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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MICHAEL C. WARD,
PATRIK SMETS, and PAUL VANNESTE

Appeal 2017-000625
Application 12/833,059¹
Technology Center 3600

Before HUBERT C. LORIN, ROBERT J. SILVERMAN, and
ALYSSA A. FINAMORE, *Administrative Patent Judges*.

SILVERMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1, 3–13, and 15–29. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ The Appellants identify MasterCard International Incorporated as the real party in interest. Appeal Br. 3.

ILLUSTRATIVE CLAIM

1. A method comprising the steps of:

obtaining, by a terminal component from a payment device reader component, at least a first cryptogram and a second cryptogram;

transmitting, from said terminal component to an issuer of a payment device presented to said payment device reader component, through a payment network, said first cryptogram, said second cryptogram, and extra data, wherein at least said first cryptogram and said second cryptogram are transmitted in a first message; and

obtaining, by said terminal, a second message from said issuer, said second message corresponding to authentication, by said issuer, of said payment device presented to said payment device reader component, said authentication being issued upon a first cryptographic calculation, wherein said first cryptographic calculation is selected from among a plurality of cryptographic calculations upon determining that said first message and said extra data have been obtained by said issuer,

wherein said first cryptographic calculation comprises:

running a first message authentication code calculation using said extra data;

running a second message authentication code calculation using said extra data; and

determining said authentication of said payment device by comparing a truncated portion of an output of each of said first and second message authentication code calculations to said first cryptogram and said second cryptogram.

CITED REFERENCES

The Examiner relies upon the following references:

Davis et al. US 5,892,211 Apr. 6, 1999
(hereinafter "Davis")

Vialen et al. US 2005/0033960 A1 Feb. 10, 2005
(hereinafter "Vialen")

Smets et al. US 2006/0022033 A1 Feb. 2, 2006
(hereinafter “Smets”)

Hill et al. US 2007/0118483 A1 May 24, 2007
(hereinafter “Hill”)

Rans et al. US 2007/0278291 A1 Dec. 6, 2007
(hereinafter “Rans”)

REJECTIONS

I. Claims 1, 3–13, and 15–29 are rejected under 35 U.S.C. § 101 as ineligible subject matter.

II. Claims 1, 8–10, 13, 15, 16, 24, 28, and 29 are rejected under 35 U.S.C. § 103(a) as unpatentable over Smets and Vialen.

III. Claims 3–7 and 17–23 are rejected under 35 U.S.C. § 103(a) as unpatentable over Smets, Vialen, and Hill.

IV. Claims 11, 12, and 27 are rejected under 35 U.S.C. § 103(a) as unpatentable over Smets, Vialen, and Rans.

V. Claims 25 and 26 are rejected under 35 U.S.C. § 103(a) as unpatentable over Smets, Vialen, and Davis.

FINDINGS OF FACT

The findings of fact relied upon, which are supported by a preponderance of the evidence, appear in the following Analysis.

ANALYSIS

Subject-Matter Eligibility

Laws of nature, natural phenomena, and abstract ideas are deemed ineligible for patenting, because they are regarded as the basic tools of scientific and technological work, such that their inclusion within the domain of patent protection would risk inhibiting future innovation premised upon them. *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*,

569 U.S. 576, 589 (2013). Of course, “[a]t some level, ‘all inventions . . . embody, use, reflect, rest upon, or apply’” these basic tools of scientific and technological work. *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014) (citation omitted). Accordingly, ascertaining ineligible subject matter involves a two-step framework for “distinguish[ing] between patents that claim the buildin[g] block[s] of human ingenuity and those that integrate the building blocks into something more, . . . thereby transform[ing] them into a patent-eligible invention.” *Id.* (internal quotation marks and citations omitted). The first step determines whether the claim is directed to judicially excluded subject matter (such as a so-called “abstract idea”); the second step determines whether there are any “additional elements” recited in the claim that (either individually or as an “ordered combination”) amount to “significantly more” than the identified judicially excepted subject matter itself. *Id.* at 2355.

According to the rejection, under the first *Alice* step, “[c]laims 1, 3–13, and 15–29 are directed to the performance and cryptographic calculation which are mathematical relationships and thus an abstract idea.” Final Action 2. As to the second *Alice* step, the Examiner states:

The claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because recitation of generic computer structure that serves to perform generic computer functions that are well-understood, routine, and conventional activities previously known to the electronic commerce industry. Viewed as a whole, these additional claim elements do not provide meaningful limitations to transform the abstract idea into a patent eligible application of the abstract idea such that the claims amount to significantly more than the abstract idea itself.

Id. at 2–3.

Disputing the rejection, the Appellants argue that the claims are not directed to an abstract idea (*see* Appeal Br. 9–10) and that, in any event, the claims contain additional limitations that amount to significantly more than the identified abstract idea (*see id.* at 10–11).

With regard to the first step of the *Alice* framework, “[t]he ‘abstract idea’ step of the inquiry calls [for] look[ing] 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.” *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016)).

The Examiner determines that the claims “are directed to the performance and cryptographic calculation which are mathematical relationships and thus an abstract idea.” Final Action 2. Yet, there is substantially more to the claims than the “cryptographic calculation” and its “performance.” *See id.* Independent claim 1, for example, requires a “first cryptogram,” a “second cryptogram,” “extra data,” the transmission of these items, “running a first message authentication code calculation using said extra data,” “running a second message authentication code calculation using said extra data,” and “comparing a truncated portion of an output of each of said first and second message authentication code calculations to said first cryptogram and said second cryptogram.” Reducing the claims to the performance of a cryptographic calculation, alone, threatens to “describe[e] 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.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016). Indeed, determining that a claim is directed to a single

element recited in the claim is tantamount to the violation of reducing the *Alice* step-one inquiry to “simply ask[ing] whether the claims *involve* a patent-ineligible concept.” *Id.* at 1335.

Accordingly, we are persuaded that the Examiner erred in determining that the claims are directed to an abstract idea.

Because the Examiner has not adequately demonstrated that the claims are directed to an abstract idea, under the first step of the *Alice* framework, we do not proceed to the second step. *See Enfish*, 822 F.3d at 1339 (citing *Alice*, 134 S. Ct. at 2355).

In view of the foregoing analysis, we do not sustain the rejection of claims 1, 3–13, and 15–29 under 35 U.S.C. § 101.

Obviousness

The Appellants argue that the cited prior art fails to teach or suggest the following recitation of independent claim 1: “said first cryptographic calculation is selected from among a plurality of cryptographic calculations upon determining that said first message and said extra data have been obtained by said issuer.” *See* Appeal Br. 13–14.

According to the Final Office Action, Figure 5 of the Smets reference discloses an authorization or approval (element 110) from the issuer, “which occurs upon receipt of the first message, is thus selected after an authorization computation, and must be based upon a calculation.” Final Action 4. Further, in response to an earlier statement from the Appellants, the Examiner explains that “‘any selection of a known cryptographic calculation’ is necessarily from a ‘group of known cryptographic calculations.’” *Id.* at 21.

Yet, the rejection identifies no disclosure, in the cited references, of the claimed “plurality of cryptographic calculations,” let alone any “select[ion]” of the “first cryptographic calculation” from among such “plurality.” The Examiner’s interpretation of the claim limitation at issue would deny any meaning to the identified language of claim 1. To the contrary, “claims are interpreted with an eye toward giving effect to all terms in the claim.” *Bicon, Inc. v. The Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006) (citations omitted).

Accordingly, we are persuaded that independent claim 1 was rejected erroneously. The same reasoning applies to independent claims 15, 16, and 28, which contain similar limitations. Therefore, the rejections of claims 1, 3–13, and 15–29 under 35 U.S.C. § 103(a) are not sustained.

DECISION

We REVERSE the Examiner’s decision rejecting claims 1, 3–13, and 15–29 under 35 U.S.C. § 101.

We REVERSE the Examiner’s decision rejecting claims 1, 3–13, and 15–29 under 35 U.S.C. § 103(a).

REVERSED