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EXAMINER	
ROSWELL, MICHAEL	

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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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EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. *90/019,523* .

PATENT UNDER REEXAMINATION *7987285* .

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)).

Office Action in Ex Parte Reexamination	**Control No.** 90/019,523	**Patent Under Reexamination** 7987285	
	Examiner MICHAEL R ROSWELL	**Art Unit** 3992	**AIA (FITF) Status** No

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

a. ☑ Responsive to the communication(s) filed on 24 May 2024.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

b. ☐ This action is made FINAL.

c. ☑ A statement under 37 CFR 1.530 has not been received from the patent owner.

A shortened statutory period for response to this action is set to expire 2 month(s) from the mailing date of this letter. Failure to respond within the period for response will result in termination of the proceeding and issuance of an *ex parte* reexamination certificate in accordance with this action. 37 CFR 1.550(d). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).** If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Information Disclosure Statement, PTO/SB/08.
3. ☐ Interview Summary, PTO-474.
4. ☐ _____.

Part II SUMMARY OF ACTION

1a. ☑ Claims 1,6,9-11 and 14-15 are subject to reexamination.

1b. ☑ Claims 2-5,7-8,12-13 and 16 are not subject to reexamination.

2. ☐ Claims _____ have been canceled in the present reexamination proceeding.

3. ☐ Claims _____ are patentable and/or confirmed.

4. ☑ Claims 1,6,9-11 and 14-15 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ The drawings, filed on _____ are acceptable.

7. ☐ The proposed drawing correction, filed on _____ has been (7a) ☐ approved (7b) ☐ disapproved.

8. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. 119(a)-(d) or (f).

   a) ☐ All b) ☐ Some* c) ☐ None of the certified copies have

   1 ☐ been received.

   2 ☐ not been received.

   3 ☐ been filed in Application No. _____.

   4 ☐ been filed in reexamination Control No. _____.

   5 ☐ been received by the International Bureau in PCT application No. _____.

   * See the attached detailed Office action for a list of the certified copies not received.

9. ☐ Since the proceeding appears to be in condition for issuance of an *ex parte* reexamination certificate except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte* Quayle, 1935 C.D. 11, 453 O.G. 213.

10. ☐ Other: _____

cc: Requester (if third party requester)

DETAILED ACTION

The present application is being examined under the pre-AIA first to invent provisions.

This Office Action addresses claims 1, 6, 9-11, 14, and 15 of US Patent 7,987,285 to **Melnyk** et al. ("the '285 Patent"), for which it has been determined in the Order Granting *Ex Parte* Reexamination (hereafter the "Order") mailed 3 July 2024 that at least one substantial new question of patentability was raised in the Request for *Ex Parte* Reexamination filed on 24 May 2024 (hereafter the "Request").

This is a **Non-Final Office Action**.

Reexamination

The Patent Owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving US Patent 7,987,285 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 §§ 2207, 2282 and 2286.

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).

In order to ensure full consideration of any amendments, affidavits or declarations, or other documents as evidence of patentability, such documents must be submitted in response to this Office Action. Submissions after the next Office Action, which is intended to be a Final

Action, will be governed by the requirements of 37 CFR 1.116, after final rejection and 37 CFR 41.33 after appeal, which will be strictly enforced.

Patent Owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c).

References and Declarations Submitted by Requester

The following four references have been cited as establishing a substantial new question of patentability, as discussed in the Order mailed 3 July 2024, and are variously applied in the rejections below:

- **van Beek** – US Publication 2005/0071876, published 31 March 2005
- **Urzaiz** – US Publication 2005/0021830, published 27 January 2005
- **Gupta** – US Patent 7,734,800, filed 25 August 2003
- **Yano** – US Publication 2003/0037158, published 20 February 2003

The following declaration was cited to at least further explain the contents of the above listed references in more detail:

- **Declaration of Dr. Lina Karam**, executed 24 May 2024

Claim Summary

In light of the prosecution history discussed in the Order, the status of the claims of the '285 Patent in this *Ex Parte* Reexamination proceeding are as follows:

- Claims 1, 6, 9-11, 14, and 15 are subject to the current reexamination.
- Claims 2-5, 7, 8, 12, 13, and 16 are not subject to reexamination.

- Claims 1, 6, 9-11, 14, and 15 are rejected, as discussed below.

Claim Rejections

The rejections below are confined to what has been deemed to be the best available art from the Request. However, prior to conclusion of this reexamination proceeding, claims must be patentable over all prior art cited in the Order granting reexamination in order to be considered patentable or confirmed on the reexamination certificate.

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis (i.e., changing from AIA to pre-AIA) for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

The following are quotations from the MPEP regarding the types of rejections to be utilized below:

35 USC § 102

The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

van Beek

Claims 9, 10, and 15 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by **van Beek** (US Publication 2005/0071876, published 31 March 2005). Note the accompanying **Declaration of Dr. Lina Karam**, pp. 15-18, and **Exhibit AA-1** (claim charts relating to claims 9, 10, and 15) for supporting guidance/rationale.

Regarding independent claim 9, **van Beek** discloses

A method comprising:

receiving an optimal session bitrate (**van Beek** discloses systems and methods for "transmission of multiple data streams in a network that may have limited bandwidth", at [0041]. **van Beek** further discloses wherein an adaptive bandwidth system on a gateway media server may determine network bandwidth characteristics and adjust the bandwidth for output data streams accordingly. See [0041]. At [0086], **van Beek** discloses that an analog input stream may be encoded or the bit rate of an input digital bit stream adapted to the available bandwidth (i.e., "optimal session bitrate"));

allocating the optimal session bitrate between audio and video media to produce an optimal audio bitrate and an optimal video bitrate (**van Beek** at [0088] discloses wherein a (trans)coding manager allocates bit rates to multiple video streams such that the aggregate of the bit rates of the output video streams matches the desired (i.e., "optimal") aggregate channel

bit rate. At [0055], **van Beek** discloses that "while the system may refer to audio/video, the concepts are likewise used for video alone and/or audio alone". As a result, the multiple video streams of [0088] may be interpreted as including both video and audio streams)*, wherein allocating the optimal session bitrate between audio and video media is based at least in part on privileging either the audio media or the video media over the other* (**van Beek** at [0107-0108] discloses the (trans)coder manager prioritizing or weighing (i.e., "privileging") different streams, generally related to the preferences of the users of client devices. This results in certain streams being considered "more important" that others, and being allocated a disproportionate number of bits to achieve a higher quality stream)*;*

encoding audio and video media data according to the optimal audio bitrate and the optimal video bitrate (at [0086-0088], **van Beek** discloses a multi-stream extender that includes multiple video encoders/transcoders, further depicted in Fig. 6. **van Beek** states that input streams are "encoded or transcoded separately, although their bit rates are controlled by the (trans)coder manager", at [0088]. Similarly, **van Beek** at [0067] discloses an extender using an encoding/transcoding module to convert or compress a data stream into a format suitable to match a desired bit rate)*; and*

providing the encoded audio and video data for transmittal to a terminal (**van Beek** at [0041] discloses that media from a gateway media server may be transmitted to client receiver units "in a compressed format". The gateway media server adjusts the bandwidth for output data streams in accordance with bandwidth characteristics).

Independent claim 15 recites subject matter substantially similar to that of independent claim 9, and as a result is rejected under similar rationale.

Regarding dependent claim 10, **van Beek** discloses

The method of claim 9, further comprising dropping frames of the encoded video data (**van Beek** at [0070] discloses that output video quality may be increased or decreased through

a change in frame rate. As an example, **van Beek** contemplates a source stream at 30 fps being transmitted to a device with a 15 fps playback capability; an adjustment of the source stream from 30 fps to 15 fps is necessarily accomplished by dropping frames).

Urzaiz and Gupta

Claims 9, 10, and 15 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over **Urzaiz** (US Publication 2005/0021830, published 27 January 2005) in view of **Gupta** (US Patent 7,734,800, filed 25 August 2003). Note the accompanying **Declaration of Dr. Lina Karam**, pp. 18-24, and **Exhibit AA-2** (claim charts relating to claims 9, 10, and 15) for supporting guidance/rationale.

Regarding independent claim 9, Urzaiz discloses

A method comprising:

receiving an optimal session bitrate (**Urzaiz** discloses at [0125] the calculation of the total bandwidth available (i.e., "optimal session bitrate") for data streams to be transmitted from a server computer. See further Fig. 11, which illustrates the calculation of the variable *total_rate*, representing the available total bandwidth)*;*

allocating the optimal session bitrate between audio and video media to produce an optimal audio bitrate and an optimal video bitrate (**Urzaiz** at [0126] discloses calculating the value *max_rate* for each audio and video data stream. The maximum individual transmission rates for each stream are calculated "to provide for TCP-friendly performance" (i.e., an "optimal" rate), at [0126]);

encoding audio and video media data according to the optimal audio bitrate and the optimal video bitrate (**Urzaiz** discloses that "audio and video feed data must first be suitably digitally encoded in order to compress the audio and video data signals to a size suitable for

transmission over a network", at [0004], and that "[f]ollowing encoding of the audio and video data, the encoded data is passed to a network server…prior to transmission over the network to a client", at [0005]. Further, at [0103], **Urzaiz** discloses that "changes in transmission rate can be achieved by controlling the encoding of the source data to give a higher (better quality) or lower (poorer quality) encoding rate", and at [0133] states that "the server transmits the audio and video streams…at the calculated audio and video sending rates"); *and*

providing the encoded audio and video data for transmittal to a terminal (**Urzaiz** at [0005] discloses that "[f]ollowing encoding of the audio and video data, the encoded data is passed to a network server…prior to transmission over the network to a client").

Urzaiz fails to explicitly disclose *wherein allocating the optimal session bitrate between audio and video media is based at least in part on privileging either the audio media or the video media over the other*. **Gupta** discloses systems and methods for providing media streams to client output devices, similar to **Urzaiz**. Furthermore, **Gupta** discloses a method of bandwidth utilization in which media streams are assigned a priority when bandwidth is allocated. **Gupta** at col. 13, lines 4-12 specifically states that "[e]ach stream is assigned a priority. Audio will generally have a high priority. The high-priority streams are given priority when allocating bandwidth". In the provided example, an audio stream (of higher priority) is streamed to a client in full quality, while a video stream (lower priority) is reduced in quality in accordance with available bandwidth.

Therefore, it would have been obvious to one of ordinary skill in the art prior to the effective filing date of the instant invention to modify the bandwidth allocation of **Urzaiz** to include the stream priorities and related bandwidth allocation as in **Gupta**. Such a combination necessarily amounts to a use of a known technique to improve similar devices in the same way.

Independent claim 15 recites subject matter substantially similar to that of independent claim 9, and as a result is rejected under similar rationale.

Regarding dependent claim 10, Urzaiz and Gupta disclose

The method of claim 9, further comprising dropping frames of the encoded video data (**Gupta** at col. 13, lines 15-23 discloses that video stream quality can be adjusted to match available bandwidth, specifically stating that "[o]ne way to reduce bandwidth is to simply drop lower-level dependent frames from the video stream").

Yano

Claims 1, 6, 11, and 14 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by **Yano** (US Publication 2003/0037158, published 20 February 2003). Note the accompanying **Declaration of Dr. Lina Karam**, pp. 27-34, and **Exhibit BB** (claim charts relating to claims 1, 6, 11, and 14) for supporting guidance/rationale.

Regarding independent claim 1, Yano discloses

A method comprising:

receiving a receiver report from a terminal (**Yano** discloses systems and methods for effecting data communications on a network between two end terminals "at an optimal transfer rate". See **Yano**, abstract. **Yano** at [0031] and Fig. 1 discloses a receiving terminal and a transmitting terminal communicating over a network. The transmitting terminal generates and transmits a receiver report, which is received at the receiving terminal. See [0036]);

estimating one or more network conditions of a media network using the receiver report (the examiner notes that the term "estimating" is not particularly defined by the limitations of the claim, nor does a limiting definition appear within the specification of the '285 Patent. As a result, "estimating" is subject to the broadest reasonable interpretation (BRI) in light of the specification, and is interpreted as "determine". See, for example, col. 10, lines 1-4 of the '285 Patent, in which an "estimate" of the state of the network is provided on the basis of a data

combination (i.e., calculation/determination of a particular result or variable). However, it is noted that the measuring of a single variable may also be considered a determination; as such "estimating" requires no more than the measuring or receipt of a data value. The estimation of network conditions, as claimed, is therefore analogous to the receipt of data related to the network in the receiver report, as in **Yano** at [0041])*;*

determining an optimal session bitrate using the estimated one or more network conditions (at [0007], **Yano** discloses that data communications are performed at an optimal transfer rate on the basis of the volume of unarrived data on the network (used in the calculation of the buffer data volume of the network)*, wherein determining the optimal session bitrate further comprises:*

determining stability criterion using the estimated one or more network conditions, wherein determining stability criterion includes at least one of: comparing a media time in transit and a round trip time estimate; and comparing a bitrate received with a current bitrate session (**Yano** at [0089-0093] discloses the comparison of a currently measured round-trip data transmission time ("RTTcur", the "media time in transit") with a previously measured and stored "base" round-trip transmission time ("RTTbase", the "round trip time estimate"))*; and*

determining the stability of the media network (the specification and claims of the '285 Patent fail to provide a limiting definition for "determining the stability of the media network" beyond "[using] the stability criterion to determine the stability of the streaming media network". See col. 7, lines 1-2. Under the BRI of the limitation, the calculation of the stability criterion itself is analogous to "determining the stability of the network". See **Yano**, [0089-0093], discussed *supra*)*; and*

providing the optimal session bitrate based at least in part on the media-network-stability determination (**Yano** discloses using network stability variables such as RTTcur and RTTbase in the calculation of a network buffer data volume, with which is then used to determine an optimal transmission rate ("Rnew"). See [0094-0099])*; and*

providing media data to the terminal according to the optimal session bitrate (after calculation, data transmission is provided at optimal rate Rnew. See **Yano**, [0097]).

Regarding independent claims 6 and 14, the limitations of the claims are substantially similar to those of independent claim 1, and are rejected under similar rationale. Claims 6 and 14 further recite "*providing the session bitrate to an encoder for transmitting media data according to the provided session bitrate*". **Yano** at [0060-0064], and illustrated in Figs. 8-9, discloses the compressing/encoding of video data resulting from a calculated transmission rate, and subsequent transmission of the compressed/encoded data.

Regarding independent claim 11, the limitations of the claim are substantially similar to those of independent claim 1, and are rejected under similar rationale. Claim 11 further recites "*a terminal, having a media player, configured to provide a receiver report*" and "*an adaptive bitrate manager*". **Yano** discloses an example application of the invention at [0053-0057]. Fig. 7 illustrates a camera server corresponding to the transmitting terminal of Fig. 1, and a client terminal corresponding to the receiving terminal of Fig. 1. **Yano** at [0056] states that software for receiving and displaying video data ("a media player") runs on the client terminal. Further, at [0057], **Yano** notes that the camera server and client terminal are separately illustrated for the sake of convenience, and notes that both terminals may be made capable of serving as both the camera server and client. As such, **Yano** shows that the camera server/transmission terminal may include a media player. The claimed "adaptive bitrate manager" performs functions recited in claim 1, and as a result is disclosed by **Yano**, as discussed *supra*.

Conclusion

All correspondence relating to this *Ex Parte* reexamination proceeding should be directed:

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For Patent Center transmissions, 37 CFR 1.8(a)(1)(i)(C) and (ii) states that correspondence (except for a request for reexamination and a corrected or replacement request for reexamination) will be considered timely filed if (a) it is transmitted via the USPTO patent electronic filing system in accordance with 37 CFR 1.6(a)(4), and (b) includes a certificate of transmission for each piece of correspondence stating the date of transmission, which is prior to the expiration of the set period of time in the Office action.

Any inquiry concerning this communication should be directed by telephone to Michael Roswell, at 571-272-4055.

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