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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/129,121	09/26/2016	Leslie D HUMPHREY	RYM-36-2600	8968
23117	7590	11/01/2018	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			MAI, KEVIN S	
			ART UNIT	PAPER NUMBER
			2456	
			NOTIFICATION DATE	DELIVERY MODE
			11/01/2018	ELECTRONIC

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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* LESLIE D. HUMPHREY, IAN E. HORSLEY, and ANDREW D. WALLACE<sup>1</sup>

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Appeal 2018-009213  
Application 15/129,121<sup>2</sup>  
Technology Center 2400

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Before ELENI MANTIS MERCADER, JAMES R. HUGHES, and STEVEN M. AMUNDSON, *Administrative Patent Judges*.

HUGHES, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134(a) of the Examiner’s Final Rejection of claims 1–15, which constitute all the claims

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<sup>1</sup> Appellants identify British Telecommunications Public Limited Company as the real party in interest. *See* Appeal Br. 3.

<sup>2</sup> The application on appeal has an effective filing date of March 31, 2014. Therefore, the Leahy-Smith America Invents Act (AIA) amendments to the U.S. Code (§§ 102, 103) are applicable. *See* Manual of Patent Examining Procedure (MPEP) § 2159.02 (The amended sections “apply to any patent application that contains or contained at any time a claim to a claimed invention that has an effective filing date that is on or after March 16, 2013.”).

pending in this application. Final Act. 1–2.<sup>3</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

*Appellants’ Invention*

The invention at issue on appeal generally concerns data communication and, more particularly, controlling Digital Subscriber Line (“DSL”) connections. Spec. 1:4–5. Appellants’ claims recite a Dynamic Line Management (DLM) system, a Digital Subscriber Line (DSL) transceiver (apparatus), and a method of controlling a DSL connection between two DSL transceiver units utilizing an external DLM system. In the delineated method steps, the external DLM system applies a first line profile—which specifies a first virtual noise template, which further specifies a first set of frequency dependent virtual noise levels for the DSL connection—to a DSL transceiver unit. The method configures a parameter for the DSL connection based on the first set of frequency dependent virtual noise levels. When necessary, the external DLM system applies a second line profile to the DSL transceiver unit—where the second line profile specifies a second virtual noise template, which further specifies a second set of frequency dependent virtual noise levels for the DSL connection distinct from the first set of frequency dependent virtual noise levels. The method reconfigures the parameter for the DSL connection based on the

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<sup>3</sup> We refer to Appellants’ Specification (“Spec.”) filed Sept. 26, 2016 (claiming benefit of EPO 14250062.8 filed March 31, 2014) and Appeal Brief (“Appeal Br.”) filed Apr. 12, 2018. We also refer to the Final Office Action (“Final Act.”) mailed Sept. 8, 2017; and Examiner’s Answer (“Ans.”) mailed July 27, 2018.

second set of frequency dependent virtual noise levels. Spec. 3:24–6:10;  
Abstract.

*Illustrative Claim*

Independent claim 1, reproduced below, further illustrates the invention:

1. A method of controlling a Digital Subscriber Line, DSL, connection between a first and second DSL transceiver unit by an external Dynamic Line Management, DLM, system, the method comprising the steps of:

the external DLM system applying a first line profile to a DSL transceiver unit, the first line profile specifying a first virtual noise template for the DSL connection, wherein the first virtual noise template specifies a first set of frequency dependent virtual noise levels for the DSL connection;

configuring a parameter for the DSL connection based on the first set of frequency dependent virtual noise levels;

the external DLM system applying a second line profile to the DSL transceiver unit, the second line profile specifying a second virtual noise template for the DSL connection, wherein the second virtual noise template specifies a second set of frequency dependent virtual noise levels for the DSL connection which is distinct to the first set of frequency dependent virtual noise levels; and

reconfiguring the parameter for the DSL connection based on the second set of frequency dependent virtual noise levels.

*Rejections on Appeal*

1. The Examiner rejects claims 1–15 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. *See* Final Act. 4.

2. The Examiner rejects claims 1–15 under 35 U.S.C. § 103 as being unpatentable over Kerpez et al. (US 2015/0146767 A1, published May 28, 2015 (claiming benefit of PCT/US12/36388 filed May 3, 2012))

(“Kerpez”), and Cendrillon et al. (US 2010/0254442 A1, published Oct. 7, 2010) (“Cendrillon”). *See* Final Act. 5.

## ISSUES

Based upon our review of the record, Appellants’ contentions, and the Examiner’s findings and conclusions, the issues before us follow:

1. Did the Examiner err in determining Appellants’ claims were directed to patent-ineligible subject matter under 35 U.S.C. § 101?
2. Did the Examiner err in finding the combination of Kerpez and Cendrillon would have taught or suggested:

the external DLM system applying a second line profile to the DSL transceiver unit, the second line profile specifying a second virtual noise template for the DSL connection, wherein the second virtual noise template specifies a second set of frequency dependent virtual noise levels for the DSL connection which is distinct to the first set of frequency dependent virtual noise levels; and

reconfiguring the parameter for the DSL connection based on the second set of frequency dependent virtual noise levels (claim 1), within the meaning of Appellants’ claim 1 and the commensurate limitations of claims 8 and 14?

## ANALYSIS

### *Patent eligibility under 35 U.S.C. §101*

The Examiner provides the same reasoning for rejecting independent claim 1 and independent claims 8 and 14, and rejects representative claim 1 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 4; Ans. 3. Specifically, the Examiner rejects claim 1 as being directed to patent-ineligible subject matter—the abstract idea of “migration or transitioning of settings” (Final Act. 4)—and determines claim 1 does not

“include additional elements that are sufficient to amount to significantly more than the [abstract idea] because they appear to be generic computers performing generic functions” (Final Act. 4). Appellants contend, *inter alia*, that claim 1 (and the other pending claims) are not directed to an abstract idea because the Examiner’s interpretation of the claims is incorrect—that the Examiner describes the “claim[s] at a high level of abstraction untethered from the language of the claim when determining the focus of the claimed invention” (Appeal Br. 11). *See* Appeal Br. 11–12. Appellants also contend the claims provide an improvement in computer technology. *See* Appeal Br. 8–11.

Appellants’ arguments raise the dispositive issue of whether the claims are directed to an abstract idea and additional issues with respect the § 101 rejection. We find the Examiner has overgeneralized the claims in formulating the rejection. Further, we find the Examiner provides little analysis and factual support for the § 101 rejection and does not address the issues raised by Appellants’ contentions. *See* Final Act. 4; Ans. 3.

We agree with Appellants that the Examiner’s rejection was formulated at too high of a level of abstraction. The purported abstract idea “migration or transitioning of settings” (Final Act. 4) does not correlate well with the express language of independent claim 1, which recites “applying a . . . line profile . . . specifying a . . . virtual noise template . . . [that further] specifies a second set of frequency dependent virtual noise levels for the DSL connection” and “reconfiguring [a] parameter for the DSL connection based on the second set of frequency dependent virtual noise levels” (claim 1). Further, the Examiner’s rejection (*see* Final Act. 4; Ans. 3) does

not address Appellants' contentions regarding an improvement in computer technology (with respect to step 1 and step 2 of the *Alice/Mayo* analysis).

Appellants' claim 1 requires, at the least, configuring and reconfiguring DSL connection parameters based on distinct sets of frequency dependent virtual noise levels. *See* Appeal Br. 17 (Claim Appendix, claim 1). In the instant claim, the focus is not merely on "migration or transitioning of settings" (Final Act. 4). Thus, we agree with Appellants that claim 1 is not directed to the Examiner's proposed abstract idea, as set out in the first step of the *Alice/Mayo* eligibility analysis.

Consequently, we are constrained by the record before us to conclude that the Examiner erred in determining Appellants' claim 1 was directed to patent-ineligible subject matter under 35 U.S.C. § 101. Independent claims 8 and 14 include limitations of commensurate scope. Claims 2–7, 9–13, and 15 depend on claims 1, 8, and 14, respectively. Accordingly, we reverse the Examiner's rejection under § 101 of claims 1–15.

*The Obviousness Rejection under 35 U.S.C. §103*

The Examiner rejects independent claim 1 (as well as independent claims 8 and 14) as being obvious in view of Kerpez and Cendrillon. *See* Final Act. 4–8; Ans. 3–5. Appellants contend that Kerpez and Cendrillon do not teach the disputed limitations of claim 1. *See* Appeal Br. 12–16. Specifically, Appellants contend, *inter alia*, that neither Kerpez nor Cendrillon describe an external DLM system applying line profiles including a set of frequency dependent virtual noise levels. *See id.*

We agree with Appellants that the Examiner-cited portions of Kerpez and Cendrillon do not describe an external DLM system applying a set of frequency dependent virtual noise levels (and configuring or reconfiguring

DSL connection parameters based on the virtual noise levels. *See* Appeal Br. 12–16. In particular we agree with Appellants that different entities apply different information to configure DSL connections. In Kerpez, the Network Management System (NMS, 116) and/or Management Device (170) (*see* Kerpez ¶¶ 51, 65), i.e., external DLM system, changes the profile settings. *See* Kerpez ¶¶ 67, 71. Kerpez does not describe sets of frequency dependent virtual noise levels. Cendrillon describes virtual noise magnitude templates across a range of frequencies (Cendrillon ¶ 41), but the templates are “applied” by an internal (rather than external) system. The digital subscriber line multiplexer (DSLAM) at the central office (CO) stores virtual noise templates and line profiles and configures DSL connections. *See* Cendrillon ¶¶ 36, 38; Appeal Br. 14. At best Cendrillon describes configuring a DSL connection based on a virtual noise template. Cendrillon does not describe an external system *reconfiguring* a DSL connection parameter based on a second, different virtual noise template. The Examiner does not sufficiently explain how the cited portions of Kerpez and Cendrillon teach or suggest these features. As explained by Appellants, nothing in the cited collective teachings of Kerpez and Cendrillon would have suggested an external DLM system reconfiguring a parameter for the DSL connection based on a distinct second set of frequency dependent virtual noise levels (*supra*). Further, as further pointed out by Appellants, it is also unclear how the cited portions of Kerpez and Cendrillon would be combined to teach the disputed feature. *See* Appeal Br. 12–16.

Consequently, we are constrained by the record before us to find that the Examiner erred in finding that the combination of Kerpez and Cendrillon renders obvious Appellants’ claim 1. Independent claims 8 and 14 include



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limitations of commensurate scope. Claims 2–7, 9–13, and 15 depend on and stand with claims 1, 8, and 14, respectively.

#### CONCLUSIONS

Appellants have persuasively shown the Examiner erred in rejecting claims 1–15 under 35 U.S.C. § 101.

Appellants have persuasively shown the Examiner erred in rejecting claims 1–15 under 35 U.S.C. § 103.

#### DECISION

We reverse the Examiner’s rejections of claims 1–15.

REVERSED