if a claim falls within one of the statutory categories of patent eligibility (i.e., a process, machine, manufacture, or composition of matter) then the first inquiry is whether the claim is directed to one of the judicially recognized exceptions (i.e., a law of nature, a natural phenomenon, or an abstract idea). *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014). If so, the

[2] Throughout this Decision, we have considered the Appeal Brief, filed May 17, 2017 ("App. Br."); the Reply Brief, filed October 11, 2017 ("Reply Br."); the Examiner's Answer, mailed August 31, 2017 ("Ans."); and the Final Office Action, mailed September 26, 2016 ("Final Act."), from which this Appeal is taken.

second step is to determine whether any element, or combination of elements, amounts to significantly more than the judicial exception. As part of "directed to" inquiry of step one, we must "look at the 'focus of the claimed advance over the prior art' to determine if the claim's 'character as a whole' is directed to excluded subject matter." *Affinity Labs of Tex. v. DirecTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016). In *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016), our reviewing court framed the question as "whether the focus of the claims is on [a] specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool." If the claims are not directed to an abstract idea, the inquiry ends. *See McRO, Inc. v. Bandai Namco Games Am.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016).

The Examiner finds the claims are directed to parsing a natural language query into tokens, correlates the tokens with a type from a repository, modifies unmatched tokens to match tokens in the repository, maps tokens onto a segment definition structure and renders the segment definition. Final Act. 3. The Examiner analogizes the claimed steps (elements) to other ideas the courts have concluded to be abstract—namely, collecting, analyzing, and displaying information (*see Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016)); collecting and analyzing information to detect misuse (*see FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1094 (Fed. Cir. 2016)); and comparing information to target data (*see Ass'n for Molecular Pathology v. USPTO*, 689 F.3d 1303, 1334–35 (Fed. Cir. 2012)). Final Act. 4; Ans. 5.

When considered as a whole, in light of the Specification, we disagree with the Examiner that the claims are directed to the abstract ideas of simply collecting, analyzing, and comparing data. Rather, the focus of Appellants' claims is on improving the ability to define, manipulate, and interact with consumer segmentations by using a natural language query framework. *See* Spec. ¶¶ 10–12; *see also McRO*, 837 F.3d at 1312 ("We do not assume that such claims are directed to patent ineligible subject matter because 'all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.'") (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.,* 132 S. Ct. 1289, 1293 (2012)). The improvement to the consumer segmentation input process itself is similar to *McRO*, where the court found the focus of the claims was to an improvement to an existing technological process (i.e., accurate and realistic lip synchronization and facial expressions in animated characters) by applying a limited set of rules having specific characteristics. *McRO*, 837 F.3d at 1313. For example, after parsing the natural language query into a plurality of grammatical tokens, the claimed invention applies specific rules to identify the token(s) with particular segment tokens defined in a token repository. If there is not a direct correlation between the grammatical token and a segment token type, the claimed invention further applies rules to identify a modified grammatical token representing a closest match approach. Further, the identified (i.e., correlated) segment token types are mapped onto a segment definition structure based on a location of a matching segment token type placeholder within the segment definition structure. Accordingly, we conclude the claims are not directed to an abstract idea.

Because we find it dispositive that the claims do not recite patent-ineligible subject matter, we need not address other issues raised by Appellants' arguments.

For the reasons discussed *supra*, we are persuaded of Examiner error. Accordingly, we do not sustain the Examiner's rejection of claims 1–3, 5–7, 9, 11, 13–18, and 20–25 under 35 U.S.C. § 101.

DECISION

We reverse the Examiner's decision rejecting claims 1–3, 5–7, 9, 11, 13–18, and 20–25.

REVERSED