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PERKINS COIE LLP - PAO General P.O. BOX 1247 SEATTLE, WA 98111-1247			CHAWAN, VIJAY B	
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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* GUILLAUME FUCHS, TOM BAECKSTROEM,  
RALF GEIGER, WOLFGANG JAEGERs, and  
EMMANUEL RAVELLI

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Appeal 2018-005849  
Application 14/811,386  
Technology Center 2600

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Before DENISE M. POTHIER, LINZY T. McCARTNEY, and  
NORMAN H. BEAMER, *Administrative Patent Judges*.

McCARTNEY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants seek review under 35 U.S.C. § 134 of the Examiner's final rejection of claims 1–27. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

## BACKGROUND

The present patent application concerns “an approach for adaptive tilt compensation in shaping the codes of a [code excited linear predictive coding] in an innovative or fixed codebook.” Specification 1:17–18, filed July 28, 2015. Claim 1 illustrates the claimed invention:

1. An apparatus for synthesizing an audio signal, comprising:
  - a processing unit configured to apply a spectral tilt to the code of a codebook used for synthesizing a current frame of the audio signal,
    - wherein the spectral tilt is based on the spectral tilt of the current frame of the audio signal,
    - wherein the apparatus is configured to determine the spectral tilt of the current frame of the audio signal on the basis of spectral envelope information for the current frame of the audio signal, and
    - wherein the processing unit is configured to apply the spectral tilt by filtering the code from the codebook based on a transfer function modeling the spectral tilt.

Replacement Claims Appendix 2, filed December 15, 2017 (“Replacement App’x”).

## REJECTION

<b>Claims</b>	<b>Basis</b>
1–27	§ 101

## DISCUSSION

The Examiner determined that claim 1 “merely use[s]” mathematical relationships, formulas, and correlations and thus the claim is “directed to” an abstract idea. Final Office Action 3, mailed April 6, 2017 (“Final Act.”); *see also* Answer 9, mailed February 23, 2018 (“Ans.”). The Examiner determined that claim 1 does not provide “significantly more” than this abstract idea because the additional claim elements “simply append[] well-understood, routine and conventional activities previously known to the industry.” Final Act. 3; *see also* Ans. 7–8.

In response, Appellants argue, among other things, that claim 1 is patent eligible because the claim “represent[s] ‘improvements to another technology [or] technical field.’” Appeal Brief 9, filed October 13, 2017.

We agree with Appellants. Section 101 of the Patent Act provides that “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof” is patent eligible. 35 U.S.C. § 101. But the Supreme Court has long recognized an implicit exception to this section: “Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). To determine whether a claim falls within one of these excluded categories, the Court has set out a two-part framework. The framework requires us first to consider whether the claim is “directed to one of those patent-ineligible concepts.” *Alice*, 573 U.S. at 217. If so, we then examine “the elements of [the] 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.” *Alice*, 573 U.S. at 217

(quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 78, 79 (2012)).

The Patent Office recently issued guidance about this framework. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“2019 Eligibility Guidance”). As relevant here, under the guidance, a claim is “directed to” an abstract idea only if the claim (1) recites one of certain abstract idea groupings such as mathematical concepts *and* (2) fails to integrate the abstract idea into a practical application. *See* 2019 Eligibility Guidance 84 Fed. Reg. at 51, 53. The guidance explains that a claim may integrate an abstract idea into a practical application when an additional claim element “reflects an improvement in the functioning of a computer, or an improvement to other technology or technical field.” 2019 Eligibility Guidance 84 Fed. Reg. at 55.

Here, although claim 1 recites elements such as “a spectral tilt” and “a transfer function modeling the spectral tilt” that may encompass mathematical concepts, claim 1 is patent eligible because the additional elements of the claim integrate these concepts into a practical application. Claim 1 recites “[a]n apparatus for synthesizing an audio signal” that includes “a processing unit configured to apply a spectral tilt to the code of a codebook used for synthesizing a current frame of the audio signal.” Replacement App’x 2. The recited spectral tilt “is based on the spectral tilt of the current frame of the audio signal,” and “the processing unit is configured to apply the spectral tilt by filtering the code from the codebook based on a transfer function modeling the spectral tilt.” Replacement App’x 2. Applying the spectral tilt in this way allows the apparatus to “improv[e] the achievable coding gain” by “adapting the spectral tilt of the codes of a

codebook . . . as a function of the spectral tilt of the actual input signal currently processed.” Spec. 4:1, 6–8. The additional elements of the claims thus “reflect[] an improvement in the functioning of a computer, or an improvement to other technology or technical field.” 2019 Eligibility Guidance 84 Fed. Reg. at 55.

For the above reasons, claim 1 is not “directed to” an abstract idea. For similar reasons, claims 2–27 are also not “directed to” an abstract idea. We therefore do not sustain the Examiner’s rejection of claims 1–27 under 35 U.S.C. § 101.

DECISION

<b>Claims</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–27	§ 101		1–27
<b>Summary</b>			1–27

REVERSED