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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/451,876	08/05/2014	Emil Kartalov	38075-716.301	1065

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WILSON, SONSINI, GOODRICH & ROSATI
650 PAGE MILL ROAD
PALO ALTO, CA 94304-1050

EXAMINER

NEGIN, RUSSELL SCOTT

ART UNIT	PAPER NUMBER
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1631

NOTIFICATION DATE	DELIVERY MODE
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08/23/2017

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@wsgr.com

Applicant's arguments filed 11 August 2017 have been fully considered but they are not persuasive.

On pages 10-14 of the Remarks, applicant goes into great detail attempting to align the fact pattern of *McRO* with the fact pattern of the instant set of claims. In *McRO*, the claims were found to be not directed to a judicial exception because the algorithm resulted in automated human animation that was previously only accomplished by humans. In addition, the algorithm of *McRO* details a technique for solving a problem in technology and not merely analysis of output data.

The instant set of claims recite a plurality of judicial exceptions. Step a of claim 49 recites encoding the analytes which is a judicial exception. Step d of claim 49 recites cumulatively measuring signal values. Step e of claim 49 recites a mental step of determining presence/absence patterns. These judicial exceptions are in combination with routine and conventional empirical steps that are not automated. The determination of the presence/absence patterns is the analysis of output data to determine a coding scheme.

On pages 13-14 of the Remarks, applicant argues that the fact pattern of the claims is analogous to the fact pattern of *Diehr*. Applicant argues that similar to *Diehr*, the cumulative measurement results in an improvement to the technology by resulting in converting the data into presence/absence patterns. This argument is not persuasive because the judicial exception of the Arrhenius equation is *Diehr* improved limitations outside the judicial exception- namely, the rubber molding process. In contrast, while

converting data into presence/absence patterns may improve the analysis of data, better data processing does not improve an element outside the judicial exceptions.

On pages 14-15 of the Remarks, applicant argues that the fact pattern of the instant claims is analogous to the fact pattern in *BASCOM*. In *BASCOM*, the combination of the limitations necessarily required execution on a computer; consequently, the claims were patent eligible. In the instant set of claims, the combination of limitations requires human intervention in the empirical steps.

Applicant argues that the limitations of the claim are specific enough as to not monopolize a technical field. This argument is not persuasive because the specificity and complexity of an idea do not preclude the idea from being abstract.

With regard to the 35 U.S.C. 102 rejection, applicant argues that Lin et al. teaches a degenerate coding scheme. Applicant argues that Lin teaches blue (B), red (R), green (G), B+G, B+R, and G+R. Figure 2C of Lin et al. illustrates all 27 non-degenerate combinations of B, G, and R. Figure 2C of Lin et al. does not involve B+G, B+R, or G+R in the combinations. While Figures 1A and 1B of the Remarks illustrate the degenerate coding of cyan, green, and blue; Figure 2C of Lin et al. does not teach cyan as one of the three colors. While Figure 5D of Lin et al. teaches dual-labeled zone fluorescence coding that would result in degeneracy, Figure 2C of Lin et al. teaches single-zone fluorescent coding that is non-degenerate. In the instant 35 U.S.C. 102 rejection, only single-labeled-zone fluorescent barcodes teachings of Lin et al. are relied upon. In other words, an observer witnessing a spot that is cyan, green, and blue should deduce that the spot is the non-degenerate overlap of BGB and GGB.

Applicant argues that Lin et al. does not teach the amended limitations of the claims. This argument is not persuasive because the proposed amendments have not been entered.

With regard to the 35 U.S.C. 103 rejection, applicant argues that Nie et al. and Orpana et al. do not overcome the alleged deficiencies of Lin et al. These arguments are not persuasive because the document of Lin et al. is not deficient.

With regard to the double patenting rejection, the Terminal Disclaimer is being processed.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Russell Negin, whose telephone number is (571) 272-1083. This Examiner can normally be reached from Monday through Thursday from 10:30 am to 5 pm and variable hours on Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Peter Paras, Supervisory Patent Examiner, can be reached at (571) 272-4517.

Information regarding the status of the application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

/Russell S. Negin/
Primary Examiner, Art Unit 1631
20 August 2017

Advisory Action Before the Filing of an Appeal Brief	Application No. 14/451,876	Applicant(s) KARTALOV ET AL.	
	Examiner Russell S. Negin	Art Unit 1631	AIA (First Inventor to File) Status No

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 11 August 2017 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. ☒ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires _____ months from the mailing date of the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.

Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because

a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);

b) ☐ They raise the issue of new matter (see NOTE below);

c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): _____.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☒ For purposes of appeal, the proposed amendment(s): (a) ☒ will not be entered, or (b) ☐ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

9. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

10. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

11. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See attached document.

13. ☐ Note the attached Information *Disclosure Statement(s)*. (PTO/SB/08) Paper No(s). _____

14. ☒ Other: PTO-2323 form is attached.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: 49,51,53,55,56,75-81,83-88 and 90-92.

Claim(s) withdrawn from consideration: 1,2,4,5,9,13,17-19,22,27-29,34,35,37-39,42,43,45,47 and 82.

/Russell S. Negin/ Primary Examiner, Art Unit 1631

Continuation of 3. NOTE: The limitations regarding intensities and/or ranges of intensities would require further search and/or consideration by the Examiner.