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KING & SCHICKLI, PLLC 800 CORPORATE DRIVE, SUITE 200 LEXINGTON, KY 40503			HOFFA, ANGELA MARIE	
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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JOHN ROBERT TERRY,  
MARK RICHARDSON, and OSCAR BENJAMIN

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Appeal 2019-000755  
Application 14/406,452  
Technology Center 3700

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Before BIBHU R. MOHANTY, PHILIP J. HOFFMANN, and  
BRADLEY B. BAYAT, *Administrative Patent Judges*.

HOFFMANN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's rejection of claims 1–14 and 19. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. According to Appellant, the real parties in interest are University of Exeter and Kings College of London. Appeal Br. 2.

According to Appellant, the “invention relates to assessing susceptibility to epilepsy and/or epileptic seizures.” Spec. 1, ll. 2–3. Below, we reproduce independent claim 1 as representative of the appealed claims.

1. A computer-implemented system adapted to assist with assessing susceptibility to epilepsy and/or epileptic seizures in a patient, the system including:

processor and processing application (104, 110) configured to receive (202), via an interface, patient brain data and programmed to:

generate (204) a network model from the received patient brain data, wherein nodes in the network model correspond to brain regions of the patient brain data and connections between the nodes of the network model correspond to measured connections between the brain regions;

generate (206) synthetic brain activity data in at least some of the nodes of the network model;

compute (208) seizure frequency from the synthetic brain activity data by monitoring transitions from non-seizure states to seizure states in at least some of the nodes over time;

use the seizure frequency to compute (210) a likelihood of susceptibility to epilepsy and/or epileptic seizures in the patient;

compare (212) the computed likelihood with another likelihood of susceptibility to epilepsy and/or epileptic seizures in order to assess whether the likelihood has increased or decreased, and output data representative thereof,

and

a display for displaying information representative of said output data.

## REJECTION<sup>2</sup>

The Examiner rejects claims 1–14 and 19 under 35 U.S.C. § 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement.

## ANALYSIS

As set forth above, the Examiner rejects claims 1–14 and 19 as failing to comply with the written description requirement of 35 U.S.C. § 112, first paragraph. Specifically, the first paragraph of § 112 requires a written description of the claimed invention which allows a person of skill in the art to recognize that the inventor invented what is claimed. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). The inventor “must . . . convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention.” *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563–64 (Fed. Cir. 1991).

When determining whether claims comply with the written-description requirement, “[t]he primary consideration is factual.” *In re Wertheim*, 541 F.2d 257, 262 (CCPA 1976). “Broadly articulated rules are particularly inappropriate in this area.” *Wertheim*, 541 F.2d at 262. Importantly, the Examiner has the initial burden of presenting evidence or reasoning to explain adequately why persons skilled in the art would not recognize in the original disclosure a description of the invention defined by the claims. *See id.* (“[T]he PTO has the initial burden of presenting evidence

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<sup>2</sup> In the Answer and Advisory Action, the Examiner withdraws all the other rejections from the Final Office Action. *See* Answer 2, 4; *see* Advisory Action 1–2; *see* Final Action 4–15.

or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims.”).

Here, the Examiner fails to explain adequately why one of ordinary skill would not recognize that Appellant disclosed the invention recited in the claims. As set forth above, claim 1 recites “[a] computer-implemented system adapted to assist with *assessing susceptibility to epilepsy and/or epileptic seizures in a patient*, the system including . . . [a] processor and processing application . . . configured to receive . . ., via an interface, patient brain data and programmed to” perform various steps. Appeal Br., Claims App. (Claim 1) (emphases added). The Examiner does not establish that Appellant’s Specification expressly states that the invention is limited to any particular type of epilepsy. *See generally* Final Action; *see generally* Answer. Nonetheless, the Examiner determines that

[Appellant’s] original disclosure provides written description [only] for the invention as it is applied to assessing the susceptibility to Idiopathic Generalized Epilepsy (IGE) and/or IGE seizures in a patient . . . [—]the original disclosure does not provide written description for the invention as it is applied to assessing the susceptibility to types of epilepsy and/or epilepsy seizures other than IGE.

Final Action 3–4. This is because, according to the Examiner,

[a]s taught by [page 10, lines 13–24 of Appellant’s Specification], IGE accounts for only 15–20% of all epilepsies and has characteristic data patterns, such as generalized spike-wave (GSW) and abnormal hypersynchronous electrical activity within brain networks. [Appellant’s] invention is directed towards measurement of abnormal properties of brain networks as a component of the inherited phenotype in IGE (*id.*). All data and disclosure of the invention are related to patients with IGE. Since other type[s] of epilepsies do not provide the same characteristics of IGE, it is unlikely that the same model could be applied to other forms of epilepsy than IGE. [Appellant] has

not demonstrated which assumptions underlying the model would need to be altered for its application to patients with forms of epilepsy other than IGE. As such, [Appellant] has demonstrated possession of the invention only as it applies to IGE.

Final Action 4.

The foregoing explanation by the Examiner fails to meet the Examiner's initial burden of presenting evidence or reasoning to explain adequately why persons skilled in the art would not recognize in the original disclosure a description of the invention defined by the claims. Specifically, the Examiner does not present evidence or a line of reasoning adequate to support that "other type[s] of epilepsies do not provide the same characteristics of IGE"—instead, this appears to be only supposition on the Examiner's part. *See id.* There is no discussion by the Examiner, for example, of what characteristics of IGE are or are not similar to characteristics of other types of epilepsy. Accordingly, the Examiner does not support adequately that "it is unlikely that the same model could be applied to other forms of epilepsy than IGE." *See id.* Based on our review of the Final Office Action and Answer, the Examiner does not provide an adequate basis for us to reach such a conclusion.

Instead, it appears that the Examiner's entire basis for concluding that the invention discloses in Appellant's Specification is suitable only for evaluating IGE is a slight rewording of two sentences from Appellant's Specification describing what IGE is—i.e., "A first experiment related to Idiopathic generaliz[ed] epilepsy (IGE), which comprises a group of clinical syndromes which account for 15–20% of all epilepsies. Generaliz[ed] spike-wave (GSW) seen with EEG is a hallmark of IGE, and reflects abnormal hypersynchronous electrical activity within brain networks." Spec. 10,

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ll. 14–18. As such, neither of these sentences from the Specification, nor the Examiner’s rewording of such, convey to us that methods of evaluating IGE are inapplicable to evaluating other types of epilepsy.

Thus, based on the foregoing, we do not sustain the Examiner’s written-description rejection of claims 1–14 and 19.

### CONCLUSION

We REVERSE the Examiner’s written-description rejection of claims 1–14 and 19.

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–14, 19	112, first paragraph	Written description		1–14, 19
<b>Overall Outcome</b>				1–14, 19

REVERSED