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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MICHAEL ZENOR

Appeal 2017-001116
Application 12/964,481
Technology Center 2400

Before JEAN R. HOMERE, ERIC B. CHEN, and KARA L. SZPONDOWSKI, *Administrative Patent Judges*.

HOMERE, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1, 3, 6–9, 12–15, 17, 20–23, 25, and 26, which constitute all claims pending in this application.[1] Claims 2, 4, 5, 10, 16, 18, 19, and 24 have been canceled. Claims App. Br. 2. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

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[1] Appellant identifies the real party in interest as The Nielsen Company (US) LLC. App. Br. 2.

Introduction

According to Appellant, the claimed subject matter relates to a method and system for providing targeted advertising to selected consumers. Spec. ¶ 2. In particular, an opportunity calculator (118) utilizing a collaborative filter analyzes purchase trends (expected consumption vs. actual consumption, 120, 122) and geodemographic characteristics of a household (102, 104) to generate an opportunity metric, which is forwarded to the content provider (106) to select the most appropriate advertisements to deliver to the household (102, 104) via an advertisement selector (202) within a head-end system (200). *Id.* ¶¶ 19, 25–29, 41–47, Fig. 1. The advertisement selector (202) evaluates products for which the opportunity metric is provided to determine a saturation metric for the advertisement such that the difference between the saturation metric and the opportunity metric produce a net effectiveness metric indicating that it is cost effective to provide the advertisement to the household when the effectiveness metric satisfies a threshold. *Id.* ¶¶ 26, 37, Fig. 2.

Representative Claim

Independent claim 1 is representative, and reads as follows:

> 1. A method to select targeted advertising, comprising:
> identifying an advertisement corresponding to a first product;
> identifying a saturation metric for the advertisement;
> placing a household into a consumer segment based on geodemographic characteristics of the household and based on characteristics of the consumer segment;
> determining, with a processor, a relationship between purchases of the first product and purchases of a second product for the consumer segment;

> determining, with the processor, an expected consumption of the first product by the household based on the relationship;
> determining, with the processor, an opportunity metric by executing a collaborative filter and based on a quantity difference between the expected consumption of the first product by the household and actual consumption of the first product by the household;
> determining, with the processor, a net effectiveness metric based on the saturation metric and the opportunity metric; and
> delivering, with the processor, the advertisement to a device associated with the household via a media transmission when the net effectiveness metric satisfies a threshold.

Rejection on Appeal

Claims 1, 3, 6–9, 12–15, 17, 20–23, 25, and 26 stand rejected under 35 U.S.C. § 101 as being directed to nonstatutory subject matter. Final Act. 1–16.

ANALYSIS

Appellant argues the Examiner erred in concluding that independent claim 1 is directed to an abstract idea. App. Br. 7. In particular, Appellant argues that the Examiner improperly picked isolated phrases taken out of context from the claim to mischaracterize the claim as being allegedly directed to a calculation using a mathematical formula. *Id.* Instead, Appellant submits that the claim as a whole is directed to a specific technical improvement to deliver an advertisement to a household via a media transmission that employs a collaborative filter for determining an opportunity metric, which is compared to a saturation metric of the advertisement to determine a net effectiveness metric for the advertisement. *Id.* at 12–15. According to Appellant, the claimed invention solves the problem of delivering the advertisement to the household only when it is cost effective to do so. *Id.* at 16. These arguments are persuasive.

The U.S. Supreme Court provides a two-step test for determining whether a claim is directed to patent-eligible subject matter under 35 U.S.C. § 101. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014). In the first step, we determine whether the claims are directed to one or more judicial exceptions (i.e., law of nature, natural phenomenon, and abstract ideas) to the four statutory categories of invention. *Id.* (citations omitted) (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1296–97 (2012)) ("*Mayo*"). In the second step, we "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." *Id.* (citing *Mayo*, 132 S. Ct. at 1297–98). In other words, the second step 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.'" *Id.* (citing *Mayo*, 132 S. Ct. at 1294).

Appellant's claimed subject matter pertains to selecting targeted advertisement for a particular household by utilizing a collaborative filter for determining whether it is cost effective to deliver the targeted advertisement to the household. Although the claimed collaborative filter performs certain mathematical calculations to determine the cost effectiveness, we do not agree with the Examiner that the claim can be reduced to merely a series of steps in a mathematical formula for optimizing presentation of advertisements based on user activity. Ans. 4–5. *See Affinity Labs. of Texas, LLC v. DirectTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2017) ("The 'abstract idea' step of the inquiry calls upon us to 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.") Rather, we agree with Appellant's argument that the Examiner has too broadly characterized the claims. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016) ("describing the claims at such a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule.") As noted in Appellant's Specification, unlike conventional collaborative filters, the claimed collaborative filter is adaptive as it continuously updates the historical purchase trends of the household to determine the opportunity metric, as well as the net effectiveness metric. Spec. ¶¶ 45–47. Merely because the claims include mathematical formulas does not render them abstract. *See Diamond v. Diehr*, 450 U.S. 175, 192 (1981) (explaining that claims are patent eligible "when a claim containing a mathematical formula implements or applies that formula in a structure or process which when considered as a whole, is performing a function which the patent laws were designed to protect.") We therefore agree with Appellant that albeit the collaborative filter performs a mathematical computation to determine the opportunity metric and the effectiveness metric, the disclosed computation is not directed to a mathematical algorithm per se. App. Br. 12. Rather, the disclosed computation is an integral part of the assessment made by the collaborative filter in determining whether the advertisement should be delivered to the household. *Id.*

Because Appellant has shown at least one reversible error in the Examiner's rejection, we need not reach the merits of Appellant's remaining arguments. Accordingly, we do not sustain the Examiner's non-statutory

subject matter rejection of claim 1, as well as claims 3–8, 10–15, and 17–21, which were rejected on the same basis.

DECISION

For the above reasons, we reverse the Examiner's nonstatutory subject matter rejection of claims 1, 3, 6–9, 12–15, 17, 20–23, 25, and 26 as set forth above.

REVERSED