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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/013,125	01/21/2014	6201839	ABYZ-502	1436
26285	7590	02/26/2014	EXAMINER	
K&L GATES LLP 210 SIXTH AVENUE PITTSBURGH, PA 15222-2613			NGUYEN, LINH M	
			ART UNIT	PAPER NUMBER
			3992	
			MAIL DATE	DELIVERY MODE
			02/26/2014	PAPER

**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.



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(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

K & L GATES LLP

210 SIXTH AVENUE

PITTSBURGH, PA 15222-2613

***EX PARTE* REEXAMINATION COMMUNICATION TRANSMITTAL FORM**

REEXAMINATION CONTROL NO. 90/013,125.

PATENT NO. 6201839.

ART UNIT 3992.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

<b>Order Granting / Denying Request For Ex Parte Reexamination</b>	<b>Control No.</b> 90/013,125	<b>Patent Under Reexamination</b> 6201839
	<b>Examiner</b> Linh M. Nguyen	<b>Art Unit</b> 3992

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

The request for *ex parte* reexamination filed 21 January 2014 has been considered and a determination has been made. An identification of the claims, the references relied upon, and the rationale supporting the determination are attached.

Attachments: a)  PTO-892,      b)  PTO/SB/08,      c)  Other: \_\_\_\_\_

1.  The request for *ex parte* reexamination is GRANTED.

RESPONSE TIMES ARE SET AS FOLLOWS:

For Patent Owner's Statement (Optional): TWO MONTHS from the mailing date of this communication (37 CFR 1.530 (b)). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).**

For Requester's Reply (optional): TWO MONTHS from the **date of service** of any timely filed Patent Owner's Statement (37 CFR 1.535). **NO EXTENSION OF THIS TIME PERIOD IS PERMITTED.** If Patent Owner does not file a timely statement under 37 CFR 1.530(b), then no reply by requester is permitted.

2.  The request for *ex parte* reexamination is DENIED.

This decision is not appealable (35 U.S.C. 303(c)). Requester may seek review by petition to the Commissioner under 37 CFR 1.181 within ONE MONTH from the mailing date of this communication (37 CFR 1.515(c)). **EXTENSION OF TIME TO FILE SUCH A PETITION UNDER 37 CFR 1.181 ARE AVAILABLE ONLY BY PETITION TO SUSPEND OR WAIVE THE REGULATIONS UNDER 37 CFR 1.183.**

In due course, a refund under 37 CFR 1.26 ( c ) will be made to requester:

- a)  by Treasury check or,  
b)  by credit to Deposit Account No. \_\_\_\_\_, or  
c)  by credit to a credit card account, unless otherwise notified (35 U.S.C. 303(c)).

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cc:Requester ( if third party requester )

***DECISION ON REQUEST***

A substantial new question of patentability (“SNQ”) affecting claim 4 of United States Patent Number 6,201,839 to Kavcic et al. (hereinafter “the ‘839 patent”), entitled "METHOD AND APPARATUS FOR CORRELATION-SENSITIVE ADAPTIVE SEQUENCE DETECTION". Since requester did not request reexamination of claims 1-3 and 5-28 and did not assert the existence of a substantial new question of patentability (SNQ) for such claims, such claims will not be reexamined. See MPEP 2243.

***References Cited in the Request***

The Request asserts that the following documents raise SNQs of the ‘839 patent:

Zeng, W., *Effective Detection Schemes for Magnetic Recording Channels with Severe Nonlinearities and Media Noise*, Thesis, University of Minnesota (October 1994) ("Zeng").

Lee, I., *Channel Equalization Techniques Applied to Digital Storage and Transmission Systems*, Thesis, Stanford University (June 1995) ("Lee").

U.S. Patent No. 6,104,766, filed on September 17, 1996 and issued on August 15, 2000, to Coker ("Coker").

### ***Prosecution History***

The '839 patent is drawn to a method of determining branch metric values for branches of a trellis for a Viterbi-like detector. The method includes the step of selecting a branch metric function for each of the branches at a certain time index and the step of applying the selected function to a plurality of time variant signal samples to determine the metric values. Such method provides advantages since the detected data sequence is detected with higher degree of accuracy because it takes into account the correlation between noise samples in the readback signal.

The examiner generally agrees with the description of the prosecution history found in the Request at pp. 7-10, and that discussion is incorporated by reference. The application was ultimately issued a Notice of Allowance, in which independent claim 4 appears to be allowed due to the claimed limit of *selecting a plurality of signal samples*. Notice of Allowance mailed 8/22/2000, p. 2. References showing a method with such features would therefore have been important to a reasonable examiner in considering the patentability of the claims.

### ***Requester's Proposed Rejections/SNQs***

1. A substantial new question of patentability as to claim 4 is raised by Zeng.
2. A substantial new question of patentability as to claim 4 is raised by Zeng in view of Lee.
3. A substantial new question of patentability as to claim 4 is raised by Zeng in view of Coker.

*Discussion of the References Pertaining to the Alleged SNQs*

**Proposal 1: Claim 4 - Anticipation by Zeng**

It is agreed that Zeng raises a SNQ for claim 4 of the '839 patent. Insofar as the explanation at pp. 14-25 of the request and the item-matching at pp. 26-31 of the request at least facially suggests that Zeng teaches the claimed method of determining branch metric values for multiple branches of a trellis, Zeng also expressly teaches including in its different branch metric functions (e.g. in the form of  $Z_k$ ) models for the signal-dependent noise that Zeng discloses is part of the observed signal samples from hard disks. A reasonable examiner would consider Zeng important in deciding whether or not claim 4 of the '839 patent are patentable. Accordingly, Zeng raises a substantial new question of patentability as to claim 4, which question has not been decided in a previous examination of the '839 patent.

Such teachings are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination and the same question of patentability was not the subject of a final holding of invalidity by Federal Courts.

**Proposal 2: Claim 4 – Obviousness by Zeng in view of Lee**

It is agreed that the combination of Zeng and Lee raises a SNQ for claim 4 of the '839 patent. Insofar as the explanation at pp. 31-36 of the request and the item-matching at pp. 36-42 of the request at least facially suggests that the combination of Zeng and Lee teaches the claimed

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method. Zeng accounts for transition noise through *multiple* branch-dependent branch metric functions, whereas Lee discloses multiple branch metric functions whose noise component is time-dependent. A reasonable examiner would consider the combination of Zeng and Lee important in deciding whether or not claim 4 of the '839 patent are patentable. Accordingly, the combination of Zeng and Lee raises a substantial new question of patentability as to claim 4, which question has not been decided in a previous examination of the '839 patent.

Such teachings are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination and the same question of patentability was not the subject of a final holding of invalidity by Federal Courts.

### **Proposal 3: Claim 4 – Obviousness by Zeng in view of Coker**

It is agreed that the combination of Zeng and Coker raises a SNQ for claim 4 of the '839 patent. Insofar as the explanation at pp. 42-47 of the request and the item-matching at pp. 48-57 of the request at least facially suggests that the combination of Zeng and Coker teaches the claimed method. Combining the teachings of Zeng and Coker would at least lead to a sequence detector that reflects the time-variant statistics of the transition noise. A reasonable examiner would consider that the combination of Zeng and Coker important in deciding whether or not claim 4 of the '839 patent are patentable. Accordingly, that the combination of Zeng and Coker raises a substantial new question of patentability as to claim 4, which question has not been decided in a previous examination of the '839 patent.

Such teachings are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination and the same question of patentability was not the subject of a final holding of invalidity by Federal Courts.

### ***Extensions of Time***

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extension of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

### ***Notification of Other Proceedings***

The patent owner is reminded of the continuing responsibility under 37 CFR 1.985(a), to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving the base patent throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP § 2686 and 2686.04.

### ***Correspondence***

**All** correspondence relating to this *inter partes* reexamination proceeding should be directed:

By Mail to: Mail Stop *Inter Partes* Reexam  
Attn: Central Reexamination Unit  
Commissioner for Patents  
United States Patent & Trademark Office  
P.O. Box 1450



Art Unit: 3992

Alexandria, VA 22313-1450

By FAX to: (571) 273-9900  
Central Reexamination Unit

By hand: Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Registered users of EFS-Web may alternatively submit such correspondence via the electronic filing system EFS-Web, at <https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html>. EFS-Web offers the benefit of quick submission to the particular area of the Office that needs to act on the correspondence. Also, EFS-Web submissions are “soft scanned” (i.e., electronically uploaded) directly into the official file for the reexamination proceeding, which offers parties the opportunity to review the content of their submissions after the “soft scanning” process is complete.

Any inquiry concerning this communication or earlier communications from the examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

Signed:

/Linh M. Nguyen/  
Primary Examiner, Art Unit 3992

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Conferees:

/JAMES MENELEE/

Primary Examiner, Art Unit 3992

/JENNIFER MCNEIL/  
Supervisory Patent Examiner, Art Unit 3992

Received:  
1/21/2014

90/013125

PTO/SB/08a (07-09)

Approved for use through 07/31/2012. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				Application Number	RE of Patent No. 6,201,839
				Issue Date	March 13, 2001
				First Named Inventor	Aleksandar Kavcic
				Art Unit	2731
				Examiner Name	Emmanuel Bayard
Sheet	1	of	2	Attorney Docket Number	ABYZ-502

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)				
	Ex. F	US-6,104,766		08-15-2000	Coker et al.	

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	† <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)					

Examiner Signature	/Linh Nguyen/	Date Considered	02/11/2014
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /L.N./

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Substitute for form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>		Application Number	RE of Patent No. 6,201,839
		Issue Date	March 13, 2001
		First Named Inventor	Aleksandar Kavcic
		Art Unit	2731
		Examiner Name	Emmanuel Bayard
		Attorney Docket Number	ABYZ-502
Sheet	2		2

<b>NON PATENT LITERATURE DOCUMENTS</b>			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	Ex. D	ZENG, WEINING, "Effective Detection Schemes for Magnetic Recording Channels with Severe Nonlinearities and Media Noise" (October 1994)	
	Ex. E	LEE, INKYU, "Channel Equalization Techniques Applied to Digital Storage and Transmission Systems" (June 1995)	

Examiner Signature	/Linh Nguyen/	Date Considered	02/11/2014
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<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /L.N./