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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* PARITOSH DESAI and KAMAL GAJENDRAN

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Appeal 2017-006329  
Application 12/626,666  
Technology Center 3600

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Before JAMES A. TARTAL, PHILIP J. HOFFMANN, and  
CYNTHIA L. MURPHY, *Administrative Patent Judges*.

MURPHY, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellants<sup>1</sup> appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–7, 11–17, 21–25, and 31–35 under 35 U.S.C. § 101.

We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

We REVERSE.

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<sup>1</sup> “The real party in interest includes International Business Machines Corporation, an assignee of record.” (Appeal Br. 2.)

## BACKGROUND

The Appellants' invention relates to a "business product decision system" for "generating pricing and assortment decisions in a retail setting for the realization of a given business goal." (Spec. ¶ 2.) According to the Appellants, "most current price modeling systems generate pricing for a known set of products which have existing historical transaction data." (*Id.* ¶ 9.) Thus, according to the Appellants, "[c]urrent systems have difficulty modeling new products," and "are virtually useless in generating models for hypothetical product assortments." (*Id.*)

The Appellants' system involves "model[ing] consumer purchasing decisions as a tree structure," with "individual products at each leaf." (Spec. ¶ 13). In this manner, the product decision tree "may model any number of products," including "fictitious products" that are "not yet available within a given market." (*Id.*) Product decisions can be made "by identifying the distance" between products (i.e., leaf nodes) in the decision tree. (*Id.* ¶ 213.) For example, "a new product may cannibalize products 'close' to it in the decision tree," while "products filling a 'void' in the tree may be particularly well received without much cannibalism of sales for other products." (*Id.*)

## ILLUSTRATIVE CLAIM

1. A computerized method for generating a business plan, useful in association with at least one store, the computerized method comprising:

receiving modeling data, wherein the modeling data includes product data, customer data, constraints, and transaction data, and receiving the modeling data comprises:  
reformatting the modeling data by aggregating elements of the modeling data and processing the aggregated elements together as a single element to reduce a processing time of a processor;

dividing customers into a plurality of customer segments;  
generating, by the processor, a product decision tree  
using the modeling data, wherein the product decision tree  
models prototypical consumer purchasing decisions for at least  
one of the customer segments as a tree structure, and wherein  
leaf nodes of the product decision tree correspond to products;  
computing, by the processor, the distance between leaf  
nodes of the product decision tree corresponding to at least two  
products to determine cannibalization effects between the at  
least two products;  
generating, by the processor, at least one business plan,  
wherein the at least one business plan is based upon the  
computed distance between leaf nodes and includes at least one  
of a product assortment plan, an everyday pricing plan, a  
promotional plan, and a markdown plan; and  
providing the at least one business plan to the at least one  
store for implementation.

#### REJECTION

The Examiner rejects claims 1–7, 11–17, 21–25, and 31–35 under  
35 U.S.C. § 101 as “directed to” a judicial exception “without significantly  
more.” (Final Action 5.)

#### JUDICIAL EXCEPTIONS

The Patent Act defines subject matter eligible for patent protection as  
“any new and useful process, machine, manufacture, or composition of  
matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. But  
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.” *Ass’n for Molecular Pathology v. Myriad Genetics,  
Inc.*, 569 U. S. 576, 589 (2013). These three listed categories are “judicially  
created exceptions to § 101,” or more concisely, “judicial exceptions.”  
*McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1311 (Fed.

Cir. 2016). Thus, an “abstract idea” is considered a judicial exception to 35 U.S.C. § 101.

### THE *ALICE* TEST

In *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208 (2014), the Supreme Court provided a two-step test to guard against an attempt to patent an abstract idea, as opposed to a “patent-eligible application” involving an abstract idea. (*Id.* at 217–18.) In *Alice* step one, a determination is made as to whether the claim at issue is “directed to” an abstract idea. (*Id.* at 218.) If not, it can be concluded that no attempt is being made to patent an abstract idea, and the *Alice* Test is complete. If the claim at issue is “directed to” an abstract idea, *Alice* step two must be performed. (*Id.*) In this second step of the *Alice* Test, consideration is given to the additional elements in the claim (both individually and as an ordered combination) to determine whether they transform the nature of the claim into something that “amounts to significantly more” than the abstract idea itself. (*Id.*)

### 2019 GUIDANCE

The recently published 2019 Revised Patent Subject Matter Eligibility Guidance (“2019 Guidance”) sets forth a revised procedure for determining whether a claim is “directed to” an abstract idea under *Alice* step one. (*See* Federal Register Vol. 84, No. 4, 50–57.) The 2019 Guidance lists three groupings of abstract ideas: “[m]athematical concepts,” “[m]ental processes,” and “[c]ertain methods of organizing human activity.” (*Id.* at 52.) If a claim does not recite a limitation that falls within one of these three enumerated groupings, the claim is not “directed to” an abstract idea under *Alice* step one. (*Id.* at 54). If a claim does recite a feature falling into one of these

enumerated groupings, the claim is still not “directed to” an abstract idea, under *Alice* step one, unless the claim, as a whole, fails to integrate the abstract idea into a practical application. (*Id.*)

#### ANALYSIS

The Examiner determines that the claims on appeal satisfy *Alice* step one because they “are directed to the abstract idea of ‘*generating a business plan based on a product decision tree modeling prototypical consumer purchasing decisions.*’” (Final Action 5.) We are persuaded by the Appellants’ position that this determination is not supported sufficiently by the record. (*See* Appeal Br. 10–17; *see also* Reply Br. 2–9.)

Insofar as the Examiner is saying that simply *generating a business plan* is an abstract idea, we do not necessarily disagree. Indeed, the purpose of the Appellants’ business plan, or any business plan for that matter, is “the realization of a given business goal.” (Spec. ¶ 3.) In a “retail setting,” a business goal is “to increase revenue,” and this can be accomplished by providing “a desirable set of products.” (*Id.* ¶¶ 3, 4, 5.) Thus, the record reasonably supports a stance that the general concept of *generating a business plan* fits under the abstract-idea umbrella of advertising and marketing (i.e., a certain method of organizing human activity).<sup>2</sup>

But, as intimated in the wording of the Examiner’s *Alice*-first-step determination, the claims do not simply require the generation of a business plan. Rather, they require the generation of a business plan *based on a*

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<sup>2</sup> “[C]ommercial or legal interactions,” including “advertising, marketing, or sales activities or behaviors,” are listed under the grouping of “[c]ertain methods of organizing human activity” in the 2019 Guidance. (Federal Register Vol. 84, No. 4 at 52.)

*product decision tree modeling prototypical consumer purchasing decisions.*

A decision tree, and particularly a product decision tree modeling prototypical consumer purchasing decisions, is not a prerequisite of a business plan. And no assertion has been made that such a product decision tree, in and of itself, is a mathematical concept, a mental process, or a method of organizing human activity. As such, this requirement (i.e., that the business plan be *based on a product decision tree modeling prototypical consumer purchasing decisions*) could plausibly create an additional element that integrates the alleged abstract idea (i.e., generating a business plan) into a practical application. But the record does not reflect that this possibility was taken into consideration during the *Alice*-step-one determination.

Additionally, the claims do not just require the decision tree to model *prototypical consumer purchasing decisions*, as they set forth specific features used in this modeling. For example, “leaf nodes” of the decision tree must correspond to “products,” so that “the distance between the leaf nodes” can be used to determine the “cannibalization effects” of products residing on relevant leaf nodes. (Appeal Br., Claims App.) The record does not reflect that these claimed details of the decision tree were taken into consideration during the *Alice*-step-one determination.

The claims on appeal additionally require “reformatting the modeling data by aggregating elements of the modeling data and processing the aggregated elements together as a single element to reduce a processing time of a processor.” (Appeal Br., Claims App.) The record reflects an attempt by the Examiner to explain why such reformatting, individually, is not enough to establish an integration of an abstract idea into a practical application. (*See* Final Action 2–5; *see also* Answer 3–7.) However, the

record does not reflect that this reformatting requirement (and the specified aggregating and processing) was considered in combination with the above-discussed, and plausibly non-abstract, limitations, when evaluating whether each claim on appeal, as a whole, integrates an abstract idea into a practical application.

The Examiner seems to almost imply that “[c]omparing new and stored information and using rules to identify options,” via a computer, inevitably equates to patent ineligibility. (See Final Action 3, *see also* Answer 4.) Yet, as argued by the Appellants, this is not always the case. (See Appeal Br. 14–15; *see also* Reply Br. 3). And the record does not contain an explanation as to how, in the context of the claims on appeal, these computer-implemented functions align with mathematical concepts, certain methods of organizing human activity, or mental processes.

Consequently, we are persuaded by the Appellants’ position that the Examiner does not establish sufficiently that the claims on appeal satisfy *Alice* step one. As such, we need not proceed to *Alice* step two in order to conclude that, on the record before us, it has not been established sufficiently that the claims on appeal fail the *Alice* Test for patent eligibility.

#### DECISION

We REVERSE the Examiner’s rejection of claims 1–7, 11–17, 21–25, and 31–35 under 35 U.S.C. § 101.

REVERSED