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LEE & HAYES, PLLC
601 W. RIVERSIDE AVENUE
SUITE 1400
SPOKANE, WA 99201

| EXAMINER | |
|---|---|
| FISHER, PAUL R | |

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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.

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

lhpto@leehayes.com

| Office Action Summary | Application No. 13/033,378 | Applicant(s) WOOD ET AL. | |
|---|---|---|---|
| | Examiner PAUL R. FISHER | Art Unit 3689 | AIA (First Inventor to File) Status No |

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

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *05 August 2015*.

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

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance 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.

**Disposition of Claims***

5)☒ Claim(s) *1-4 and 6-28* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-4 and 6-28* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

**Application Papers**

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *23 February 2011* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

**Certified copies:**

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

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

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

## DETAILED ACTION

1. Amendment filed on August 5, 2015 has been acknowledged. Claim 5 has been canceled. Claims 1-4 and 6-28, as amended, are currently pending and have been considered below.

### *Notice of Pre-AIA or AIA Status*

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

### *Claim Rejections - 35 USC § 101*

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-4 and 6-28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. When considering subject matter eligibility under 35 U.S.C. 101, it must be determined whether the claim is directed to one of the four statutory categories of invention, i.e., process, machine, manufacture, or composition of matter. If the claim does fall within one of the statutory categories, it must then be determined whether the claim is directed to a judicial exception (i.e., law of nature, natural phenomenon, and abstract idea), and if so, it must additionally be determined whether the claim is a patent-eligible application of the exception. If an abstract idea is present in the claim, any element or combination of elements in the

claim must be sufficient to ensure that the claim amounts to significantly more than the abstract idea itself. Examples of abstract ideas include fundamental economic practices; certain methods of organizing human activities; an idea itself; and mathematical relationships/formulas. *Alice Corporation Pty. Ltd. v. CLS Bank International, et al.*, 573 U.S. (2014).

In the instant case, claims 1-4 and 23-28 are directed to a process or method, claims 6-22 are directed to a medium or product.

Additionally, the claims are directed towards managing a service level agreement which is considered to be an abstract idea inasmuch as receiving requests, supplying the requested media, monitoring the service, storing metrics associated with the service, comparing the metrics and providing restitution are activities that are considered both fundamental economic or business practices and an idea of itself. Specifically the recited limitations create a contractual relationship in this case the service level agreement and monitor the service to ensure compliance with that agreement. As set forth in the Federal Register dated December 16, 2014, the acts of creating a contractual relationship are considered to be drawn toward an abstract idea, as reference in regards to the buySAFE case. This is supported by the MPEP 2106, I. which lists "a legal contractual agreement between two parties" as an example of claims that are not directed to one of the statutory categories. It is also similar to the SmartGene case where new and stored information are compared and rules are used to identify options. In this case the stored parameters of the agreement are compared to the new metrics which are measured to determine options, such as if the customer

should be compensated. As such the claims are directed toward an abstract idea and are therefore not statutory.

The elements in the instant claims (computer systems, client device, digital content, processors, and media), when taken in combination, together do not offer "significantly more" than the abstract idea itself because the claims do not recite an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or provide meaningful limitations beyond generally linking an abstract idea to a particular technological environment. It should be noted the limitations of the current claims are performed by a generically recited processor and the memory and program components contain no more than mere instructions to implement the abstract idea on a computer. The claims require no more than a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry. This is supported by the applicant's originally filed specification paragraph [0029], which outlines the invention as being implemented on hardware, software or a combination of both, and generally refers to processors, routines and programs. The specification outlines merely generic hardware elements such as a computer processor which carries out routine functions such as gathering data and comparing it to stored values. As such the claims simply describe a problem, announce purely functional steps that purport to solve the problem, and recite standard computer operations to perform some of those steps, which is not "significantly more" than an abstract idea. Therefore, claims 1-4 and 6-28 are directed to non-statutory subject matter.

***Claim Rejections - 35 USC § 103***

5. 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 of this title, 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 negatived by the manner in which the invention was made.

6. **Claims 1 and 2 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Edwards et al. (US 2008/0005156 A1) hereafter Edwards, further in view of Burkhart (US 2002/0006116 A1) hereafter Burkhart**.

**As per claim 1**, Mizutani disclose a method (Abstract) comprising:

under control of one or more computer systems configured with specific computer-executable instructions (Figure 1, Page 2, paragraphs [0032]-[0034]; disclose that the invention contains a system which has a delivery device which includes one or more computing systems which have software which implements the invention):

receiving, at a content provider from a client device associated with a user, a request to receive a digital content item in return for a payment (Page 2, paragraphs [0035]-[0036]; disclose that the system allows the terminal or client device associated with a user to specify or request a specific media stream, and also specify the content provider which is providing that specific media stream. Page 5, paragraphs [0086]-[0088]; disclose that this media stream is sent to the customer in return for a payment);

streaming the requested digital content item from the content provider to the client device at a quality that varies (Figure 15, Page 5, paragraphs [0086]-[0088]; discloses that the content provider streams the requested digital content item from the content provider to the client device at a quality that varies);

monitoring, at the content provider, the streaming of the requested digital content item from a start of the streaming of the requested digital content item to an end of the streaming of the requested digital content item (Page 5, paragraph [0093]; discloses the delivery device or content provider monitors the quality. Page 5, paragraph [0087]; discloses that the monitoring is from the beginning or start of the program to the end of the program on a per program basis);

storing, at the content provider, metrics associated with the quality of the streaming of the requested digital content item during the streaming of the requested digital content item based at least in part on the monitoring (Page 5, paragraph [0093]; discloses that the content provider receives the metrics for the quality of streaming for the requested digital content item based on the monitoring. Page 3, paragraph [0056]; discloses that the history of the transactions are recorded or stored at the content provider. Figures 13-15, page 5, paragraphs [0084]-[0088]; discloses that the information which is collected and stored is done during the streaming process as it averages the amount of degradation during each individual hour of the streaming process. Specifically each of the pictures which were shown during the streaming is calculated to determine the level of degradation. Thus the system finds and collects

errors which occurred during streaming, this is stored and processed to determine compensation for the customer);

comparing, at the content provider, the stored metrics with one or more threshold values during the streaming of the requested digital content item (Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the collected and stored information is compared with threshold values for the quality of the item presented during the streaming of the requested digital content item); and

providing restitution to the user when the stored metrics indicate that the quality of the streaming fails to achieve at least one of the threshold values based at least in part on the comparing, wherein the restitution comprises at least one of an extension of a term to receive the requested digital content item or a refund of at least a portion of the payment from the user for the requested digital content item (Figure 15, page 5, paragraphs [0086]-[0088]; disclose that the customer is paid back or refunded money when the stored metrics indicate that the quality of the streaming fails to achieve the threshold values based on the comparing of the recorded quality and the expected threshold values as shown in Figure 15. As explained above the restitution is in the form of a refund either total refund or partial refund based on the level of quality).

Mizutani however fails to explicitly disclose that the quality varies based at least in part on at least one of network bandwidth or a buffer fill level of the client device and that the threshold values that are associated with a bit rate of the requested digital content item. Mizutani fails to explicitly state the bit rate is encoded.

Edwards, which like Mizutani talks about refunding a customer's money if the quality of the service is below a threshold value, teaches that it is known when streaming content to a user that the quality of the content is going to vary based **at least in part** on **at least one of** network bandwidth **or** a buffer fill level of the client device (Page 51, paragraph [0389]; discloses that the invention provides streaming content that varies based on network bandwidth);

Edwards further teaches that when determining the quality of streaming content such as the content shown in Mizutani it is known that the threshold values are associated with **a bit rate of the requested digital content item** (Page 51, paragraph [0389]; discloses that the parameters are compared to threshold values set forth in the service level agreement with the customer based on bit rate, in this example the data packets or requested digital content items are being transmitted based on a set bit rate according to the service level agreement);

Since Edwards also talks about determining the level of quality for streaming content to a user, it would have been obvious to utilize the known metrics for measuring quality in the streaming environment. That is to say when streaming digital content items such as described in Mizutani it is known that the quality of the content is going to vary based on the network bandwidth, further it is also known to measure the bit rate of the customer's streaming to determine if the quality of the items they requested is being delivered. The Mizutani reference teaches monitoring a customer's digital content item streaming to determine the overall quality of that transmission and to charge the customer accordingly. The sole difference between the Mizutani reference and the

claimed subject matter is that the Mizutani reference does not explicitly disclose that it is known for the quality of a streaming content item to vary based on network bandwidth and for the monitoring company to use bit rate to determine the quality of the transmission. The Edwards reference teaches that it is known when streaming digital content such as mentioned in Mizutani that the network bandwidth does vary the quality of the streaming content and that when monitoring the quality of the transmission it is known to check the bit rate as bit rate is a known indication of the quality of the transmission. Since each individual element and its function are shown in the prior art, albeit shown in separate references, the difference between the claimed subject matter and the prior art rests not on any individual element or function but in the very combination itself- that is in the substitution of the known metrics for measuring quality such as the network bandwidth and the overall bit rate of the transmission for the measuring of the quality through the degrading of the image disclosed in Mizutani. Thus, the simple substitution of one known element for another producing a predictable result renders the claim obvious.

Therefore, from this teaching of Edwards, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by Mizutani, with monitoring the network bandwidth and bit rate of the transmission as taught by Edwards, for the purposes of tracking and monitoring known elements which affect the quality of the digital content item stream as shown in Edwards. Since Edwards also talks about determining the level of quality for streaming content to a user, it would have been obvious to utilize the

known metrics for measuring quality in the streaming environment. That is to say when streaming digital content items such as described in Mizutani it is known that the quality of the content is going to vary based on the network bandwidth, further it is also known to measure the bit rate of the customer's streaming to determine if the quality they requested is being delivered.

The combination fails to explicitly state the bit rate is encoded.

Burkhart, which like Edwards talks about streaming bit rates, teaches it is known for the bit rate to be encoded (Page 3, paragraph [0030]; teaches that is known to use an encoded bit rate to establish the maximum and minimum bit rate, knowing these values in advance allows the system to know target values and limits. Since the combination talks about establishing the level of quality for the user it would have been obvious to use an encoded bit rate to establish these targets as shown in Burkhart).

Therefore, from this teaching of Burkhart, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by Mizutani and Edwards, with encoding a bit rate as taught by Burkhart, for the purposes of establishing and meeting targets values. Since the combination talks about establishing the level of quality for the user it would have been obvious to use an encoded bit rate to establish these targets as shown in Burkhart.

**As per claim 2**, the combination of Mizutani, Edwards and Burkhart teaches the above-enclosed invention; Mizutani further discloses wherein the providing restitution to the user occurs without a request from the user (Page 5, paragraphs [0086]-[0088];

disclose that the user is paid back for the quality if it drops below a set threshold. Page 6, paragraphs [0103]-[0104] and [0108]; disclose that the refund is based on the quality sent to the customer and automatically calculated by the service provider to deepen the subscribers' satisfaction thus the subscriber or user does not request restitution).

7. **Claim 3 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Edwards et al. (US 20080005156 A1) hereafter Edwards, further in view of Burkhart (US 2002/0006116 A1) hereafter Burkhart, further in view of n2nsoft.com: "Network planning for Quality of Experience" http://www.n2nsoft.com/uploads/File/QoE-wp-N2Nsoft.pdf (2007) hereafter N2nsoft.**

**As per claim 3**, the combination of Mizutani, Edwards and Burkhart teaches the above-enclosed invention; however fails to explicitly disclose wherein the comparing is based at least in part on a quantity of the rebuffer events that occur when a buffer of the client device is exhausted during the streaming of the requested digital content item.

N2nsoft, which like Edwards talks about providing Service Level Agreements for digital content, teaches it is known to determine Quality of service by comparing the number or quantity of rebuffering events that occur when a buffer of the client device is exhausted during the streaming of the requested digital content item (Pages 4 and 8; teach it is known to have a service level agreement or SLA as disclosed in Edwards. It also states that part of the Quality of Service is Quality of Experience and that rebuffering and loss of frame rate contribute to a lower quality of experience and as

such a lower quality of service. As such it would have been obvious to monitor these events and compare them to service level agreements to ensure the proper level of service for the customer. Since Edwards discloses monitoring the service provided to a customer and that service is streaming it would have been obvious that rebuffering and loss of frame rate are known issues with streaming and should be monitored and shown in N2nsoft. By doing this the system could determine not only the rate of transfer but the consistence of that transfer to ensure a Quality of Experience as taught in N2nsoft. This would ensure increased customer satisfaction and reliability when streaming content.

Therefore it would have been obvious not only to compare bit rate but also rebuffer and loss of frame rate and to provide restitution in accordance with a service level agreement. This way providing the most consistent and reliable service possible). Therefore, from this teaching of N2nsoft, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Edwards and Burkhart, with monitoring rebuffering and loss of frame rate as taught by N2nsoft, for the purposes of ensuring Quality of Experience for the customer. Since Edwards discloses monitoring the service provided to a customer and that service is streaming it would have been obvious that rebuffering and loss of frame rate are known issues with streaming and should be monitored and shown in N2nsoft. By doing this the system could determine not only the rate of transfer but the consistence of that transfer to ensure a Quality of Experience as taught in N2nsoft. This would ensure increased customer satisfaction and reliability when streaming content. Therefore it would have

been obvious not only to compare bit rate but also rebuffer and loss of frame rate and to provide restitution in accordance with a service level agreement. This way providing the most consistent and reliable service possible.

8. **Claim 4 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Edwards et al. (US 20080005156 A1) hereafter Edwards, further in view of Burkhart (US 2002/0006116 A1) hereafter Burkhart, in view of Friskney et al. (US 7,400,583 B2) hereafter Friskney**.

**As per claim 4**, the combination of Mizutani, Edwards and Burkhart teaches the above-enclosed invention, however fails to explicitly disclose wherein the comparing includes determining a length of time that the bit rate value is below a respective threshold value.

Friskney, which like Edwards talks about monitoring Service Level Agreements or SLAs and issuing restitution for failed services, teaches it is known that when providing restitution to determine a length of time that the bit rate value is below a respective threshold value (Col. 11, lines 18-33; teaches like Edwards that it is known to monitor the services provided and to compare them against a Service Level Agreement. It also teaches when doing so it is known that if the services fail to perform up to that threshold to automatically calculating and refund the customer based on the time it was not up to the level negotiated. Which requires the determination of the duration the threshold was not met. Since Edwards already performs the monitoring and the refund

to the customer for failure to meet threshold requirements, it would have been obvious to calculating those refunds and automatically credit the customer as shown in Friskney. This would allow the system to be automated and also eliminate the need for the customer to request the funds they are owed).

Therefore, from this teaching of Friskney, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Edwards and Burkhart, with calculating duration of the failure as taught by Friskney, for the purposes of automating the process and calculating how much is owed to the customer. Since Edwards already performs the monitoring and the refund to the customer for failure to meet threshold requirements, it would have been obvious to calculating those refunds and automatically credit the customer as shown in Friskney. This would allow the system to be automated and also eliminate the need for the customer to request the funds they are owed.

9. **Claims 6, 9, 12 and 15-16 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Edwards et al. (US 2008/0005156 A1) hereafter Edwards, further in view of Rabie et al. (US 7,092,356 B2) hereafter Rabie, further in view of Zimmermann et al. (US 6,618,776 B1) hereafter Zimmermann**.

**As per claim 6**, Mizutani discloses one or more non-transitory computer-readable storage media storing instructions (Abstract, Figure 1, Page 2, paragraphs

[0032]-[0034]; disclose that the invention contains a system which has a delivery device which includes one or more computing systems which have software which implements the invention) that when executed by one or more processors, cause the one or more processors to:

transmit, in exchange for a payment, a requested digital content item to a client device associated with a user (Page 2, paragraphs [0035]-[0036]; disclose that the system allows the terminal or client device associated with a user to specify or request a specific media stream, and also specify the content provider which is providing that specific media stream. Page 5, paragraphs [0086]-[0088]; disclose that this media stream is sent to the customer in return for a payment);

store, at a content provider, metrics associated with transmitting of the requested digital content item to the client device, the metrics associated with **at least one of** a quality of the digital content item, a quality of the transmitting of the digital content item, or a quality of rendering of the digital content item (Page 5, paragraph [0093]; discloses that the content provider receives the metrics for the quality of streaming for the requested digital content item based on the monitoring. Page 3, paragraph [0056]; discloses that the history of the transactions are recorded or stored at the content provider. Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the metrics are associated with the rendering of the digital content item, such as the degradation of the picture);

determine the stored metrics include at least one instance where the at least one of the quality of the digital content item, the quality of the transmitting, or the quality of

the rendering fails to comply with threshold values (Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the collected and stored information is compared with threshold values for the quality of the item presented during the streaming of the requested digital content item. It also discloses that the metrics are associated with the rendering of the digital content item, such as the degradation of the picture); and

determine restitution specific to the requested digital content item to provide to the user after determination of the at least one instance that fails to comply with the threshold value (Figure 15, page 5, paragraphs [0086]-[0088]; disclose that the customer is paid back or refunded money when the stored metrics indicate that the quality of the streaming fails to achieve the threshold values based on the comparing of the recorded quality and the expected threshold values as shown in Figure 15. As explained above the restitution is in the form of a refund either total refund or partial refund based on the level of quality).

Mizutani fails to explicitly state that the threshold value is based at least in part on at least one of a variable bit rate or an adaptive bit rate transmission of the digital content item. Mizutani further fails receive a request for digital content from a user, wherein the request includes request attributes associated with transmission of a digital content item; determine that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content item.

Edwards, which like Mizutani talks about refunding a customer's money if the quality of the service is below a threshold value, teaches that it is known when streaming content to a user that the quality of the content is going to vary based **at least**

**in part** on **at least one of** network bandwidth **or** a buffer fill level of the client device (Page 51, paragraph [0389]; discloses that the invention provides streaming content that varies based on network bandwidth);

Edwards further teaches that when determining the quality of streaming content such as the content shown in Mizutani it is known that the threshold values are associated with **a bit rate of the requested digital content item** (Page 51, paragraph [0389]; discloses that the parameters are compared to threshold values set forth in the service level agreement with the customer based on bit rate, in this example the data packets or requested digital content items are being transmitted based on a set bit rate according to the service level agreement);

Since Edwards also talks about determining the level of quality for streaming content to a user, it would have been obvious to utilize the known metrics for measuring quality in the streaming environment. That is to say when streaming digital content items such as described in Mizutani it is known that the quality of the content is going to vary based on the network bandwidth, further it is also known to measure the bit rate of the customer's streaming to determine if the quality of the items they requested is being delivered. The Mizutani reference teaches monitoring a customer's digital content item streaming to determine the overall quality of that transmission and to charge the customer accordingly. The sole difference between the Mizutani reference and the claimed subject matter is that the Mizutani reference does not explicitly disclose that it is known for the quality of a streaming content item to vary based on network bandwidth and for the monitoring company to use bit rate to determine the quality of the

transmission. The Edwards reference teaches that it is known when streaming digital content such as mentioned in Mizutani that the network bandwidth does vary the quality of the streaming content and that when monitoring the quality of the transmission it is known to check the bit rate as bit rate is a known indication of the quality of the transmission. Since each individual element and its function are shown in the prior art, albeit shown in separate references, the difference between the claimed subject matter and the prior art rests not on any individual element or function but in the very combination itself- that is in the substitution of the known metrics for measuring quality such as the network bandwidth and the overall bit rate of the transmission for the measuring of the quality through the degrading of the image disclosed in Mizutani. Thus, the simple substitution of one known element for another producing a predictable result renders the claim obvious.

Therefore, from this teaching of Edwards, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by Mizutani, with monitoring the network bandwidth and bit rate of the transmission as taught by Edwards, for the purposes of tracking and monitoring known elements which affect the quality of the digital content item stream as shown in Edwards. Since Edwards also talks about determining the level of quality for streaming content to a user, it would have been obvious to utilize the known metrics for measuring quality in the streaming environment. That is to say when streaming digital content items such as described in Mizutani it is known that the quality of the content is going to vary based on the network bandwidth, further it is also known

to measure the bit rate of the customer's streaming to determine if the quality they requested is being delivered.

The combination fails to explicitly state that the bit rate is variable or adaptive and further fails receive a request for digital content from a user, wherein the request includes request attributes associated with transmission of a digital content item; determine that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content item.

Rabie, which like Edwards talks about using a service level agreement to monitor and manage the quality of service to a user, teaches it is known that as a common part of a service level agreement it is known for the thresholds to be based off of a variable bit rate or a constant bit rate (Col. 2, lines 13-23; teaches that in service level agreements such as the one shown in Edwards it is known for the terms of the agreement to outline the quality of service using a constant bit rate or a variable bit rate. Since Edwards already discusses monitoring and adhering to a bit rate set forth in a service level agreement, it would have been obvious for that bit rate to be either a constant bit rate or a variable bit rate as shown in Rabie as these are known stipulations of a service level agreement).

The combination of Mizutani and Edwards teaches determining compliance of a requested digital content item with a service level agreement based on the quality of the transmission which is determined based on the bit rate.

The sole difference between the combination and the claimed subject matter is that the combination does not disclose that the bit rate is a variable bit rate.

The Rabie reference teaches that when monitoring and complying with a service level agreement it is known for the stipulations of the agreement to be based on a variable bit rate.

The Rabie reference shows that monitoring and using a variable bit rate in a service level agreement was known in the prior art at the time of the invention.

Since each individual element and its function are shown in the prior art, albeit shown in separate references, the difference between the claimed subject matter and the prior art rests not on any individual element or function but in the very combination itself- that is in the substitution of the monitoring and complying with the bit rate based on the threshold level in a service level agreement as provided in the combination of Mizutani and Edwards with the bit rate being a variable bit rate as taught by Rabie.

Thus, the simple substitution of one known element for another producing a predictable result renders the claim obvious.

Therefore, from this teaching of Rabie, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by Mizutani and Edwards, with bit rate being a variable bit rate as taught by Rabie, for the purposes of using known stipulations of service level agreements to determine the quality of service as established in Rabie. Since Edwards already discusses monitoring and adhering to a bit rate set forth in a service level agreement, it would have been obvious for that bit rate to be either a constant bit rate or a variable bit rate as shown in Rabie as these are known stipulations of a service level agreement.

The combination further fails receive a request for digital content from a user, wherein the request includes request attributes associated with transmission of a digital content item; determine that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content item.

Zimmermann, which like Edwards talks about bandwidth management, teaches receive a request for digital content from a user, wherein the request includes request attributes associated with transmission of a digital content item; determine that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content item (Col. 7, lines 7-22; teach that it each request is determined if the request is going to maintain the quality level which is expected thus it is not likely to cause a reduction in quality of the output. If it is not going to lower the quality it is allowed, this request includes a attributes. Since Mizutani and Edwards measure quality to determine service levels, it would have been obvious to check the attributes prior to determine if it will lower the quality level as shown in Zimmermann).

Therefore, from this teaching of Zimmermann, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by Mizutani, Edwards and Rabie, with determining if the request will lower the bit rate as taught by Zimmermann, for the purposes of maintaining the quality level. Since Mizutani and Edwards measure quality to determine service levels, it would have been obvious to check the attributes prior to determine if it will lower the quality level as shown in Zimmermann.

**As per claim 9**, the combination of Mizutani, Edwards, Rabie and Zimmermann teaches the above-enclosed invention, Mizutani further discloses wherein the transmitting includes streaming the digital content item to the client device for playback of the digital content item by the client device, and wherein the determining occurs concurrently with the streaming of the digital content item (Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the collected and stored information is compared with threshold values for the quality of the item presented during the streaming of the requested digital content item. This information is collected and monitored as the user streaming the content to determine the overall quality of the transmission).

**As per claim 12**, the combination of Mizutani, Edwards, Rabie and Zimmermann teaches the above-enclosed invention, Mizutani further discloses wherein the quality of the digital content item is further based at least in part on a reduction in size of the digital content item (Page 2, paragraphs [0041]-[0046] and Page 3, paragraph [0047]; discloses that during the transmission of the streaming media the system determines that transmission of the digital content item is degraded, thus the quality of the digital content item is less than what was expected. Specifically the system determines if packets are missing from the transmission, thus the overall size of the digital content has been reduced as it is missing elements causing a reduction in quality).

**As per claim 15**, the combination of Mizutani, Edwards, Rabie and Zimmermann teaches the above-enclosed invention, Mizutani further discloses wherein the threshold value includes an amount or percentage of time that the quality of the digital content **or**

the quality of the rendering of the digital content is less than a predetermined value (Figure 15, Page 5, paragraphs [0086]-[0088]; disclose that the system include the amount of time the quality of the digital content item is less than a predetermined value).

**As per claim 16**, the combination of Mizutani, Edwards, Rabie and Zimmermann teaches the above-enclosed invention; Edwards further teaches wherein the threshold value is based at least in part on a selection by the user of a quality of the digital content item (Page 51, paragraph [0389]; teaches that the quality is measured by bit rate and the that the threshold values are based on the selection by the user as part of the service level agreement).

Since Edwards also talks about determining the level of quality for streaming content to a user, it would have been obvious to utilize the known threshold values set by the user to establish the level quality expected by the user. That is to say when streaming digital content items such as described in Mizutani it is known to measure the bit rate of the customer's streaming to determine if the quality they requested is being delivered. Further it would have been obvious that those expected bit rates can be established by the user as shown in Edwards. The Mizutani reference teaches monitoring a customer's digital content item streaming to determine the overall quality of that transmission and to charge the customer accordingly. The sole difference between the Mizutani reference and the claimed subject matter is that the Mizutani reference does not explicitly disclose that it is known for the monitoring company to use bit rate and the threshold values are set by the customer to determine the quality of the transmission. The Edwards reference teaches that it is known when streaming digital

content such as mentioned in Mizutani that when monitoring the quality of the transmission it is known to check the bit rate as bit rate is a known indication of the quality of the transmission, and to compare that bit rate to a threshold set by the customer. Since each individual element and its function are shown in the prior art, albeit shown in separate references, the difference between the claimed subject matter and the prior art rests not on any individual element or function but in the very combination itself- that is in the substitution of the known metrics for measuring quality such the overall bit rate of the transmission for the measuring of the quality and comparing that rate to a rate set by the customer through the degrading of the image disclosed in Mizutani and comparing that time of degrading to a predetermine threshold. Thus, the simple substitution of one known element for another producing a predictable result renders the claim obvious.

Therefore, from this teaching of Edwards, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Edwards, Rabie and Zimmermann, with monitoring the network bandwidth and bit rate of the transmission as taught by Edwards, for the purposes of tracking and monitoring known elements which affect the quality of the digital content item stream as shown in Edwards. Since Edwards also talks about determining the level of quality for streaming content to a user, it would have been obvious to utilize the known threshold values set by the user to establish the level quality expected by the user. That is to say when streaming digital content items such as described in Mizutani it is known to measure the

bit rate of the customer's streaming to determine if the quality they requested is being delivered. Further it would have been obvious that those expected bit rates can be established by the user as shown in Edwards.

10. **Claim 7 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Edwards et al. (US 2008/0005156 A1) hereafter Edwards, further in view of Rabie et al. (US 7,092,356 B2) hereafter Rabie, further in view of Zimmermann et al. (US 6,618,776 B1) hereafter Zimmermann, further in view of Mehta et al. (US 2009/0144764 A1) hereafter Mehta.**

**As per claim 7**, the combination of Mizutani, Edwards, Rabie and Zimmermann teaches the above-enclosed invention; however fails to explicitly disclose receiving a request for restitution from the user, and wherein the determining is based at least in part on the receipt of the request.

Mehta, which like Mizutani talks about providing content to users, teaches it is known to receive a request for restitution from the user, and wherein the determining a threshold was not met is based at least in part on the receiving of the receipt of the request (Page 7, paragraphs [0056]-[0058]; teach that it is known when delivering content to a user to have the user request for a refund or restitution prior to determining that a threshold has been met. In this case upon receiving the request from the system the system then determines if there are any faults in the system. Further the system also determines if they user is allowed to request a refund. By doing this the system

prevents fraudulent claims from being processed automatically. For example if the user requests a refund for a show they did not order the system can then determine this is not proper and deny the request. Since Mizutani discloses both providing streaming services and refunding the customer, it would have been obvious to have the customer request a refund and then determine if a refund is proper as shown in Mehta to prevent fraud as shown in Mehta. This would allow the system to confirm that the service was indeed at fault prior to providing the restitution).

Therefore, from this teaching of Mehta, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Edwards, Rabie and Zimmermann, with having the customer request restitution as taught by Mehta, for the purposes of confirming the fault with the service. Since Mizutani discloses both providing streaming services and refunding the customer, it would have been obvious to have the customer request a refund and then determine if a refund is proper as shown in Mehta to prevent fraud as shown in Mehta. This would allow the system to confirm that the service was indeed at fault prior to providing the restitution.

11. **Claim 8 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Edwards et al. (US 2008/0005156 A1) hereafter Edwards, further in view of Rabie et al. (US 7,092,356 B2) hereafter Rabie, further in view of Zimmermann et al. (US 6,618,776**

**B1) hereafter Zimmermann, further in view of Netflix Notice (Provided from applicant's IDS dated Feb 23, 2011) (November 11, 2010) hereafter Netflix**.

**As per claim 8**, the combination of Mizutani, Edwards, Rabie and Zimmermann teaches the above-enclosed invention; however fails to explicitly disclose transmitting a message to the user to indicate that restitution has been provided to the user.

Netflix, which like Mizutani talks about providing streaming content to users, teaches it is known to transmit or send a message to the user to indicate that restitution has been provided to the user (Page 1; teaches it is known to provide restitution to the customer for failure to deliver a service, part of that restitution is to send the user a message or notification of the restitution and to show that the restitution was provided through the billing statement. From this since Mizutani discloses monitoring the usage of the service and providing restitution if the service failed, it would have been obvious to provide the user with a message both to notify them of the event and to ensure them of the restitution through their billing statement as shown in Netflix. This would keep the customer up to date and confirm with them that the service has kept up their end of the restitution).

Therefore, from this teaching of Netflix, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Edwards, Rabie and Zimmermann, with messaging the customer about the restitution as taught by Netflix, for the purposes of providing the user with the fault information and the manner in which restitution is to be performed. Since Mizutani discloses monitoring the usage of

the service and providing restitution if the service failed, it would have been obvious to provide the user with a message both to notify them of the event and to ensure them of the restitution through their billing statement as shown in Netflix. This would keep the customer up to date and confirm with them that the service has kept up their end of the restitution.

12. **Claim 10 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Edwards et al. (US 2008/0005156 A1) hereafter Edwards, further in view of Rabie et al. (US 7,092,356 B2) hereafter Rabie, further in view of Zimmermann et al. (US 6,618,776 B1) hereafter Zimmermann, further in view of Pippuri (US 2005/0265555) hereafter Pippuri, further in view of Netflix**.

**As per claim 10**, the combination of Mizutani, Edwards, Rabie and Zimmermann teaches the above-enclosed invention; however fails to explicitly disclose providing a message to the user in response to determination of the at least one instance, the message indicating that the quality of the digital content item or the quality of the transmitting of the digital content item fails to comply with the threshold value and, the message including an option to receive the restitution.

Pippuri, which like Mizutani talks about streaming content to a user, teaches it is known to provide a message to the user in response to determination of the at least one instance, the message indicating that the quality of the digital content or the quality of the transmitting of the digital content fails to comply with the predetermined threshold

values (Page 5, paragraph [0047]; teaches that it is known when a transmission cannot complete or a threshold is not met to message or notify the user during the process. Since Mizutani streams content it would have been obvious if that content cannot be provided as requested to inform the user during the process so they are informed instantly as shown in Pippuri. This would allow for the user to remain up to date and not continue to wait for content which cannot be provided).

Therefore, from this teaching of Pippuri, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Edwards, Rabie and Zimmermann, with notifying the user of an error in playback as taught by Pippuri, for the purposes keeping the user informed. Since Mizutani streams content it would have been obvious if that content cannot be provided as requested to inform the user during the process so they are informed instantly as shown in Pippuri. This would allow for the user to remain up to date and not continue to wait for content which cannot be provided.

The combination however fails to show where the message includes an option to receive restitution.

Netflix, which like Mizutani talks about providing streaming content to users, teaches it is known to provide the user and option to receive restitution through a message (Page 1; teaches that it is known to monitor the services provided to the customers and determine that there was a failure of service and to provide restitution. It also teaches that in order for the customer to get restitution they must submit a request

by clicking on the link in the notice. The determination is then made that the customer attempted to receive service and ultimately the service failed, at which point the service provider in this case Netflix provides restitution in the form of a partial refund. Since Mizutani discloses both providing streaming services and refunding the customer, it would have been obvious to first provide the customer with a notice of the failure of service and allow the customer to make a request for restitution. This would allow the system to confirm that the service was indeed at fault prior to providing the restitution).

Therefore, from this teaching of Netflix, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Edwards, Rabie, Zimmermann and Pippuri, with having the customer request restitution as taught by Netflix, for the purposes of confirming the fault with the service. Since Mizutani discloses both providing streaming services and refunding the customer, it would have been obvious to first provide the customer with a notice of the failure of service and allow the customer to make a request for restitution. This would allow the system to confirm that the service was indeed at fault prior to providing the restitution.

13. **Claim 11 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Edwards et al. (US 2008/0005156 A1) hereafter Edwards, further in view of Rabie et al. (US 7,092,356 B2) hereafter Rabie, further in view of Zimmermann et al. (US 6,618,776**

**B1) hereafter Zimmermann, further in view of Beerends et al. (US 2007/0030815 A1) hereafter Beerends.**

**As per claim 11**, the combination of Mizutani, Edwards, Rabie and Zimmermann teaches the above-enclosed invention; however fails to explicitly disclose wherein the quality of the transmitting is further based at least in part on a total download time for the digital content compared to an estimated download time for the digital content.

Beerends, which like Edwards talks about the transfer of media and determining the quality of that transfer, teaches it is known wherein the quality of the transmitting is based at least in part on a total download time for the digital content compared to an estimated download time for the digital content (Figures 3-4, Page 2, paragraphs [0024]-[0025], page 4 paragraph [0066] and page 5, paragraph [0092]; teaches it is known to evaluate the quality of a transmission using the estimated time of download verses the measured or actual time of download. By doing this the system can determine the level of quality of the line. Since Mizutani discloses determining the quality of the transmission by determining the packet loss (Mizutani page 2, paragraphs [0038] and [0043]) it would have been obvious to use other methods such as the estimated verses the actual download times as shown in Beerends. This would allow the user to access the connection and determine if the quality is up to the terms set forth in the service level agreement).

Therefore, from this teaching of Beerends, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Edwards,

Rabie and Zimmermann, with measuring quality by comparing estimated and actual download times as taught by Beerends, for the purposes determining the quality of the connection and if it met the standards set forth by the customer. Since Mizutani discloses determining the quality of the transmission by determining the packet loss (Mizutani page 2, paragraphs [0038] and [0043]) it would have been obvious to use other methods such as the estimated verses the actual download times as shown in Beerends. This would allow the user to access the connection and determine if the quality is up to the terms set forth in the service level agreement.

14. **Claims 13-14 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Edwards et al. (US 2008/0005156 A1) hereafter Edwards, further in view of Rabie et al. (US 7,092,356 B2) hereafter Rabie, further in view of Zimmermann et al. (US 6,618,776 B1) hereafter Zimmermann, further in view of N2nsoft.**

**As per claim 13**, the combination of Mizutani, Edwards, Rabie and Zimmermann teaches the above-enclosed invention; however fails to explicitly disclose wherein the quality of the transmitting is further based at least in part on a quantity of one or more rebuffer events that occur when a buffer of the client device is exhausted during the transmitting.

N2nsoft, which like Mizutani talks about monitoring quality for digital content, teaches it is known to determine Quality of service by comparing the number or quantity of rebuffering events (Pages 4 and 8; teach it is known to monitor the quality for digital

content as disclosed in Mizutani. It also states that part of the Quality of Service is Quality of Experience and that rebuffering and loss of frame rate contribute to a lower quality of experience and as such a lower quality of service. As such it would have been obvious to monitor these events and compare them to service level agreements to ensure the proper level of service for the customer. Since Mizutani discloses monitoring the service provided to a customer and that service is streaming it would have been obvious that rebuffering and loss of frame rate are known issues with streaming and should be monitored and shown in N2nsoft. By doing this the system could determine not only the rate of transfer but the consistence of that transfer to ensure a Quality of Experience as taught in N2nsoft. This would ensure increased customer satisfaction and reliability when streaming content. Therefore it would have been obvious not only to compare quality level but also rebuffer and loss of frame rate and to provide restitution in accordance with a service. This way providing the most consistent and reliable service possible).

Therefore, from this teaching of N2nsoft, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Edwards, Rabie and Zimmermann, with monitoring rebuffering and loss of frame rate as taught by N2nsoft, for the purposes of ensuring Quality of Experience for the customer. Since Mizutani discloses monitoring the service provided to a customer and that service is streaming it would have been obvious that rebuffering and loss of frame rate are known issues with streaming and should be monitored and shown in N2nsoft. By doing this the

system could determine not only the rate of transfer but the consistence of that transfer to ensure a Quality of Experience as taught in N2nsoft. This would ensure increased customer satisfaction and reliability when streaming content. Therefore it would have been obvious not only to compare quality level but also rebuffer and loss of frame rate and to provide restitution in accordance with a service. This way providing the most consistent and reliable service possible.

**As per claim 14**, the combination of Mizutani, Edwards, Rabie and Zimmermann teaches the above-enclosed invention; however fails to explicitly disclose wherein the quality of the rendering of the digital content is further based at least in part on a frame rate rendered by the client.

N2nsoft, which like Mizutani talks about monitoring quality for digital content, teaches it is known to determine Quality of service by determining the quality of the rendering of the digital content is further based at least in part on a frame rate rendered by the client (Pages 4 and 8; teach it is known to monitor the quality for digital content as disclosed in Mizutani. It also states that part of the Quality of Service is Quality of Experience and that rebuffering and loss of frame rate contribute to a lower quality of experience and as such a lower quality of service. As such it would have been obvious to monitor these events and compare them to service level agreements to ensure the proper level of service for the customer. Since Mizutani discloses monitoring the service provided to a customer and that service is streaming it would have been obvious that rebuffering and loss of frame rate are known issues with streaming and should be monitored and shown in N2nsoft. By doing this the system could determine not only the

rate of transfer but the consistence of that transfer to ensure a Quality of Experience as taught in N2nsoft. This would ensure increased customer satisfaction and reliability when streaming content. Therefore it would have been obvious not only to compare quality level of the transmission but also rebuffer and loss of frame rate and to provide restitution in accordance with a service level agreement. This way providing the most consistent and reliable service possible).

Therefore, from this teaching of N2nsoft, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Edwards, Rabie and Zimmermann, with monitoring rebuffering and loss of frame rate as taught by N2nsoft, for the purposes of ensuring Quality of Experience for the customer. Since Mizutani discloses monitoring the service provided to a customer and that service is streaming it would have been obvious that rebuffering and loss of frame rate are known issues with streaming and should be monitored and shown in N2nsoft. By doing this the system could determine not only the rate of transfer but the consistence of that transfer to ensure a Quality of Experience as taught in N2nsoft. This would ensure increased customer satisfaction and reliability when streaming content. Therefore it would have been obvious not only to compare quality level of the transfer but also rebuffer and loss of frame rate and to provide restitution in accordance with a service level agreement. This way providing the most consistent and reliable service possible.

15. **Claims 17-18 and 22 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Pippuri (US 2005/0265555) hereafter Pippuri, further in view of Netflix, Davies et al. (US 7,006,435 B1) hereafter Davies, further in view of Zimmermann et al. (US 6,618,776 B1) hereafter Zimmermann**.

**As per claim 17**, Mizutani discloses one or more non-transitory computer-readable media storing computer-executable instructions (Figure 1, Page 2, paragraphs [0032]-[0034]; disclose that the invention contains a system which has a delivery device which includes one or more computing systems which have software which implements the invention) that, when executed on one or more processors, cause the one or more processors to:

receive a request for digital content from a user, (Page 2, paragraphs [0035]-[0036]; disclose that the system allows the terminal or client device associated with a user to specify or request a specific media stream, and also specify the content provider which is providing that specific media stream. Page 5, paragraphs [0086]-[0088]; disclose that this media stream is sent to the customer in return for a payment);

determine that the request received from the user cause one or more of: an interruption in the transmission of the digital content, or a reduction in quality of the digital content (Page 2, paragraphs [0041]-[0046] and Page 3, paragraph [0047]; discloses that during the transmission of the streaming media the system determines that transmission of the digital content item is degraded, thus the quality of the digital content item is less than what was expected. Specifically the system determines if

packets are missing from the transmission, thus the overall size of the digital content has been reduced as it is missing elements causing a reduction in quality);

transmit the digital content to a client device associated with the user (Page 2, paragraphs [0035]-[0036]; disclose that the system allows the terminal or client device associated with a user to specify or request a specific media stream, and also specify the content provider which is providing that specific media stream. Page 5, paragraphs [0086]-[0088]; disclose that this media stream is sent to the customer in return for a payment);

store performance attribute information associated with transmission, the performance attribute information associated with at least one of the quality of the output of digital content or a quality of transmission of the digital content (Page 5, paragraph [0093]; discloses that the content provider receives the metrics for the quality of streaming for the requested digital content item based on the monitoring. Page 3, paragraph [0056]; discloses that the history of the transactions are recorded or stored at the content provider. Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the metrics are associated with the rendering of the digital content item, such as the degradation of the picture);

determine that the stored performance attribute information includes at least one instance where the at least one of the quality of the output of the digital content or the quality of the transmission of the digital content fails to comply with one or more threshold values (Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the collected and stored information is compared with threshold values for the quality of the

item presented during the streaming of the requested digital content item. It also discloses that the metrics are associated with the rendering of the digital content item, such as the degradation of the picture);

provide a message to the user of the client device in response to determining the at least one instance, the message indicating that the quality of the output of the digital content or the quality of the transmission of the digital content fails to comply with the one or more threshold values and including an option to receive restitution; and

provide restitution to the user in response to the user exercising the option to receive the restitution (Figure 15, page 5, paragraphs [0086]-[0088]; disclose that the customer is paid back or refunded money when the stored metrics indicate that the quality of the streaming fails to achieve the threshold values based on the comparing of the recorded quality and the expected threshold values as shown in Figure 15. As explained above the restitution is in the form of a refund either total refund or partial refund based on the level of quality).

Mizutani however fails to explicitly disclose wherein the request includes request attributes associated with the transmission of the digital content; determine whether the request attributes received from the user are likely to cause one or more of: an interruption in the transmission of the digital content, or a reduction in quality of the digital content and provide a message to the user of the client device in response to determining the at least one instance, the message indicating that the quality of the digital content or the quality of the transmission of the digital content fails to comply with the one or more threshold values and including an option to receive restitution. Mizutani

however fails to explicitly state determine that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content.

Pippuri, which like Mizutani talks about streaming content to a user, teaches it is known to provide a message to the user of the client device in response to determining the at least one instance, the message indicating that the quality of the digital content or the quality of the transmission of the digital content fails to comply with the one or more threshold values (Page 5, paragraph [0047]; teaches that it is known when a transmission cannot complete or a threshold is not met to message or notify the user during the process. Since Mizutani streams content it would have been obvious if that content cannot be provided as requested to inform the user during the process so they are informed instantly as shown in Pippuri. This would allow for the user to remain up to date and not continue to wait for content which cannot be provided).

Therefore, from this teaching of Pippuri, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by Mizutani, with notifying the user of an error in playback as taught by Pippuri, for the purposes keeping the user informed. Since Mizutani streams content it would have been obvious if that content cannot be provided as requested to inform the user during the process so they are informed instantly as shown in Pippuri. This would allow for the user to remain up to date and not continue to wait for content which cannot be provided.

The combination however fails to show wherein the request includes request attributes associated with the transmission of the digital content; determine whether the

request attributes received from the user are likely to cause one or more of: an interruption in the transmission of the digital content, or a reduction in quality of the digital content and where the message includes an option to receive restitution. The combination further fails to explicitly state determine that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content.

Netflix, which like Mizutani talks about providing streaming content to users, teaches it is known to receive, via a user input associated with the presentation interface, a user input accepting the restitution (Page 1; teaches that it is known to monitor the services provided to the customers and determine that there was a failure of service and to provide restitution. It also teaches that in order for the customer to get restitution they must submit a request by clicking on the link in the notice. The determination is then made that the customer attempted to receive service and ultimately the service failed, at which point the service provider in this case Netflix provides restitution in the form of a partial refund. Since Mizutani discloses both providing streaming services and refunding the customer, it would have been obvious to first provide the customer with a notice of the failure of service and allow the customer to make a request for restitution. This would allow the system to confirm that the service was indeed at fault prior to providing the restitution).

Therefore, from this teaching of Netflix, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by Mizutani and Pippuri, with having the

customer request restitution as taught by Netflix, for the purposes of confirming the fault with the service. Since Mizutani discloses both providing streaming services and refunding the customer, it would have been obvious to first provide the customer with a notice of the failure of service and allow the customer to make a request for restitution. This would allow the system to confirm that the service was indeed at fault prior to providing the restitution.

Davis, which like Mizutani talks about implementing a transmission of data according to a set quality of service, teaches it is known for the request to include request attributes associated with the transmission of the content and to determine whether the requested attributes received from the user are likely to cause one or more of: an interruption in the transmission of the digital content, or a reduction in quality of the digital content (Col. 3, line 53 through Col. 4, line 9, Col. 8, lines 47-54 and Col. 21, lines 39-59; teach that when receive request such as the one shown in Mizutani it is known to receive along with the request attributes, in this case parameters for quality of service. The system then determines based on those parameters if the request would cause a reduction in quality of the transmission and the content itself which is requested. If the likelihood is at an unacceptable level the transmission is rejected, however if it is acceptable the transmission is processed. This allows the system to adhere to the terms of the quality of service. Since Mizutani already collects the same information and makes the same determination it would have been obvious to perform this modeling step to determine if the request should be rejected or processed, thus ensuring the quality of service as shown in Davis).

Therefore, from this teaching of Davis, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by Mizutani, Pippuri and Netflix, with the request including parameters for the request and determining based on those parameters if the request will cause a reduction in quality as taught by Davis, for the purposes of ensuring each transmission adheres to the terms of the quality of service as shown in Davis. Since Mizutani already collects the same information and makes the same determination it would have been obvious to perform this modeling step to determine if the request should be rejected or processed, thus ensuring the quality of service as shown in Davis.

The combination fails to explicitly state determine that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content.

Zimmermann, which like Mizutani talks about data management, teaches determining that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content (Col. 7, lines 7-22; teach that it each request is determined if the request is going to maintain the quality level which is expected thus it is not likely to cause a reduction in quality of the output. If it is not going to lower the quality it is allowed, this request includes a attributes. Since Mizutani measure quality to determine service levels, it would have been obvious to check the attributes prior to determine if it will lower the quality level as shown in Zimmermann).

Therefore, from this teaching of Zimmermann, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by Mizutani, Pippuri, Netflix and Davis, with determining if the request will lower the bit rate as taught by Zimmermann, for the purposes of maintaining the quality level. Since Mizutani measure quality to determine service levels, it would have been obvious to check the attributes prior to determine if it will lower the quality level as shown in Zimmermann.

**As per claim 18**, the combination of Mizutani, Pippuri, Netflix, Davis and Zimmermann teaches the above-enclosed invention; Netflix further teaches it is known to receive a request for restitution from the user, and the providing the restitution is performed at least partly in response to receipt of a request for restitution from the user (Page 1; teaches that it is known to monitor the services provided to the customers and determine that there was a failure of service and to provide restitution. It also teaches that in order for the customer to get restitution they must submit a request by clicking on the link in the notice. The determination is then made that the customer attempted to receive service and ultimately the service failed, at which point the service provider in this case Netflix provides restitution in the form of a partial refund. Since Mizutani discloses both providing streaming services and refunding the customer, it would have been obvious to first provide the customer with a notice of the failure of service and allow the customer to make a request for restitution. This would allow the system to confirm that the service was indeed at fault prior to providing the restitution).

**As per claim 22**, the combination of Mizutani, Pippuri, Netflix, Davis and Zimmermann teaches the above-enclosed invention; Pippuri further teaches it is known to wherein the message to the user includes information related to the at least one instance where the quality of the output of the digital content or the quality of the streaming of the digital content fails to comply with one or more threshold values (Page 5, paragraph [0047]; teaches that it is known when a transmission cannot complete or a threshold is not met to message or notify the user during the process and include information related to the event. Since Mizutani streams content it would have been obvious if that content cannot be provided as requested to inform the user during the process so they are informed instantly as shown in Pippuri. This would allow for the user to remain up to date and not continue to wait for content which cannot be provided).

16. **Claim 19 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Pippuri (US 2005/0265555) hereafter Pippuri, further in view of Netflix, Davies et al. (US 7,006,435 B1) hereafter Davies, further in view of Zimmermann et al. (US 6,618,776 B1) hereafter Zimmermann, further in view of Snelgrove (US 6,535,592 B1) hereafter Snelgrove**.

**As per claim 19**, the combination of Mizutani, Pippuri, Netflix, Davis and Zimmermann teaches the above-enclosed invention; however fails to explicitly disclose wherein the restitution is an extension of a license to receive or play the digital content.

Snelgrove, which like Mizutani talks about compensating a user for failure to comply with negotiated terms, teaches it is known to for the restitution or compensation to be in an extension of service or free time to use the service that failed (Col. 10, line 53 through Col. 11, line 13; teaches it is known to compensate the user in different manners, one of which is to extend the time given to the user for a service. Since in Mizutani the service is streaming media, it would have been obvious that that media requires a license and in order to play it for a longer period of time it would be necessary to extend that license to compensate the user for time lost. As stated in Snelgrove this manner of compensation is known and would have therefore been obvious to implement in place of a refund or discount).

Therefore, from this teaching of Snelgrove, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Pippuri, Netflix, Davis and Zimmermann, with compensating the user with additional time as taught by Snelgrove, for the purposes of allowing the user to view the streaming media they originally could not view. Since in Mizutani the service is streaming media, it would have been obvious that that media requires a license and in order to play it for a longer period of time it would be necessary to extend that license to compensate the user for time lost. As stated in Snelgrove this manner of compensation is known and would have therefore been obvious to implement in place of a refund or discount.

17. **Claim 20 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Pippuri (US 2005/0265555) hereafter Pippuri, further in view of Netflix, Davies et al. (US 7,006,435 B1) hereafter Davies, further in view of Zimmermann et al. (US 6,618,776 B1) hereafter Zimmermann, further in view of Edwards et al. (US 2008/0005156 A1) hereafter Edwards**.

**As per claim 20**, the combination of Mizutani, Pippuri, Netflix, Davis and Zimmermann teaches the above-enclosed invention, however fails to explicitly disclose wherein at least one of the quality of the output of the digital content or the quality of the transmission is based at least in part on a bit rate associated with the digital content.

Edwards, which like Mizutani talks about refunding a customer's money if the quality of the service is below a threshold value, teaches that it is known when streaming content to a user that the quality of the content is going to vary based **at least in part** on **at least one of** network bandwidth **or** a buffer fill level of the client device (Page 51, paragraph [0389]; discloses that the invention provides streaming content that varies based on network bandwidth);

Edwards further teaches that when determining the quality of streaming content such as the content shown in Mizutani it is known for the at least one of the quality of the digital content or the quality of the transmission is based at least in part one a bit rate associated with the digital content (Page 51, paragraph [0389]; discloses that the parameters are compared to threshold values set forth in the service level agreement with the customer based on bit rate, in this example the data packets or requested

digital content items are being transmitted based on a set bit rate according to the service level agreement);

Since Edwards also talks about determining the level of quality for streaming content to a user, it would have been obvious to utilize the known metrics for measuring quality in the streaming environment. That is to say when streaming digital content items such as described in Mizutani it is known that the quality of the content is going to vary based on the network bandwidth, further it is also known to measure the bit rate of the customer's streaming to determine if the quality of the items they requested is being delivered. The Mizutani reference teaches monitoring a customer's digital content item streaming to determine the overall quality of that transmission and to charge the customer accordingly. The sole difference between the Mizutani reference and the claimed subject matter is that the Mizutani reference does not explicitly disclose that it is known for the quality of a streaming content item to vary based on network bandwidth and for the monitoring company to use bit rate to determine the quality of the transmission. The Edwards reference teaches that it is known when streaming digital content such as mentioned in Mizutani that the network bandwidth does vary the quality of the streaming content and that when monitoring the quality of the transmission it is known to check the bit rate as bit rate is a known indication of the quality of the transmission. Since each individual element and its function are shown in the prior art, albeit shown in separate references, the difference between the claimed subject matter and the prior art rests not on any individual element or function but in the very combination itself- that is in the substitution of the known metrics for measuring quality

such as the network bandwidth and the overall bit rate of the transmission for the measuring of the quality through the degrading of the image disclosed in Mizutani. Thus, the simple substitution of one known element for another producing a predictable result renders the claim obvious.

Therefore, from this teaching of Edwards, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Pippuri, Netflix, Davis and Zimmermann, with monitoring the network bandwidth and bit rate of the transmission as taught by Edwards, for the purposes of tracking and monitoring known elements which affect the quality of the digital content item stream as shown in Edwards. Since Edwards also talks about determining the level of quality for streaming content to a user, it would have been obvious to utilize the known metrics for measuring quality in the streaming environment. That is to say when streaming digital content items such as described in Mizutani it is known that the quality of the content is going to vary based on the network bandwidth, further it is also known to measure the bit rate of the customer's streaming to determine if the quality they requested is being delivered.

18. **Claim 21 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Pippuri (US 2005/0265555) hereafter Pippuri, further in view of Netflix, Davies et al. (US 7,006,435 B1) hereafter Davies, further in view of Zimmermann et al. (US 6,618,776 B1) hereafter Zimmermann, further in view of N2nsoft.**

**As per claim 21**, the combination of Mizutani, Pippuri, Netflix, Davis and Zimmermann teaches the above-enclosed invention; however fails to explicitly disclose wherein the quality of the transmission is based at least in part on a quantity of one or more rebuffer events that occur when a buffer of the client device is exhausted during the transmission.

N2nsoft, which like Mizutani talks about providing Service Level Agreements for digital content, teaches it is known for the quality of the transmission is based at least in part on a quantity of one or more rebuffer events that occur when a buffer of the client device is exhausted during the transmission (Pages 4 and 8; teach it is known to have a service level agreement or SLA as disclosed in Mizutani. It also states that part of the Quality of Service is Quality of Experience and that rebuffering and loss of frame rate contribute to a lower quality of experience and as such a lower quality of service. As such it would have been obvious to monitor these events and compare them to service level agreements to ensure the proper level of service for the customer. Since Mizutani discloses monitoring the service provided to a customer and that service is streaming it would have been obvious that rebuffering and loss of frame rate are known issues with streaming and should be monitored and shown in N2nsoft. By doing this the system could determine not only the rate of transfer but the consistence of that transfer to ensure a Quality of Experience as taught in N2nsoft. This would ensure increased customer satisfaction and reliability when streaming content. Therefore it would have been obvious not only to compare bit rate but also rebuffer and loss of frame rate and to

provide restitution in accordance with a service level agreement. This way providing the most consistent and reliable service possible).

Therefore, from this teaching of N2nsoft, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Pippuri, Netflix and Davis, with monitoring rebuffering and loss of frame rate as taught by N2nsoft, for the purposes of ensuring Quality of Experience for the customer. Since Mizutani discloses monitoring the service provided to a customer and that service is streaming it would have been obvious that rebuffering and loss of frame rate are known issues with streaming and should be monitored and shown in N2nsoft. By doing this the system could determine not only the rate of transfer but the consistence of that transfer to ensure a Quality of Experience as taught in N2nsoft. This would ensure increased customer satisfaction and reliability when streaming content. Therefore it would have been obvious not only to compare bit rate but also rebuffer and loss of frame rate and to provide restitution in accordance with a service level agreement. This way providing the most consistent and reliable service possible.

19. **Claims 23-24 and 26 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Pippuri (US 2005/0265555) hereafter Pippuri, further in view of Netflix, further in view of Zimmermann et al. (US 6,618,776 B1) hereafter Zimmermann**.

**As per claim 23**, Mizutani discloses a method (Abstract) comprising:

under control of one or more computer systems configured with executable instructions (Figure 1, Page 2, paragraphs [0032]-[0034]; disclose that the invention contains a system which has a delivery device which includes one or more computing systems which have software which implements the invention):

streaming a digital content item to a client device associated with a user (Page 2, paragraphs [0035]-[0036]; disclose that the system allows the terminal or client device associated with a user to specify or request a specific media stream, and also specify the content provider which is providing that specific media stream. Page 5, paragraphs [0086]-[0088]; disclose that this media stream is sent to the customer in return for a payment);

monitoring parameters indicative of a user experience associated with the streaming of the digital content item during the streaming of the digital content item (Page 5, paragraph [0093]; discloses that the content provider receives the metrics for the quality of streaming for the requested digital content item based on the monitoring. Page 3, paragraph [0056]; discloses that the history of the transactions are recorded or stored at the content provider. Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the metrics are associated with the rendering of the digital content item, such as the degradation of the picture);

determining, by the one or more computer systems, during the streaming and based at least in part on the monitored parameters, whether a quality of the user experience is less than a threshold value (Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the collected and stored information is compared with threshold values for

the quality of the item presented during the streaming of the requested digital content item. It also discloses that the metrics are associated with the rendering of the digital content item, such as the degradation of the picture); and

initiating restitution to the user based at least in part on determining that the quality is less than then threshold value (Figure 15, page 5, paragraphs [0086]-[0088]; disclose that the customer is paid back or refunded money when the stored metrics indicate that the quality of the streaming fails to achieve the threshold values based on the comparing of the recorded quality and the expected threshold values as shown in Figure 15. As explained above the restitution is in the form of a refund either total refund or partial refund based on the level of quality).

Mizutani however fails to explicitly disclose presenting a message to the user on a presentation interface associated with the client device offering restitution to the user upon determining that the quality of the user experience is less than the threshold value; receiving, via a user input associated with the presentation interface, a user input accepting the restitution. Mizutani further fails to explicitly disclose determine that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content item.

Pippuri, which like Mizutani talks about streaming content to a user, teaches it is known to present a message to the user on a presentation interface associated with the client device offering restitution to the user upon determining that the quality of the user experience is less than the threshold value (Page 5, paragraph [0047]; teaches that it is known when a transmission cannot complete or a threshold is not met to message or

notify the user during the process. Since Mizutani streams content it would have been obvious if that content cannot be provided as requested to inform the user during the process so they are informed instantly as shown in Pippuri. This would allow for the user to remain up to date and not continue to wait for content which cannot be provided).

Therefore, from this teaching of Pippuri, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by Mizutani, with notifying the user of an error in playback as taught by Pippuri, for the purposes keeping the user informed. Since Mizutani streams content it would have been obvious if that content cannot be provided as requested to inform the user during the process so they are informed instantly as shown in Pippuri. This would allow for the user to remain up to date and not continue to wait for content which cannot be provided.

The combination however fails to show where the message includes an option to receive restitution and further fails to explicitly disclose determine that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content item.

Netflix, which like Mizutani talks about providing streaming content to users, teaches it is known to receive, via a user input associated with the presentation interface, a user input accepting the restitution (Page 1; teaches that it is known to monitor the services provided to the customers and determine that there was a failure of service and to provide restitution. It also teaches that in order for the customer to get

restitution they must submit a request by clicking on the link in the notice. The determination is then made that the customer attempted to receive service and ultimately the service failed, at which point the service provider in this case Netflix provides restitution in the form of a partial refund. Since Mizutani discloses both providing streaming services and refunding the customer, it would have been obvious to first provide the customer with a notice of the failure of service and allow the customer to make a request for restitution. This would allow the system to confirm that the service was indeed at fault prior to providing the restitution).

Therefore, from this teaching of Netflix, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by Mizutani and Pippuri, with having the customer request restitution as taught by Netflix, for the purposes of confirming the fault with the service. Since Mizutani discloses both providing streaming services and refunding the customer, it would have been obvious to first provide the customer with a notice of the failure of service and allow the customer to make a request for restitution. This would allow the system to confirm that the service was indeed at fault prior to providing the restitution.

The combination further fails to explicitly disclose determine that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content item.

Zimmermann, which like Mizutani talks about data management, teaches determining that the request attributes received from the user are not likely to cause a

reduction in a quality of an output of the digital content (Col. 7, lines 7-22; teach that it each request is determined if the request is going to maintain the quality level which is expected thus it is not likely to cause a reduction in quality of the output. If it is not going to lower the quality it is allowed, this request includes a attributes. Since Mizutani measure quality to determine service levels, it would have been obvious to check the attributes prior to determine if it will lower the quality level as shown in Zimmermann).

Therefore, from this teaching of Zimmermann, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by Mizutani, Pippuri and Netflix, with determining if the request will lower the bit rate as taught by Zimmermann, for the purposes of maintaining the quality level. Since Mizutani measure quality to determine service levels, it would have been obvious to check the attributes prior to determine if it will lower the quality level as shown in Zimmermann.

**As per claim 24**, the combination of Mizutani, Pippuri, Netflix and Zimmermann teach the above-enclosed invention, Mizutani further discloses wherein the user experience associated with the streaming of the digital content item is based at least in part on **at least one of** a quality of transmission of the digital content item, a quality of the digital content item, **or** a quality of rendering of the digital content item (Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the metrics are associated with the rendering of the digital content item, such as the degradation of the picture).

**As per claim 26**, the combination of Mizutani, Pippuri, Netflix and Zimmermann teach the above-enclosed invention, Mizutani further discloses wherein the monitoring

the user experience comprises determining an amount or percentage of time a lower quality level of the digital content item is streamed to the client device as compared to a selected quality of the digital content item that is expected to be received by the client device (Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the collected and stored information is compared with threshold values for the quality of the item presented during the streaming of the requested digital content item. It also discloses that the metrics are associated with the rendering of the digital content item, such as the degradation of the picture. The system determines the amount of time the quality level of the digital content item is lower than what is expected);

the threshold value comprises a threshold amount or percentage of time (Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the collected and stored information is compared with threshold values for the quality of the item presented during the streaming of the requested digital content item. It also discloses that the metrics are associated with the rendering of the digital content item, such as the degradation of the picture. Figure 15 shows there is a threshold amount of time); and

the initiating the restitution occurs at least partly in response to determining that the streaming of the digital content item occurs at the lower quality level for an amount or percentage of time that is greater than the threshold amount or percentage of time (Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the collected and stored information is compared with threshold values for the quality of the item presented during the streaming of the requested digital content item. It also discloses that the metrics are associated with the rendering of the digital content item, such as the

degradation of the picture. The refund is based off of the amount of time determined where the quality was lower than expected).

20. **Claims 25 and 27 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Pippuri (US 2005/0265555) hereafter Pippuri, further in view of Netflix, further in view of Zimmermann et al. (US 6,618,776 B1) hereafter Zimmermann, further in view of N2nsoft.**

**As per claim 25**, the combination of Mizutani, Pippuri, Netflix and Zimmermann teaches the above-enclosed invention; Mizutani further discloses the monitoring the user experience comprises determining that and event occurred on the client device during the streaming (Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the collected and stored information is compared with threshold values for the quality of the item presented during the streaming of the requested digital content item. It also discloses that the metrics are associated with the rendering of the digital content item, such as the degradation of the picture. The event is determined for a particular program and if the quality of the program is less than what is expected);

the threshold value comprises a threshold number events (Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the collected and stored information is compared with threshold values for the quality of the item presented during the streaming of the requested digital content item. It also discloses that the metrics are

associated with the rendering of the digital content item, such as the degradation of the picture. The threshold values are the number of times and duration of those times); and

the initiating the restitution occurs at least partly in response to determining that the number of events that occurred on the client device is greater than the threshold number of events (Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the collected and stored information is compared with threshold values for the quality of the item presented during the streaming of the requested digital content item. It also discloses that the metrics are associated with the rendering of the digital content item, such as the degradation of the picture. As shown in Figure 15 the total amount or number of times the quality was reduced is summed and then compared to a threshold to determine how much to refund the customer).

Mizutani fails to explicitly disclose where the event is number of rebuffer events.

N2nsoft, which like Mizutani talks about streaming content to a user, teaches it is known to determine Quality of service by comparing the number or quantity of rebuffering events (Pages 4 and 8; teach it is known to monitor the quality of service for a customer as shown in Mizutani. It also states that part of the Quality of Service is Quality of Experience and that rebuffering and loss of frame rate contribute to a lower quality of experience and as such a lower quality of service. As such it would have been obvious to monitor these events and compare them to service level agreements to ensure the proper level of service for the customer. Since Mizutani discloses monitoring the service provided to a customer and that service is streaming it would have been obvious that rebuffering and loss of frame rate are known issues with streaming and

should be monitored and shown in N2nsoft. By doing this the system could determine not only the rate of transfer but the consistence of that transfer to ensure a Quality of Experience as taught in N2nsoft. This would ensure increased customer satisfaction and reliability when streaming content. Therefore it would have been obvious not only to compare the image quality but also rebuffer and loss of frame rate and to provide restitution in accordance with a service level agreement. This way providing the most consistent and reliable service possible).

Therefore, from this teaching of N2nsoft, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Pippuri, Netflix and Zimmermann, with monitoring rebuffering and loss of frame rate as taught by N2nsoft, for the purposes of ensuring Quality of Experience for the customer. Since Mizutani discloses monitoring the service provided to a customer and that service is streaming it would have been obvious that rebuffering and loss of frame rate are known issues with streaming and should be monitored and shown in N2nsoft. By doing this the system could determine not only the rate of transfer but the consistence of that transfer to ensure a Quality of Experience as taught in N2nsoft. This would ensure increased customer satisfaction and reliability when streaming content. Therefore it would have been obvious not only to compare the image quality but also rebuffer and loss of frame rate and to provide restitution in accordance with a service level agreement. This way providing the most consistent and reliable service possible.

**As per claim 27**, the combination of Mizutani, Pippuri, Netflix and Zimmermann teach the above-enclosed invention, Mizutani further discloses the threshold value comprises a threshold amount or percentage of time (Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the collected and stored information is compared with threshold values for the quality of the item presented during the streaming of the requested digital content item. It also discloses that the metrics are associated with the rendering of the digital content item, such as the degradation of the picture. The system determines the amount of time the quality level of the digital content item is lower than what is expected); and

the initiating the restitution occurs at least partly in response to determining that the rendering of the digital content item occurs at the lower rate for an amount or percentage of time that is greater than the threshold amount or percentage of time (Figure 15, page 5, paragraphs [0086]-[0088]; discloses that the collected and stored information is compared with threshold values for the quality of the item presented during the streaming of the requested digital content item. It also discloses that the metrics are associated with the rendering of the digital content item, such as the degradation of the picture. The refund is based off of the amount of time determined where the quality was lower than expected).

Mizutani however fails to explicitly disclose wherein the monitoring the user experience comprises determining an amount or percentage of time a lower frame rate of the digital content rendered by the client device as compared to an anticipated frame

rate of the digital content that is expected to be rendered by the client device and determining that the rendering of the digital content occurs at the lower frame rate;

N2nsoft, which like Mizutani talks about streaming content to a user, teaches it is known to determine Quality of service by determining an amount or percentage of time a lower frame rate of the digital content rendered by the client device as compared to an anticipated frame rate of the digital content that is expected to be rendered by the client device and determining that the rendering of the digital content occurs at the lower frame rate (Pages 4 and 8; teach it is known to monitor the quality of service as shown in Mizutani. It also states that part of the Quality of Service is Quality of Experience and that rebuffering and loss of frame rate contribute to a lower quality of experience and as such a lower quality of service. As such it would have been obvious to monitor these events and compare them to service level agreements to ensure the proper level of service for the customer. Since Mizutani discloses monitoring the service provided to a customer and that service is streaming it would have been obvious that rebuffering and loss of frame rate are known issues with streaming and should be monitored and shown in N2nsoft. By doing this the system could determine not only the rate of transfer but the consistence of that transfer to ensure a Quality of Experience as taught in N2nsoft. This would ensure increased customer satisfaction and reliability when streaming content. Therefore it would have been obvious not only to compare image quality but also rebuffer and loss of frame rate and to provide restitution in accordance with a service level agreement. This way providing the most consistent and reliable service possible).

Therefore, from this teaching of N2nsoft, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Pippuri, Netflix and Zimmermann, with monitoring rebuffering and loss of frame rate as taught by N2nsoft, for the purposes of ensuring Quality of Experience for the customer. Since Mizutani discloses monitoring the service provided to a customer and that service is streaming it would have been obvious that rebuffering and loss of frame rate are known issues with streaming and should be monitored and shown in N2nsoft. By doing this the system could determine not only the rate of transfer but the consistence of that transfer to ensure a Quality of Experience as taught in N2nsoft. This would ensure increased customer satisfaction and reliability when streaming content. Therefore it would have been obvious not only to compare image quality but also rebuffer and loss of frame rate and to provide restitution in accordance with a service level agreement. This way providing the most consistent and reliable service possible.

21. **Claim 28 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 2002/0138846 A1) hereafter Mizutani, in view of Edwards et al. (US 2008/0005156 A1) hereafter Edwards, further in view of Burkhart (US 2002/0006116 A1) hereafter Burkhart, further in view of Mehta et al. (US 2009/0144764 A1) hereafter Mehta**.

**As per claim 28**, the combination of Mizutani, Edwards and Burkhart teaches the above-enclosed invention; however fails to explicitly disclose determining, at the content

provider, whether a fraud has occurred when the stored metrics indicate that the quality of the streaming fails to achieve at least one of the threshold values.

Mehta, which like Mizutani talks about providing content to users, teaches it is known to determine, at the content provider, whether a fraud has occurred when the stored metrics indicate that the quality of the streaming fails to achieve at least one of the threshold values (Page 7, paragraphs [0056]-[0058]; teach that it is known when delivering content to a user to have the user request for a refund. In this case upon receiving the request from the user the system determines if they user is allowed to request a refund. By doing this the system prevents fraudulent claims from being processed automatically. For example if the user requests a refund for a show they did not order the system can then determine this is not proper and deny the request. Since Mizutani discloses both providing streaming services and refunding the customer, it would have been obvious to have the customer request a refund and then determine if a refund is proper as shown in Mehta to prevent fraud as shown in Mehta. This would allow the system to confirm that the service was indeed at fault prior to providing the restitution).

Therefore, from this teaching of Mehta, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of providing monitoring services provided by the combination of Mizutani, Edwards and Burkhart, with having the customer request restitution as taught by Mehta, for the purposes of confirming the fault with the service. Since Mizutani discloses both providing streaming services and refunding the customer, it would have been obvious to

have the customer request a refund and then determine if a refund is proper as shown in Mehta to prevent fraud as shown in Mehta. This would allow the system to confirm that the service was indeed at fault prior to providing the restitution.

***Response to Arguments***

22. Applicant's arguments filed August 5, 2015 have been fully considered but they are not persuasive.

23. In response to the applicant's arguments on pages 12-22, specifically that, "Applicant respectfully submits that independent claims 1, 6, 17, and 23 are not directed to any abstract ideas, including the abstract ideas alleged by the Office. Abstract ideas have been identified by the courts by way of example, including fundamental economic practices, (Bilski v. Kappos, 561 U.S. 593 (2010)), certain methods of organizing human activities, (Mayo v. Prometheus, 566 U.S. __ (2012)), an idea 'of itself,' (Gottschalk v. Benson, 409 U. S. 63, 67, (1972)), and mathematical relationships/formulas, (Parker v. Flook, 437 U. S. 584, 594-595 (1978)."

"It is respectfully maintained that the Office's allegation that the claim recitations are directed to an "abstract idea" of managing a service level agreement is erroneously attributed. Applicant further submits that the claims recite statutory subject matter pursuant to 35 U.S.C. § 101 in light of Alice Corp. and the 2014 Interim Guidance on Patent Subject Matter Eligibility, 79 Fed. Reg. 74618 (December 16, 2014) (the "Interim Eligibility Guidance")."

"Similarly, independent claims 1, 6, 17, and 23 address "a business challenge ... that is particular to the Internet." For instance, the recitations of Applicant's claim 1 address the **business challenge** of providing restitution to a customer in response to an unsatisfactory digital streaming experience. Moreover, the pending claims are not directed to an abstract idea because electronic commerce systems have only been viable for a couple of decades, and their analog predecessors, brick and mortar stores, operate in a significantly different fashion. See Trading Technologies Int'l Inc. v. CQG, Inc., No. 05-cv-4811, slip op. at 4-5 (N.D. Ill. Feb. 24, 2015) (stating that "electronic trading has only been viable for a couple of decades, and its analog predecessor, open outcry trading systems, operate in a significantly different fashion"). Just as the claims in Trading Technologies were directed to solving problems relating to speed, accuracy, and usability of graphical user interfaces in the context of computerized trading (Trading Technologies at p. 6), the present claims are directed to solving problems, inter alia, related to a bandwidth and/or throughput of a network connection used in electronic commerce and the quality of digital content provided in electronic commerce, by "streaming the requested digital content item from the content provider to the client device at a quality that varies based at least in part on at least one of network bandwidth or a buffer fill level of the client device," "monitoring, at the content provider, the streaming of the requested digital content item from a start of the streaming of the requested digital content item to an end of the streaming of the requested digital content item," "storing, at the content provider, metrics associated with the quality of the streaming of the requested digital content item during the streaming of the requested

digital content item based at least in part on the monitoring," "comparing, at the content provider, the stored metrics with one or more threshold values that are associated with an encoding bit rate of the requested digital content item," and "providing restitution to the user when the stored metrics indicate that the quality of the streaming fails to achieve at least one of the threshold values based at least in part on the comparing, wherein the restitution comprises at least one of an extension of a term to receive the requested digital content item or a refund of at least a portion of the payment from the user for the requested digital content item," as recited in Applicant's claim 1. Thus, the pending claims are not directed to a "fundamental practice long prevalent in our system of commerce.""

"Furthermore, the claim terms also need to be considered "individually and 'as an ordered combination'" as the Supreme Court requires, rather than oversimplifying the claims. Alice Corp., slip op. at 7, quoting Mayo, 566 U. S., at __ (slip op., at 10, 9). In the present Office Action, the Office has essentially ignored all of the recitations of the claims by abstracting the claims to the highest possible degree. Applicant submits that independent claim 1 is associated with functionality that goes beyond "managing a service level agreement." For example, in order to characterize claim 1 as the abstract idea of merely managing a service level agreement, the Office ignores at least the following recitations of claim 1 :"

[quoting claim 1]

"Thus, Applicant submits that the foregoing meaningful recitations cause independent claim 1 to fall outside the definition of an a fundamental economic practice,

an idea of itself, a method of organizing human activities, or a mathematical relationship or formula, and that the Office's conclusion that claim 1 is directed to an abstract idea is based on an over-simplification of the recitations of claim 1. Moreover, independent claims 6, 17, and 23 recite statutory subject matter pursuant to 35 U.S.C. § 101 for similar reasons as those discussed above with respect to independent claim 1. Therefore, it is respectfully maintained that the Office erred in identifying claims 1, 6, 17, and 23 as being directed to the judicial exception of an abstract idea, and it is requested that the 35 U.S.C. § 101 rejection be withdrawn."

"Even if the Office argues that the features recited in independent claims 1, 6, 17, and 23 are directed to an abstract idea, to which Applicant strongly disagrees, Applicant respectfully submits that, after considering the claim recitations individually and in combination, the claim recitations transform the nature of the claims into a patent-eligible concept."

"The Interim Eligibility Guidance states that "[t]o be patent-eligible, a claim that is directed to a judicial exception must include additional features to ensure that the claim ... is more than a drafting effort designed to monopolize the exception." 79 Fed. Reg. at 74624.. The Examiner must "determine whether the elements of the claim, considered both individually and as a combination, are sufficient to ensure that the claim as a whole amounts to significantly more than the exception itself- this has been termed a search for an 'inventive concept.'" Id. at 20, quoting Alice Corp., slip op. at 7."

"Applicant respectfully submits that independent claims 1, 6, 17, and 23 include significantly more than the alleged abstract idea in this regard. Applicant submits that

independent claims 1, 6, 17, and 23 recite features that add specific details that build upon the alleged abstract idea in a way other than a basic implementation by a generic computer structure."

"For instance, the pending claims distinguish from the claims at issue in buySAFE, Inc. v. Google, Inc., 765 F.3d 1350 (Fed. Cir. 2014). In buySAFE, the Federal Circuit held that the creation of financial relationships was an abstract idea and that the use of generic computing components such as a "computer application" or "computer networks" did not render that abstract idea patent-eligible. See buySAFE at 1355.. In buySAFE, the claims at issue were directed to underwriting transactions over a computer network. In contrast, while the claims may be related generally to "creat[ing] a contractual relationship ... [in the form of a] service level agreement and monitor[ing] the service to ensure compliance with that agreement," as alleged by the Office (Office Action, p. 3), claim 1 recites, inter alia, "streaming the requested digital content item from the content provider to the client device at a quality that varies based at least in part on at least one of network bandwidth or a buffer fill level of the client device," "monitoring, at the content provider, the streaming of the requested digital content item from a start of the streaming of the requested digital content item to an end of the streaming of the requested digital content item," "storing, at the content provider, metrics associated with the quality of the streaming of the requested digital content item during the streaming of the requested digital content item based at least in part on the monitoring," "comparing, at the content provider, the stored metrics with one or more threshold values that are associated with an encoding bit rate of the requested digital

content item," and "providing restitution to the user when the stored metrics indicate that the quality of the streaming fails to achieve at least one of the threshold values based at least in part on the comparing, wherein the restitution comprises at least one of an extension of a term to receive the requested digital content item or a refund of at least a portion of the payment from the user for the requested digital content item." When the aforementioned limitations are considered in combination with the remaining claim recitations, the limitations constitute unconventional steps that confine the claim to a particular useful application. See 79 Fed. Reg. at 74624. That is, Applicant submits that at least the aforementioned features of claim 1 are not customarily implemented in a typical process of creating a contractual relationship between two parties, or identifying options based upon rules and metrics. Thus, when claim 1 is taken together as an ordered combination, it recites an invention that is not merely the routine or conventional use of a computing system, thereby rendering claim 1 patent-eligible."

"The pending claims are also analogous to the patent-eligible claims at issue in Messaging Gateway Solutions, LLC v. Amdocs, Inc. et al. 1:14-cv-00732, Delaware Dist. Ct. (April 15, 2015) (finding that "[c]laim 20 contains a sufficient inventive concept to render it patent-eligible. It is firmly rooted in technology and is addressed to a specific problem arising in the realm of mobile device-to-Internet communication. Furthermore, it contains sufficient limitations to prevent it from preempting an abstract idea"). Patent-eligible claim 20 in Messaging Gateway Solutions was directed to a method of facilitating two-way communication between a mobile device and an Internet server, and involved steps of "receiving a text message," "inserting...a message body of the text

message into an IP message," and "transmitting the IP message to the Internet server." Messaging Gateway Solutions, pp. 4-5. Like the claims of Messaging Gateway Solutions, the pending claims are firmly rooted in technology and are addressed to a specific problem arising in the realm of computer networks; namely insufficient bandwidth and/or throughput of a network connection used in electronic commerce and unsatisfactory measurable attributes of digital content provided in electronic commerce. For example, the recitation in claim 1 directed to "streaming the requested digital content item from the content provider to the client device at a quality that varies based at least in part on at least one of network bandwidth or a buffer fill level of the client device," "monitoring, at the content provider, the streaming of the requested digital content item from a start of the streaming of the requested digital content item to an end of the streaming of the requested digital content item," "storing, at the content provider, metrics associated with the quality of the streaming of the requested digital content item during the streaming of the requested digital content item based at least in part on the monitoring," "comparing, at the content provider, the stored metrics with one or more threshold values that are associated with an encoding bit rate of the requested digital content item," and "providing restitution to the user when the stored metrics indicate that the quality of the streaming fails to achieve at least one of the threshold values based at least in part on the comparing, wherein the restitution comprises at least one of an extension of a term to receive the requested digital content item or a refund of at least a portion of the payment from the user for the requested digital content item." One of ordinary skill in the art would readily appreciate that these issues represent problems

specifically arising in the realm of electronic commerce and wide area computer networks, and that such problems would not arise in the pre-Internet world where consumers did not stream or download content via digital networks."

"Similarly, claims 1, 6, 17, and 23 also "show an improvement in the functioning of the computer itself and also show an improvement to another technology/technical field." For example, the above referenced elements of claim 1 allow the operator of an electronic retailer to provide restitution to a customer in response to the detection of an unsatisfactory digital streaming experience. Therefore, the claim elements are not mere instructions to implement an idea and/or a generic computer structure that serves to perform generic computer functions."

"As a result, Applicant submits that independent claims 1, 6, 17, and 23 recite statutory subject matter pursuant to 35 U.S.C. § 101. Accordingly, Applicant respectfully requests that the Office reconsider and withdraw the rejections of claims 1, 6, 17, and 23 and issue a notice of allowance."

The Examiner respectfully disagrees.

While the applicant states that the invention is directed toward addressing problems associated with bit rates, the invention as claimed is directed toward monitoring and comparing information. Which as shown in CET v Wells Fargo and SmartGene collecting information and comparing it using rules to determine options is considered to be an abstract idea. As such the claims are still directed toward an abstract idea.

When considering subject matter eligibility under 35 U.S.C. § 101, it must be determined whether the claim is directed to one of the four statutory categories of invention, i.e., process, machine, manufacture, or composition of matter. If the claim does fall within one of the statutory categories, it must then be determined whether the claim is directed to a judicial exception (i.e., law of nature, natural phenomenon, and abstract idea), and if so, it must additionally be determined whether the claim is a patent-eligible application of the exception. If an abstract idea is present in the claim, any element or combination of elements in the claim must be sufficient to ensure that the claim amounts to significantly more than the abstract idea itself. Examples of abstract ideas include fundamental economic practices, certain methods of organizing human activities, an idea itself, and mathematical relationships/formulas. *Alice Corporation Pty. Ltd. v. CLS Bank International, et al.*, 573 U.S. __ (2014).

In the instant case, **claims 1-4 and 23-28** are directed to a method (i.e. process) and **claims 6-22** are directed to a computer readable storage device (i.e., an article of manufacture). Thus, each of the claims falls within one of the four statutory categories. Nevertheless, the claims fall within the judicial exception of an abstract idea.

However, **claims 1-4 and 6-28** do not fall within at least one of the four categories of patent eligible subject matter because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more. **Claims 1-4 and 6-28** are directed to an abstract idea of managing a service level agreement, specifically, directed towards receiving content, monitoring the content, **storing metrics and comparing the metrics**, and providing

restitution which is (i) a fundamental economic practice, (ii) a method of organizing human activities, (iii) an idea of itself, or (iv) a mathematical relationship or formula. For instance, in *Alice Corp.* the Supreme Court found that "intermediated settlement" was a fundamental economic practice, which is an abstract idea. In this case, the claimed invention is directed to **(i) a fundamental economic practice and (iii) an idea of itself,** because the claimed invention is managing a service level agreement by comparing stored information, which results in it being **(i) a fundamental economic practice and (iii) an idea of itself**.

Part I: Is the claim **directed** to a law of nature, a natural phenomenon, or an abstract idea? As was discussed above, the claimed invention is, indeed, directed to an abstract idea as it is directed towards the abstract idea of managing a service level agreement. The claimed invention is directed towards performing the well-understood, routine, and conventional activities in the technical field of managing a service level agreement. Independent **claims 1, 6, 17 and 23** are directed towards the well-understood, routine, and conventional activities of identifying collecting information on the service, comparing the metrics with rules and providing restitution if the service fails to meet the metrics. As a result, the Examiner asserts that the claimed invention is, indeed, directed towards a judicial exception of an abstract idea and is, therefore, not eligible for the "streamlined analysis".

Additionally, the Interim Eligibility Guidelines at 74625 state that "**if there is doubt as to whether the applicant is effectively seeking coverage for a judicial exception itself, the full analysis should be conducted to determine whether the**

**claim recites significantly more than the judicial exception**." Further yet still, the July 2015 Guidelines are state:

> "In particular, the initial burden is on the examiner to explain why a claim or claims are unpatentable clearly and specifically, so that applicant has sufficient notice and is able to effectively respond. For subject matter eligibility, the examiner's burden is met by clearly articulating the reason(s) why the claimed invention is not eligible, for example by providing a reasoned rationale that identifies the judicial exception recited in the claim and why it is considered an exception, and that identifies the additional elements in the claim (if any) and explains why they do not amount to significantly more than the exception. This rationale may rely, where appropriate, on the knowledge generally available to those in the art, on the case law precedent, on applicant's own disclosure, or on evidence.
>
> ...
>
> Accordingly, courts do not rely on evidence that a claimed concept is a judicial exception, and in most cases resolve the ultimate legal conclusion on eligibility without making any factual findings.
>
> ...
>
> *Alice Corp., Myriad, Mayo, Bilski, Diehr, Flook* and *Benson* relied solely on comparisons to concepts found to be exceptions in past decisions when identifying judicial exceptions.
>
> ...

> *Alice Corp.*, *Bilski*, *Diehr*, *Flook* and *Benson* did not cite any evidence in support of the significantly more inquiry, even where additional elements were identified as well-understood, routine and conventional in the art. *Mayo* did not cite any evidence in support of identifying additional elements as mere field-of-use or data gathering steps, but did cite the patent's specification when identifying other limitations as well-understood, routine and conventional."
>
> (Pages 6 - 7)

Therefore, the full analysis under *Alice* would is still appropriate because applicant's remarks have not eliminated all doubt that the invention is directed to a judicial exception.

Although, one may argue that the claimed invention does not seek to "tie up" the exception because of the claimed invention's narrow scope, the Examiner asserts that clever draftsmanship of further narrowing the abstract idea does not change the fact that the invention is still directed towards an abstract idea. As an example, the Examiner asserts that if the claimed invention were directed towards the abstract idea of incentives by providing a user with a 3 for 1 sale and the state of the art only provides teachings for other sale types, e.g., 2 for 1, BOGO, or etc. and does not mention 3 for 1 sales, then, for purposes of a prior art rejection under 35 USC 102 or 103 there *may* be a distinction. However, for the purposes of 35 USC 101, and in view of the decision of *Alice Corp v CLS Bank*, clever draftsmanship of further narrowing of an abstract idea does not change the fact that the invention is still directed towards an abstract idea, i.e.

discounting with a 3 for 1 sale versus a 2 or 1 sale result in the invention still being directed towards discounting, which is an abstract idea. Here, the claimed invention is directed towards a similar scenario because the claimed invention is taking the abstract idea of managing a service level agreement and merely implementing it in a particular environment, i.e. the claimed invention takes the information that corresponds to the particular environment and uses them, or, more specifically, applies them in the aforementioned well-understood, routine, and conventional activities that are known in the technical field of managing a service level agreement. Again, the Examiner would like to reiterate that this is a rejection under 35 USC 101 and not a rejection under 35 USC 102/103.

Therefore, because independent **claims 1, 6, 17 and 23** includes an abstract idea, the claim must be reviewed under Part II of the Alice Corp. analysis to determine whether the abstract idea has been applied in an eligible manner.

Part II: The claim(s) does not include additional element that are sufficient to amount to significantly more than the judicial exception because the claim recited generically computer elements (e.g. a processors and media) which do not add a meaningful limitation to the abstract idea because they would be routine in any computer implementation.

The Examiner asserts that the claimed invention does not further or improve upon the technology or the technical field as merely having a general purpose device to perform the steps of the abstract idea is nothing more than having the general purpose device perform the well-understood, routine, and conventional activities already known

in managing a service level agreement, which results in the claimed invention not amounting to being significantly more than the judicial exception. The Examiner further notes that the decision of *DDR Holdings* does not apply as, unlike *DDR Holdings*, the claimed invention is not "deeply rooted in the technology" since: 1.) humans have, for some time, longed been known to perform the well-understood, routine, and conventional activities in the field of managing a service level agreement, e.g., gathering the necessary information pertaining to the specifics of the particular service and comparing the collected information with terms of an agreement, and provide restitution if necessary; and 2.) the well-understood, routine, and conventional activities of the abstract idea does not change, alter, or improve upon how the technology, i.e. the processor or media, fundamentally functions. The invention further fails to improve upon the technical field (managing a service level agreement) because merely using the general purpose device to perform the well-understood, routine, and conventional activities of the managing a service level agreement has been held to not be an "inventive concept" as the general purpose device is being used for the very purpose that such device are known to be used for, e.g. more efficient, faster, and etc. This is supported by the applicant's originally filed specification paragraph [0029], which outlines the invention as being implemented on hardware, software or a combination of both, and generally refers to processors, routines and programs. The specification outlines merely generic hardware elements such as a computer processor which carries out routine functions such as gathering data and comparing it to stored values.

Additionally, the claimed invention is also directed towards the abstract idea of collecting data, recognizing data, and storing the recognized data in order to provide an restitution for poor quality of service. The Examiner asserts that the concept of data collection, recognition, and storage is undisputedly well-known and, indeed, humans have always performed these functions. As was already discussed above, the claimed invention is merely utilizing general purpose devices (processor and media) to perform the steps of data retrieval regarding the service, comparing the metrics which were collected, and providing restitution if the comparison indicates. Although one may argue that the human mind is unable to process and recognize the electronic stream of data that is being received, transmitted, stored, and etc. by the processor and media, the Examiner asserts that this is insufficient to overcoming the rejection under 35 USC 101. The claims in *Alice Corp v CLS Bank* also required a computer that processed streams of data, but nonetheless were found to be abstract. There is no "inventive concept" in the claimed invention's use of a general purpose computing device (processor) and media to perform well-understood, routine, and conventional activities commonly used in the technical field, in this case, managing a service level agreement. (*Content Extraction and Transmission LLC v Wells Fargo Bank, National Association*) At most, the claims attempt to limit the abstract idea of recognizing and storing information using the devices to a particular environment. Such a limitation has been held insufficient to save a claim in this context.

Finally, the steps of receiving and transmitting information between the processor and media of the information are merely directed towards the concept of data gathering

and transmitting are considered insignificant extra solution activities. 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.

The claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements or combination of elements in the claims other than the abstract idea per se amounts to no more than: (i) managing a service level agreement, and/or (ii) recitation of computer readable storage medium having instructions encoded to perform functions of managing a service level agreement are well understood, routine, and conventional activities previously known to the industry. Considering all claim elements both individually and in combination, do not amount to significantly more than an abstract idea.

Dependent **claims 2-4, 7-16, 18-22 and 24-28** merely add further details of the abstract steps/elements recited in **claims 1, 6, 17 and 23** without including an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment. Therefore, dependent **claims 2-4, 7-16, 18-22 and 24-28** are also non-statutory subject matter.

While applicant argues that the claims are not similar to court cases, the applicant has merely recited the claim language and has failed to recite any additional reasons or rationale as to why they are not the same. Further while the applicant has argued that the claims are directed toward features which improve the technology and

field itself, as discussed above the claims are merely directed toward collecting and comparing information. Thus without significantly more the claims are directed toward an abstract idea. Lacking any further arguments the Examiner has not been persuaded and the rejections have been maintained.

24. Applicant's arguments with respect to claims 1-4 and 6-28 have been considered but are moot in view of the new ground(s) of rejection. Specifically the arguments regarding the newly amended material that "comparing, at the content provider, the stored metrics with one or more threshold values that are associated with an encoding bit rate of the requested digital content item", "determine that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content item" are moot in view of the new grounds of rejection. Specifically the newly cited references Burkhart and Zimmermann.

25. All rejections made towards the dependent claims are maintained due to the lack of a reply by the applicant in regards to distinctly and specifically point out the supposed errors in the Examiner's action in the prior Office Action (37 CFR 1.111). The Examiner asserts that the applicant only argues that the dependent claims should be allowable because the independent claims are unobvious and patentable over Mizutani in view of Edwards and, where appropriate, in further view of Friskney, Netflix, N2nsoft, Pippuri, Beerends, Snelgrove and Mehta.

***Conclusion***

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL R. FISHER whose telephone number is (571)270-5097. The examiner can normally be reached on Mon/Fri [8am/4:30pm].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janice Mooneyham can be reached on (571) 272-6805. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an 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. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PAUL R FISHER/
Primary Examiner, Art Unit 3689
11-2-2015

## REMARKS

Applicant respectfully requests reconsideration and allowance of the pending claims. Applicant herein amends claims 1-4, 6-18, 20-25, and 28. Therefore, claims 1-4 and 6-28 are pending, with claims 1, 6, 17, and 23 being independent. Support for the amendments can be found in Applicant's originally filed specification at least at paragraphs 0062-0066, and the claims as originally presented. The amendments do not present new matter.

## CLAIMS 1-4 AND 6-28 COMPLY WITH 35 U.S.C. § 101

Claims 1-4 and 6-28 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. As shown above, Applicant herein amends claims 1, 6, 17, and 23, and Applicant respectfully submits that these amendments render the § 101 rejection of this claim moot.

In *Alice Corporation Pty. Ltd. v. CLS Bank International, et al.*, 573 US ___ (slip op. 13-298) (June 19, 2014), the Supreme Court held that the two-part analysis framework set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. __ (2012), must be followed in determining whether a claimed invention is patent-ineligible as being directed to a mere abstract idea. The test contains two parts: first, determine whether the claims at issue are directed to an abstract idea; and second, if so, determine whether any element, or combination of elements, in the claims are sufficient to ensure that the claim amounts to significantly more than the abstract idea itself. *See Alice Corp.*, slip op. at 7.

### Subject Matter Eligibility Test for Products and Processes

***Mayo Test, Part I: Is the claim directed to a law of nature, a natural phenomenon, or an abstract idea (judicially recognized exceptions)?***

The Office Action states that,

> the claims are directed towards managing a service level agreement which is considered to be an abstract idea inasmuch as receiving requests, supplying the requested media, monitoring the service, storing metrics associated with the service, comparing the metrics and providing restitution are activities that are considered both fundamental economic or business practices and an idea of itself. Specifically the recited limitations create a contractual relationship in this case the service level agreement and monitor the service to ensure compliance with that

> agreement. As set forth in the Federal Register dated December 16, 2014, the acts of creating a contractual relationship are considered to be drawn toward an abstract idea, as reference in regards to the buySAFE case. This is supported by the MPEP 2106, I. which lists "a legal contractual agreement between two parties" as an example of claims that are not directed to one of the statutory categories. It is also similar to the SmartGene case where new and stored information are compared and rules are used to identify options. In this case the stored parameters of the agreement are compared to the new metrics which are measured to determine options, such as if the customer should be compensated. As such the claims are directed toward an abstract idea and are therefore not statutory.

*Office Action*, pp. 3-4.

Applicant respectfully submits that independent claims 1, 6, 17, and 23 are not directed to any abstract ideas, including the abstract ideas alleged by the Office. Abstract ideas have been identified by the courts by way of example, including fundamental economic practices, (*Bilski v. Kappos*, 561 U.S. 593 (2010)), certain methods of organizing human activities, (*Mayo v. Prometheus*, 566 U.S. ___ (2012)), an idea 'of itself,' (*Gottschalk v. Benson*, 409 U. S. 63, 67, (1972)), and mathematical relationships/formulas, (*Parker v. Flook*, 437 U. S. 584, 594–595 (1978).

It is respectfully maintained that the Office's allegation that the claim recitations are directed to an "abstract idea" of managing a service level agreement is erroneously attributed. Applicant further submits that the claims recite statutory subject matter pursuant to 35 U.S.C. § 101 in light of *Alice Corp.* and the *2014 Interim Guidance on Patent Subject Matter Eligibility*, 79 Fed. Reg. 74618 (December 16, 2014) (the "*Interim Eligibility Guidance*").

In the second example of the 2015 U.S. Patent & Trademark Office publication "Examples: Abstract Idea" (hereinafter the "*Examples*"), the Office states:

> [t]his claim recites a system "useful in outsource provider serving web pages offering commercial opportunities," but is directed to automatically generating and transmitting a web page in response to activation of a link using data identified with a source web page having certain visually perceptible elements. The claim does not recite a mathematical algorithm; nor does it recite a fundamental economic or longstanding commercial practice. The claim addresses a business challenge (retaining website visitors) that is particular to the Internet. The claimed invention differs from other claims found by the courts to recite abstract ideas in that it does not "merely recite the performance of some business practice known from the pre-Internet world along with the

> requirement to perform it on the Internet. Instead, the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks." No idea similar to those previously found by the courts to be abstract has been identified in the claim.

*Examples*, p. 7; *See also DDR Holdings, LLC v. Hotels.com, L.P.,* (Fed. Cir. 2014).

Similarly, independent claims 1, 6, 17, and 23 address "a business challenge ... that is particular to the Internet." For instance, the recitations of Applicant's claim 1 address the business challenge of providing restitution to a customer in response to an unsatisfactory digital streaming experience. Moreover, the pending claims are not directed to an abstract idea because electronic commerce systems have only been viable for a couple of decades, and their analog predecessors, brick and mortar stores, operate in a significantly different fashion. *See Trading Technologies Int'l Inc. v. CQG, Inc.*, No. 05-cv-4811, slip op. at 4-5 (N.D. Ill. Feb. 24, 2015) (stating that "electronic trading has only been viable for a couple of decades, and its analog predecessor, open outcry trading systems, operate in a significantly different fashion"). Just as the claims in *Trading Technologies* were directed to solving problems relating to speed, accuracy, and usability of graphical user interfaces in the context of computerized trading (*Trading Technologies* at p. 6), the present claims are directed to solving problems, *inter alia,* related to a bandwidth and/or throughput of a network connection used in electronic commerce and the quality of digital content provided in electronic commerce, by performing a test to determine the capabilities of a computer network, assessing whether the computer network is capable of providing a digital content item to a client device at a particular level of quality based on the test, and transmitting the digital content item to the client device. Thus, the pending claims are not directed to a "fundamental practice long prevalent in our system of commerce."

Furthermore, the claim terms also need to be considered "individually and 'as an ordered combination'" as the Supreme Court requires, rather than oversimplifying the claims. *Alice Corp.,* slip op. at 7, *quoting Mayo*, 566 U. S., at ___ (slip op., at 10, 9). In the present Office Action, the Office has ignored many of the recitations of the claims in formulating its alleged abstraction of the claims. Applicant submits that independent claim 1 is associated with functionality that goes beyond "managing a service level agreement." For example, in order to characterize claim 1 as the abstract idea of merely

managing a service level agreement, the Office would have to ignore at least the following recitations of claim 1, as amended:

> receiving, at a content provider from a client device associated with a user, a request to receive a digital content item in return for a payment;
>
> determining a performance of a network associated with the client device;
>
> generating testing results based at least partly on the performance of the network;
>
> determining, based at least partly on the testing results, that request attributes received from the client device are not likely to cause a reduction in a first quality of an output of the digital content item;
>
> streaming the digital content item from the content provider to the client device at a second quality that varies based at least in part on at least one of network bandwidth or a buffer fill level of the client device;
>
> monitoring, at the content provider, the streaming of the digital content item from a start of the streaming of the digital content item to an end of the streaming of the digital content item;
>
> storing, at the content provider, metrics associated with the second quality of the streaming of the digital content item during the streaming of the digital content item;
>
> comparing, at the content provider, the metrics with one or more threshold values that are associated with an encoding bit rate of the digital content item; and
>
> providing restitution to the user based at least partly on a determination that the metrics indicate that the second quality of the streaming of the digital content item fails to achieve at least one threshold value of the one or more threshold values, wherein the restitution comprises at least one of an extension of a term to receive the digital content item or a refund of at least a portion of the payment from the user for the digital content item.

Thus, Applicant submits that the foregoing meaningful recitations cause independent claim 1 to fall outside the definition of an a fundamental economic practice, an idea of itself, a method of organizing human activities, or a mathematical relationship or formula, and that the Office's conclusion that claim 1 is directed to an abstract idea is based on an over-simplification of the recitations of claim 1. Moreover, independent claims 6, 17, and 23 recite statutory subject matter pursuant to 35 U.S.C. § 101 for similar reasons as those discussed above with respect to independent claim 1. Therefore, it is respectfully maintained that the Office erred in identifying claims 1, 6, 17, and 23 as being directed to the judicial exception of an abstract idea, and it is requested that the 35 U.S.C. §101 rejection be withdrawn.

***Mayo Test, Part II: Is any element, or combination of elements, in the claim sufficient to ensure that the claim amounts to significantly more than the judicial exception?***

Even if the Office argues that the features recited in independent claims 1, 6, 17, and 23 are directed to an abstract idea, to which Applicant strongly disagrees, Applicant respectfully submits that, after considering the claim recitations individually and in combination, the claim recitations transform the nature of the claims into a patent-eligible concept.

The *Interim Eligibility Guidance* states that "[t]o be patent-eligible, a claim that is directed to a judicial exception must include additional features to ensure that the claim … is more than a drafting effort designed to monopolize the exception." *79 Fed. Reg.* at 74624. The Examiner must "determine whether the elements of the claim, considered both individually and as a combination, are sufficient to ensure that the claim as a whole amounts to significantly more than the exception itself – this has been termed a search for an 'inventive concept.'" *Id.* at 20, *quoting Alice Corp.*, slip op. at 7.

The Office Action states that,

> [t]he elements in the instant claims (computer systems, client device, digital content, processors, and media), when taken in combination, together do not offer 'significantly more' than the abstract idea itself because the claims do not recite an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or provide meaningful limitations beyond generally linking an abstract idea to a particular technological environment. It should be noted the limitations of the current claims are performed by a generically recited processor and the memory and program components contain no more than mere instructions to implement the abstract idea on a computer. The claims require no more than a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry. This is supported by the applicant's originally filed specification paragraph [0029], which outlines the invention as being implemented on hardware, software or a combination of both, and generally refers to processors, routines and programs. The specification outlines merely generic hardware elements such as a computer processor which carries out routine functions such as gathering data and comparing it to stored values. As such the claims simply describe a problem, announce purely functional steps that purport to solve the problem, and recite standard computer operations to perform some of those steps, which is not 'significantly more' than an abstract

idea. Therefore, claims 1-4 and 6-28 are directed to non-statutory subject matter.

*Office Action*, p. 4.

Applicant respectfully submits that independent claims 1, 6, 17, and 23 include significantly more than the alleged abstract idea in this regard. Applicant submits that independent claims 1, 6, 17, and 23 recite features that add specific details that build upon the alleged abstract idea in a way other than a basic implementation by a generic computer structure.

For instance, the pending claims distinguish from the claims at issue in *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350 (Fed. Cir. 2014). In *buySAFE*, the Federal Circuit held that the creation of financial relationships was an abstract idea and that the use of generic computing components such as a "computer application" or "computer networks" did not render that abstract idea patent-eligible. *See buySAFE* at 1355. In *buySAFE*, the claims at issue were directed to underwriting transactions over a computer network. In contrast, while the claims may be related generally to "creat[ing] a contractual relationship ...[in the form of a] service level agreement and monitor[ing] the service to ensure compliance with that agreement," as alleged by the Office (*Office Action*, p. 3), claim 1 recites, *inter alia*, "determining a performance of a network associated with the client device," "generating testing results based at least partly on the performance of the network," and "determining, based at least partly on the testing results, that request attributes received from the client device are not likely to cause a reduction in a first quality of an output of the digital content item." When the aforementioned limitations are considered in combination with the remaining claim recitations, the limitations constitute unconventional steps that confine the claim to a particular useful application. See *79 Fed. Reg.* at 74624. That is, Applicant submits that at least the aforementioned features of claim 1 are not customarily implemented in a typical process of creating a contractual relationship between two parties, or identifying options based upon rules and metrics. Thus, when claim 1 is taken together as an ordered combination, it recites an invention that is not merely the routine or conventional use of a computing system, thereby rendering claim 1 patent-eligible.

The pending claims are also analogous to the patent-eligible claims at issue in *Messaging Gateway Solutions, LLC v. Amdocs, Inc. et al.* 1:14-cv-00732, Delaware Dist.

Ct. (April 15, 2015) (finding that "[c]laim 20 contains a sufficient inventive concept to render it patent-eligible. It is firmly rooted in technology and is addressed to a specific problem arising in the realm of mobile device-to-Internet communication. Furthermore, it contains sufficient limitations to prevent it from preempting an abstract idea"). Patent-eligible claim 20 in *Messaging Gateway Solutions* was directed to a method of facilitating two-way communication between a mobile device and an Internet server, and involved steps of "receiving a text message," "inserting...a message body of the text message into an IP message," and "transmitting the IP message to the Internet server." *Messaging Gateway Solutions*, pp. 4-5.

Like the claims of *Messaging Gateway Solutions*, the pending claims are firmly rooted in technology and address a specific problem arising in the realm of computer networks; namely insufficient bandwidth and/or throughput of a network connection used in electronic commerce and unsatisfactory measurable attributes of digital content provided in electronic commerce. For example, the recitation in claim 1 directed to "determining a performance of a network associated with the client device," "generating testing results based at least partly on the performance of the network," and "determining, based at least partly on the testing results, that request attributes received from the client device are not likely to cause a reduction in a first quality of an output of the digital content item." One of ordinary skill in the art would readily appreciate that these issues represent problems specifically arising in the realm of electronic commerce and wide area computer networks, and that such problems would not arise in the pre-Internet world where consumers did not stream or download content via digital networks.

In the third example of the 2015 U.S. Patent & Trademark Office publication "Examples: Abstract Idea" (hereinafter the "Examples"), the Office states:

> [h]ypothetical claims 1-3 are directed to an abstract idea and have additional elements that amount to significantly more than the abstract idea because they show an improvement in the functioning of the computer itself and also show an improvement to another technology/technical field, either of which can show eligibility.

*Examples*, p.7.

Similarly, claims 1, 6, 17, and 23 also "show an improvement in the functioning of the computer itself and also show an improvement to another technology/technical field." For example, the above referenced elements of claim 1 allow the operator of an

electronic retailer to provide restitution to a customer in response to the detection of an unsatisfactory digital streaming experience. Therefore, the claim elements are not mere instructions to implement an idea and/or a generic computer structure that serves to perform generic computer functions.

As a result, Applicant submits that independent claims 1, 6, 17, and 23 recite statutory subject matter pursuant to 35 U.S.C. § 101. Accordingly, Applicant respectfully requests that the Office reconsider and withdraw the rejections of claims 1, 6, 17, and 23 and issue a notice of allowance.

**CLAIMS 1 AND 2 STAND ALLOWABLE OVER MIZUTANI, EDWARDS, BURKHART, RABIE, AND ZIMMERMAN**

The Office rejects claims 1 and 2 under 35 U.S.C. § 103(a) as allegedly being obvious over US Patent Appln. Pub. No. 2002/0138846 to Mizutani, et al. (hereinafter, "Mizutani") in view of US Patent Appln. Pub. No. 2008/0005156 to Edwards, et al., (hereinafter, "Edwards"), and further in view of US Patent Appln. Pub. No. 2002/0006116 to Burkhart, et al., (hereinafter, "Burkhart"). Applicant respectfully submits that these claims stand allowable as listed above and discussed below.

*Independent Claim 1*

Claim 1, as amended herein, recites, in part:

> determining a performance of a network associated with the client device;
>
> generating testing results based at least partly on the performance of the network; [and]
>
> determining, based at least partly on the testing results, that request attributes received from the client device are not likely to cause a reduction in a first quality of an output of the digital content item.

Applicant's amended independent claim 1 includes similar subject matter as previously presented in claim 6. The Office has rejected claim 6 under 35 U.S.C. § 103(a) as allegedly being obvious over a combination of Mizutani in view of Edwards, US Patent No. 7,092,356 to Rabie, et al., (hereinafter, "Rabie"), and US Patent No. 6,618,776 to Zimmermann, et al., (hereinafter, "Zimmermann"). Accordingly, Applicant addresses the combination of Mizutani, Edwards, Burkhart, Rabie, and Zimmerman in the arguments presented below with reference to amended claim 6.

In the rejection of claim 6, some subject matter of which has been included in Applicant's claim 1, the Office admits, and Applicant agrees that the combination of Mizutani, Edwards, and Rabie fails to teach or suggest "determin[ing] that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content item." *Office Action*, p. 21. To compensate, the Office cites Zimmerman, col. 7, ll. 7-22, as allegedly teaching, "determin[ing] that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content item." *Office Action*, p. 21. However, the cited portions of Zimmerman merely describe "receiving notification of a request for a bandwidth allocation by a second device on said shared bus [and] determining if said shared bus has sufficient unused bandwidth to accommodate said request." *Zimmerman*, col. 7, ll. 9-12.

Zimmerman is directed to "varying the bandwidth used on a shared bus, such as the Universal Serial Bus (USB)." *Zimmerman*, col. 1, ll. 21-23. Zimmerman describes the following:

> intercepting messages between the bus controller and a device attempting to connect over the bus. Based on the intercepted message, the existing device using bandwidth can determine whether it can relinquish some of its bandwidth allocation while maintaining sufficient transmission quality. Thus, the already connected devices will make the determination if they can relinquish bandwidth, to allow a new device to connect.

*Zimmerman*, col. 2, ll. 14-21.

Accordingly, Zimmerman fails to teach or suggest "determining, based at least partly on the testing results, that request attributes received from the client device are not likely to cause a reduction in a first quality of an output of the digital content item," as Applicant's amended claim 1 recites. In particular, the determination step in Zimmerman does not correspond to whether "...request attributes received from the client device are not likely to cause a **reduction in a first quality of an output of the digital content item**," as Applicant's amended claim 1 recites (emphasis added). Instead, Zimmerman merely describes that "[an] existing device using bandwidth can determine whether it can relinquish some of its bandwidth allocation while maintaining sufficient transmission quality." *Zimmerman*, col. 2, ll. 19-22. In other words, Zimmerman is directed to determining whether fulfilling the request will degrade the quality of existing bandwidth use as opposed to "caus[ing] a reduction in a first quality of an output of the **requested**

**digital content item,"** as Applicant's claim 1 recites (emphasis added). Further, the determination in Zimmerman is "based on the total bandwidth available and the current bandwidth usage, or by 'trial and error' by decreasing usage step by step," (*Zimmerman*, col. 6, ll. 41-44), and not "... based at least partly on the testing results ...," as Applicant's amended claim 1 recites (emphasis added). Consequently, combining Zimmerman with Mizutani, Edwards, and Rabie still does not teach or suggest at least the above recitation of Applicant's amended claim 1.

In addition, Burkhart fails to compensate for the deficiencies set forth above. Burkhart is directed to "... distributed content management of broadband multimedia content." *Burkhart*, Abstract. Further, Burkhart merely describes that "... knowledge of maximum bit rate and time period of transmission for multiple events enables system capacity to be divided with known limits and protections against overlap or system failure induced by insignificant system capacity occurring when two accepted events conflict with one another." *Burkhart*, par. 0035. Consequently, combining Burkhart with Mizutani, Edwards, Rabie, and Zimmerman still does not teach or suggest at least the above recitation of Applicant's amended claim 1.

For at least the reasons presented herein, the combination of Mizutani, Edwards, Burkhart, Rabie, and Zimmerman does not teach or suggest all of the features of amended claim 1. Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 1.

*Dependent Claim 2*

Claim 2 ultimately depends from independent claim 1. As discussed above, claim 1 is allowable over the cited documents. Therefore, claim 2 is also allowable over the cited documents of record for at least its dependency from an allowable base claim, and also for the additional features that it recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 2.

**CLAIM 3 STANDS ALLOWABLE OVER MIZUTANI, EDWARDS, BURKHART, RABIE, ZIMMERMAN AND N2NSOFT**

The Office rejects claim 3 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Edwards and Burkhart, and further in view of "Network planning for Quality of Experience" to N2nsoft, et al., (hereinafter, "N2nsoft"). Applicant respectfully submits that this claim stands allowable as listed above and discussed below.

Claim 3 ultimately depends from independent claim 1. As discussed above, claim 1 is allowable over the combination of Mizutani, Edwards, Burkhart, Rabie, and Zimmerman. N2nsoft is cited for its alleged teaching of the respective features of dependent claim 3. However, N2nsoft fails to remedy the deficiencies of Mizutani, Edwards, Burkhart, Rabie, and Zimmerman as noted above with regard to independent claim 1. Therefore, claim 3 is also allowable over the cited documents of record for at least its dependency from an allowable base claim, and also for the additional features that it recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 3.

**CLAIM 4 STANDS ALLOWABLE OVER MIZUTANI, EDWARDS, BURKHART, RABIE, ZIMMERMAN AND FRISKNEY**

The Office rejects claim 4 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Edwards and Burkhart, and further in view of US Patent No. 7,400,583 to Friskney, et al., (hereinafter, "Friskney"). Applicant respectfully submits that this claim stands allowable as listed above and discussed below.

Claim 4 ultimately depends from independent claim 1. As discussed above, claim 1 is allowable over the combination of Mizutani, Edwards, Burkhart, Rabie, and Zimmerman. Friskney is cited for its alleged teaching of the respective features of dependent claim 4. However, Friskney fails to remedy the deficiencies of Mizutani, Edwards, Burkhart, Rabie, and Zimmerman as noted above with regard to independent claim 1. Therefore, claim 4 is also allowable over the cited documents of record for at

least its dependency from an allowable base claim, and also for the additional features that it recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 4.

## CLAIMS 6, 9, 12, 15, AND 16 STAND ALLOWABLE OVER MIZUTANI, EDWARDS, RABIE AND ZIMMERMANN

The Office rejects claims 6, 9, 12, 15, and 16 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Edwards, US Patent No. 7,092,356 to Rabie, et al., (hereinafter, "Rabie") and US Patent No. 6,618,776 to Zimmermann, et al., (hereinafter, "Zimmermann"). Applicant respectfully submits that these claims stand allowable as listed above and discussed below.

*Independent Claim 6*

Claim 6, as amended herein, recites, in part:

> determine a past performance of a network associated with the client device;
>
> determine a hardware configuration of the client device; [and]
>
> determine that the request attributes received from the client device are not likely to cause a reduction in a first quality of an output of the digital content item based at least in part on the past performance of the network and the hardware configuration of the client device.

In the rejection of claim 6, the Office admits, and Applicant agrees that the combination of Mizutani, Edwards, and Rabie fails to teach or suggest "determin[ing] that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content item." *Office Action*, p. 21. To compensate, the Office cites Zimmerman, col. 7, ll. 7-22, as allegedly teaching, "determin[ing] that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the digital content item." *Office Action*, p. 21. However, the cited portions of Zimmerman merely describe "receiving notification of a request for a bandwidth allocation by a second device on said shared bus [and] determining if said shared bus has sufficient unused bandwidth to accommodate said request." *Zimmerman*, col. 7, ll. 9-12.

Zimmerman is directed to "varying the bandwidth used on a shared bus, such as the Universal Serial Bus (USB)." *Zimmerman*, col. 1, ll. 21-23. Zimmerman describes the following:

> intercepting messages between the bus controller and a device attempting to connect over the bus. Based on the intercepted message, the existing device using bandwidth can determine whether it can relinquish some of its bandwidth allocation while maintaining sufficient transmission quality. Thus, the already connected devices will make the determination if they can relinquish bandwidth, to allow a new device to connect.

*Zimmerman*, col. 2, ll. 14-21. Zimmerman further describes that,

> devices can give up bandwidth based on the total bandwidth available and the current bandwidth usage, or by "trial and error" by decreasing usage step by step. Each device driver knows what its target should be. A lower limit under which the quality is not acceptable is set in the device driver.

*Zimmerman*, col. 6, ll. 41-46.

Accordingly, Zimmerman fails to teach or suggest "determin[ing] that the request attributes received from the client device are not likely to cause a reduction in a first quality of an output of the digital content item based at least in part on the past performance of the network and the hardware configuration of the client device," as Applicant's amended claim 6 recites. In particular, the determination in Zimmerman does not correspond to whether "... the request attributes received from the client device are not likely to cause a **reduction in a first quality of an output of the requested digital content item** ...," as Applicant's amended claim 6 recites (emphasis added). Instead, Zimmerman merely describes that "[an] existing device using bandwidth can determine whether it can relinquish some of its bandwidth allocation while maintaining sufficient transmission quality." *Zimmerman*, col. 2, ll. 19-22. In other words, Zimmerman is directed to determining whether fulfilling the request will degrade the quality of existing bandwidth use as opposed to "caus[ing] a reduction in a first quality of an output of the **requested digital content item**," as Applicant's claim 6 recites (emphasis added). Further, the determination in Zimmerman is based on "based on the total bandwidth available and the current bandwidth usage, or by 'trial and error' by decreasing usage step by step," (*Zimmerman*, col. 6, ll. 41-44), and not "... based at least in part on the past performance of the network and the hardware configuration of the client device," as Applicant's amended claim 6 recites. Consequently, combining

Zimmerman with Mizutani, Edwards, and Rabie still does not teach or suggest at least the above recitation of Applicant's amended claim 6.

For at least the reasons presented herein, the combination of Mizutani, Edwards, Rabie, and Zimmerman does not teach or suggest all of the features of amended claim 6. Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 6.

*Dependent Claims 9, 12, 15 and 16*

Claims 9, 12, 15 and 16 ultimately depend from independent claim 6. As discussed above, claim 6 is allowable over the cited documents. Therefore, claims 9, 12, 15 and 16 are also allowable over the cited documents of record for at least their dependency from an allowable base claim, and also for the additional features that each recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claims 9, 12, 15 and 16.

**CLAIM 7 STANDS ALLOWABLE OVER MIZUTANI, EDWARDS, RABIE, ZIMMERMANN AND MEHTA**

The Office rejects claim 7 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Edwards, Rabie, and Zimmermann, and further in view of US Patent Appln. Pub. No. 2009/0144764 to Mehta, et al., (hereinafter, "Mehta"). Applicant respectfully submits that this claim stands allowable as listed above and discussed below.

Claim 7 ultimately depend from independent claim 6. As discussed above, claim 6 is allowable over the combination of Mizutani, Edwards, Rabie, and Zimmermann. Mehta is cited for its alleged teaching of the respective features of dependent claim 7. However, Mehta fails to remedy the deficiencies of Mizutani, Edwards, Rabie, and Zimmerman as noted above with regard to independent claim 6. Therefore, claim 7 is also allowable over the cited documents of record for at least its dependency from an allowable base claim, and also for the additional features that it recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 7.

**CLAIM 8 STANDS ALLOWABLE OVER MIZUTANI, EDWARDS, RABIE, ZIMMERMANN AND NETFLIX**

The Office rejects claim 8 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Edwards, Rabie, and Zimmermann, and further in view Netflix Notice (hereinafter, "Netflix"). Applicant respectfully submits that this claim stands allowable as listed above and discussed below.

Claim 8 ultimately depends from independent claim 6. As discussed above, claim 6 is allowable over the combination of Mizutani, Edwards, Rabie, and Zimmermann. Netflix is cited for its alleged teaching of the features of dependent claim 8. However, Netflix fails to remedy the deficiencies of Mizutani, Edwards, Rabie, and Zimmermann as noted above with regard to independent claim 6. Therefore, claim 8 is also allowable over the cited documents of record for at least its dependency from an allowable base claim, and also for the additional features that it recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 8.

**CLAIM 10 STANDS ALLOWABLE OVER MIZUTANI, EDWARDS, RABIE, ZIMMERMANN, PIPPURI AND NETFLIX**

The Office rejects claim 10 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Edwards, Rabie, and Zimmermann, and further in view of US Patent Appln. Pub. No. 2005/0265555 to Pippuri, (hereinafter, "Pippuri") and Netflix. Applicant respectfully submits that this claim stands allowable as listed above and discussed below.

Claim 10 ultimately depends from independent claim 6. As discussed above, claim 6 is allowable over the combination of Mizutani, Edwards, Pippuri, Netflix, Rabie, and Zimmermann. Pippuri and Netflix are cited for their alleged teaching of the features of dependent claim 10. However, Pippuri and Netflix fail to remedy the deficiencies of Mizutani, Edwards, Zimmermann, and Rabie as noted above with regard to independent claim 6. Therefore, claim 10 is also allowable over the cited documents of record for at

least its dependency from an allowable base claim, and also for the additional features that it recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 10.

**CLAIM 11 STANDS ALLOWABLE OVER MIZUTANI, EDWARDS, RABIE, ZIMMERMANN AND BEERENDS**

The Office rejects claim 11 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Edwards, Rabie, and Zimmermann, and further in view of US Patent Appln. Pub. No. 2007/0030815 to Beerends et al., (hereinafter, "Beerends"). Applicant respectfully submits that this claim stands allowable as listed above and discussed below.

Claim 11 ultimately depends from independent claim 6. As discussed above, claim 6 is allowable over the combination of Mizutani, Edwards, Zimmermann, Netflix, and Rabie. Beerends is cited for its alleged teaching of the features of dependent claim 11. However, Beerends fails to remedy the deficiencies of Mizutani, Edwards, Netflix, Rabie, and Zimmermann as noted above with regard to independent claim 6. Therefore, claim 11 is also allowable over the cited documents of record for at least its dependency from an allowable base claim, and also for the additional features that it recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 11.

**CLAIMS 13 AND 14 STAND ALLOWABLE OVER MIZUTANI, EDWARDS, RABIE, ZIMMERMANN AND N2NSOFT**

The Office rejects claims 13 and 14 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Edwards, Rabie, and Zimmermann, and further in view of N2nsoft. Applicant respectfully submits that these claims stand allowable as listed above and discussed below.

Claims 13 and 14 ultimately depend from independent claim 6. As discussed above, claim 6 is allowable over the combination of Mizutani, Edwards, Pippuri, Netflix, Rabie, and Zimmermann. N2nsoft is cited for its alleged teaching of the features of

dependent claims 13 and 14. However, N2nsoft fails to remedy the deficiencies of Mizutani, Edwards, Pippuri, Netflix, Rabie, and Zimmermann as noted above with regard to independent claim 6. Therefore, claims 13 and 14 are also allowable over the cited documents of record for at least their dependency from an allowable base claim, and also for the additional features that each recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claims 13 and 14.

**CLAIMS 17, 18, AND 22 STAND ALLOWABLE OVER MIZUTANI, PIPPURI, NETFLIX, DAVIES AND ZIMMERMANN**

The Office rejects claims 17, 18, and 22 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Pippuri, Netflix, US Patent No. 7,006,435 to Davies, et al., (hereinafter, "Davies"), and Zimmermann. Applicant respectfully submits that these claims stand allowable as listed above and discussed below.

*Independent Claim 17*

Claim 17, as amended herein, recites, in part:

> determine a past performance of a network associated with the client device;
>
> determine a hardware configuration of the client device;
>
> determine that the request attributes received from the client device are not likely to cause a reduction in a first quality of an output of the digital content based on the past performance of the network and the hardware configuration of the client device.

For at least reasons similar to those discussed above with respect to claim 6, and to the extent that claims 6 and 17 recite similar subject matter, the combination of Mizutani, Davies, and Zimmermann does not teach or suggest all of the features of claim 17. For instance, Applicant's claim 17 has been amended to further recite "determin[ing] that the request attributes received from the client device are not likely to cause a reduction in a first quality of an output of the digital content based on the past performance of the network and the hardware configuration of the client device."

In addition, in the rejection of claim 17, the Office admits, and Applicant agrees that Pippuri and Netflix fail to teach or suggest "determine that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the

digital content." *Office Action*, p. 42. Consequently, combining Pippuri and Netflix with Mizutani, Davies, and Zimmermann still does not teach or suggest the above recited element of Applicant's claim 17.

For at least the reasons presented herein, the combination of Mizutani, Pippuri, Netflix, Davies, and Zimmermann does not teach or suggest all of the features of claim 17. Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 17.

*Dependent Claims 18 and 22*

Claims 18 and 22 ultimately depend from independent claim 17. As discussed above, claim 17 is allowable over the cited documents. Therefore, claims 18 and 22 are also allowable over the cited documents of record for at least their dependency from an allowable base claim, and also for the additional features that each recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claims 18 and 22.

**CLAIM 19 STANDS ALLOWABLE OVER MIZUTANI, PIPPURI, NETFLIX, DAVIES, ZIMMERMANN AND SNELGROVE**

The Office rejects claim 19 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Pippuri, Netflix, Davies, and Zimmermann, and in further view of US Patent No. 6,535,592 to Snelgrove, (hereinafter, "Snelgrove"). Applicant respectfully submits that this claim stands allowable as listed above and discussed below.

Claim 19 ultimately depends from independent claim 17. As discussed above, claim 17 is allowable over the combination of Mizutani, Pippuri, Netflix, Davies, and Zimmermann. Snelgrove is cited for their alleged teaching of the features of dependent claim 19. However, Snelgrove fails to remedy the deficiencies of Mizutani, Pippuri, Netflix, Davies, and Zimmermann as noted above with regard to independent claim 17. Therefore, claim 19 is also allowable over the cited documents of record for at least its dependency from an allowable base claim, and also for the additional features that it recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 19.

**CLAIM 20 STANDS ALLOWABLE OVER MIZUTANI, PIPPURI, NETFLIX, DAVIES, ZIMMERMANN AND EDWARDS**

The Office rejects claim 20 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Pippuri, Netflix, Davies, and Zimmermann, and in further view of US Patent Appln. Pub. No. 2008/0005156 to Edwards, et al., (hereinafter, "Edwards"). Applicant respectfully submits that this claim stands allowable as listed above and discussed below.

Claim 20 ultimately depends from independent claim 17. As discussed above, claim 17 is allowable over the combination of Mizutani, Pippuri, Netflix, Davies, and Zimmermann. Edwards is cited for their alleged teaching of the features of dependent claim 20. However, Edwards fails to remedy the deficiencies of Mizutani, Pippuri, Netflix, Davies, and Zimmermann as noted above with regard to independent claim 17. Therefore, claim 20 is also allowable over the cited documents of record for at least its dependency from an allowable base claim, and also for the additional features that it recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 20.

**CLAIM 21 STANDS ALLOWABLE OVER MIZUTANI, PIPPURI, NETFLIX, DAVIES, ZIMMERMANN AND N2NSOFT**

The Office rejects claim 21 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Pippuri, Netflix, Davies, and Zimmermann, and in further view of N2nsoft. Applicant respectfully submits that this claim stands allowable as listed above and discussed below.

Claim 21 ultimately depends from independent claim 17. As discussed above, claim 17 is allowable over the combination of Mizutani, Pippuri, Netflix, Zimmermann and Davies. N2nsoft is cited for their alleged teaching of the features of dependent claim

21. However, N2nsoft fails to remedy the deficiencies of Mizutani, Pippuri, Netflix, Zimmermann and Davies as noted above with regard to independent claim 17. Therefore, claim 21 is also allowable over the cited documents of record for at least its dependency from an allowable base claim, and also for the additional features that it recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 21.

**CLAIMS 23, 24 AND 26 STAND ALLOWABLE OVER MIZUTANI, PIPPURI, NETFLIX AND ZIMMERMANN**

The Office rejects claims 23, 24 and 26 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Pippuri, Netflix and Zimmermann. Applicant respectfully submits that these claims stand allowable as listed above and discussed below.

*Independent Claim 23*

Claim 23, as amended herein, recites, in part:

> determining a performance of a network associated with the client device;
>
> generating testing results based at least on the performance of the network; [and]
>
> determining, based at least partly on the testing results, that the request attributes received from the client device are not likely to cause a reduction in a first quality of an output of the digital content item.

For at least reasons similar to those discussed above with respect to claim 1, and to the extent that claims 1 and 23 recite similar subject matter, the combination of Mizutani and Zimmermann does not teach or suggest all of the features of amended claim 23. For instance, Applicant's claim 23 has been amended to further recite "determining, based at least partly on the testing results, that the request attributes received from the client device are not likely to cause a reduction in a first quality of an output of the digital content item."

In addition, in the rejection of claim 23, the Office admits, and Applicant agrees that Pippuri and Netflix fails to teach or suggest "determin[ing] that the request attributes received from the user are not likely to cause a reduction in a quality of an output of the

digital content." *Office Action*, p. 51. Consequently, combining Pippuri and Netflix with Mizutani and Zimmermann still does not teach or suggest the above recited element of Applicant's claim 23, as amended.

For at least the reasons presented herein, the combination of Mizutani, Pippuri, Netflix, and Davies does not teach or suggest all of the features of amended claim 23. Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 23.

*Dependent Claims 24 and 26*

Claims 24 and 26 ultimately depend from independent claim 23. As discussed above, claim 23 is allowable over the cited documents. Therefore, claims 24 and 26 are also allowable over the cited documents of record for at least their dependency from an allowable base claim, and also for the additional features that each recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claims 24 and 26.

**CLAIMS 25 AND 27 STAND ALLOWABLE OVER MIZUTANI, PIPPURI, NETFLIX, ZIMMERMANN AND N2NSOFT**

The Office rejects claims 25 and 27 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Pippuri, Netflix, Zimmermann, and in further view of N2nsoft. Applicant respectfully submits that these claims stand allowable as listed above and discussed below.

Claims 25 and 27 ultimately depend from independent claim 23. As discussed above, claim 23 is allowable over the combination of Mizutani, Pippuri, Netflix, and Zimmermann. N2nsoft is cited for its alleged teaching of the respective features of dependent claims 25 and 27. However, N2nsoft fails to remedy the deficiencies of Mizutani, Pippuri, Netflix, and Zimmermann as noted above with regard to independent claim 23. Therefore, claims 25 and 27 are also allowable over the cited documents of record for at least their dependency from an allowable base claim, and also for the additional features that each recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claims 25 and 27.

**CLAIM 28 STANDS ALLOWABLE OVER MIZUTANI, EDWARDS, BURKHART, RABIE, ZIMMERMAN AND MEHTA**

The Office rejects claim 28 under 35 U.S.C. § 103(a) as allegedly being obvious over Mizutani in view of Edwards and Burkhardt, and in further view of Mehta. Applicant respectfully submits that this claim stands allowable as listed above and discussed below.

Claim 28 ultimately depends from independent claim 1. As discussed above, claim 1 is allowable over the combination of Mizutani, Edwards, Burkhart, Rabie, and Zimmerman. Mehta is cited for its alleged teaching of the features of dependent claim 28. However, Mehta fails to remedy the deficiencies of Mizutani, Edwards, Burkhart, Rabie, and Zimmerman as noted above with regard to independent claim 1. Therefore, claim 28 is also allowable over the cited documents of record for at least its dependency from an allowable base claim, and also for the additional features that it recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 28.

## CONCLUSION

For at least the foregoing reasons, all pending claims are in condition for allowance. Applicant respectfully requests reconsideration and withdrawal of the rejections and an early notice of allowance.

If any issue remains unresolved that would prevent allowance of this case, Applicant respectfully requests that the Office contact the undersigned attorney to resolve the issue.

Respectfully Submitted,

Lee & Hayes, PLLC
Representatives for Applicant

By: /Imhotep Durham 61466/ Dated: 2016-03-02

Imhotep S. Durham (imhotepd@leehayes.com)
Registration No. 61466

Brett J. Schlameus (brett@leehayes.com)
Registration No. 60827

Customer No. **29150**

Telephone: (509) 324-9256
Facsimile: (509) 323-8979
www.leehayes.com

## AMENDMENTS TO THE CLAIMS

**Claims pending**

- At time of the Action: 1-4 and 6-28
- After this Response: 1-4 and 6-28

**Currently Amended claims**: 1-4, 6-18, 20-25, and 28

**Currently Canceled claims**: None

**New claims**: None

1. (Currently Amended) A method comprising:

under control of one or more computer systems configured with specific computer-executable instructions:

receiving, at a content provider from a client device associated with a user, a request to receive a digital content item in return for a payment;

determining a performance of a network associated with the client device;

generating testing results based at least partly on the performance of the network;

determining, based at least partly on the testing results, that request attributes received from the client device are not likely to cause a reduction in a first quality of an output of the digital content item;

streaming the ~~requested~~ digital content item from the content provider to the client device at a second quality that varies based at least in part on at least one of network bandwidth or a buffer fill level of the client device;

monitoring, at the content provider, the streaming of the ~~requested~~ digital content item from a start of the streaming of the ~~requested~~ digital content item to an end of the streaming of the ~~requested~~ digital content item;

storing, at the content provider, metrics associated with the second quality of the streaming of the ~~requested~~ digital content item during the streaming of the ~~requested~~ digital content item ~~based at least in part on the monitoring~~;

comparing, at the content provider, the ~~stored~~ metrics with one or more threshold values that are associated with an encoding bit rate of the ~~requested~~ digital content item; and

providing restitution to the user ~~when~~ based at least partly on a determination that the ~~stored~~ metrics indicate that the second quality of the streaming of the digital content item fails to achieve at least one threshold value of the one or more threshold values ~~based at least in part on the comparing~~, wherein the restitution comprises at least one of an extension of a term to receive the ~~requested~~ digital content item or a refund of at least a portion of the payment from the user for the ~~requested~~ digital content item.

2. (Currently Amended) The method as recited in claim 1, wherein the request is a first request, and the providing the restitution to the user occurs without receiving a second request from the client device~~user.~~

3. (Currently Amended) The method as recited in claim 1, wherein the comparing is further based at least in part on a quantity of one or more rebuffer events that occur ~~when~~ at a time at which a buffer of the client device is exhausted during the streaming of the ~~requested~~ digital content item.

4. (Currently Amended) The method as recited in claim 1, wherein the comparing includes determining a length of time that the encoding bit rate ~~value~~ is below a respective threshold value.

5. (Canceled)

6. (Currently Amended) One or more non-transitory computer-readable storage media storing instructions that when executed by one or more processors, cause the one or more processors to:

receive a request for digital content from a client device associated with a user, wherein the request includes request attributes associated with transmission of a digital content item;

determine a past performance of a network associated with the client device;

determine a hardware configuration of the client device;

determine that the request attributes received from the ~~user~~ client device are not likely to cause a reduction in a first quality of an output of the digital content item based at least in part on the past performance of the network and the hardware configuration of the client device;

transmit, in exchange for a payment, the digital content item to the[[a]] client device associated with the user;

store, at a content provider, metrics associated with transmitting of the ~~requested~~ digital content item to the client device, the metrics associated with at least one of a second quality of the digital content item, a third quality of the transmitting of the digital content item, or a fourth quality of rendering of the digital content item;

determine that the ~~stored~~ metrics include at least one instance where the at least one of the second quality of the digital content item, the third quality of the transmitting the digital content item, or the fourth quality of the rendering of the digital content item fails to comply with a threshold value that is based at least in part on at least one of a variable bit rate or an adaptive bit rate transmission of the digital content item; and

determine restitution specific to the ~~requested~~ digital content item to provide to the user after a determination ~~of~~ that the at least one instance ~~that~~ fails to comply with the threshold value.

7. (Currently Amended) The one or more computer-readable media as recited in claim 6, further comprising instructions that when executed by the one or more processors, cause the one or more processors to receive a request for restitution from the ~~user~~ client device, and wherein the determining that the metrics include at least one instance is based at least in part on receipt of the request.

8. (Currently Amended) The one or more computer-readable media as recited in claim 6, further comprising instructions that when executed by the one or more processors, cause the one or more processors to transmit a message to the ~~user~~ client device to indicate that restitution has been provided to the user.

9. (Currently Amended) The one or more computer-readable media as recited in claim 6, wherein the transmitting includes streaming the digital content item to the client device for playback of the digital content item by the client device, and wherein the determining that the metrics include at least one instance occurs concurrently with the streaming of the digital content item.

10. (Currently Amended) The one or more computer-readable media as recited in claim 9, further comprising instructions that when executed by the one or more processors, cause the one or more processors to provide a message to the ~~user~~ client device~~in response to determination of the at least one instance~~, the message indicating that the second quality of the digital content item or the third quality of the transmitting of the digital content item fails to comply with the threshold value and, the message including an option to receive the restitution.

11. (Currently Amended) The one or more computer-readable media as recited in claim 6, wherein the third quality of the transmitting of the digital content item is further based at least in part on a total download time for the digital content item compared to an estimated download time for the digital content item.

12. (Currently Amended) The one or more computer-readable media as recited in claim 6, wherein the second quality of the digital content item is further based at least in part on a reduction in size of the digital content item.

13. (Currently Amended) The one or more computer-readable media as recited in claim 6, wherein the third quality of the transmitting of the digital content item is further [[a]]based at least in part on a quantity of one or more rebuffer events that occur ~~when~~ at a time at which a buffer of the client device is exhausted during the transmitting of the digital content item.

14. (Currently Amended) The one or more computer-readable media as recited in claim 6, wherein the fourth quality of the rendering of the digital content item is further based at least in part on a frame rate rendered by the client device.

15. (Currently Amended) The one or more computer-readable media as recited in claim 6, wherein the threshold value includes an amount or percentage of time that the second quality of the digital content item or the fourth quality of the rendering of the digital content item is less than a predetermined value.

16. (Currently Amended) The one or more computer-readable media as recited in claim 6, wherein the threshold value is based at least in part on a selection by the user of [[a]]the second quality of the digital content item.

17. (Currently Amended) One or more non-transitory computer-readable media storing computer-executable instructions that, when executed on one or more processors, cause the one or more processors to:

receive a request for digital content from a client device associated with a user, wherein the request includes request attributes associated with transmission of the digital content;

determine a past performance of a network associated with the client device;

determine a hardware configuration of the client device;

determine that the request attributes received from the ~~user~~ client device are not likely to cause a reduction in a first quality of an output of the digital content based on the past performance of the network and the hardware configuration of the client device;

transmit the digital content to [[a]]the client device associated with the user;

store performance attribute information associated with the transmission of the digital content, the performance attribute information associated with at least one of the first quality of the output of the digital content or a second quality of the transmission of the digital content;

determine that the ~~stored~~ performance attribute information includes at least one instance where the at least one of the first quality of the output of the digital content or

the second quality of the transmission of the digital content fails to comply with one or more threshold values;

provide a message to ~~the user of~~ the client device ~~in response to determining the at least one instance~~, the message indicating that the first quality of the output of the digital content or the second quality of the transmission of the digital content fails to comply with the one or more threshold values and including an option to receive restitution; and

provide the restitution to the user in response to the user exercising the option to receive the restitution.

18. (Currently Amended) The one or more computer-readable media as recited in claim 17, wherein the providing the restitution is performed at least partly in response to receipt of a request for the restitution from the ~~user~~ client device.

19. (Original) The one or more computer-readable media as recited in claim 17, wherein the restitution is an extension of a license to receive or play the digital content.

20. (Currently Amended) The one or more computer-readable media as recited in claim 17, wherein at least one of the first quality of the output of the digital content or the second quality of the transmission of the digital content is based at least in part on a bit rate associated with the digital content.

21. (Currently Amended) The one or more computer-readable media as recited in claim 17, wherein the second quality of the transmission of the digital content is based at least in part on a quantity of one or more rebuffer events that occur ~~when~~ at a time at which a buffer of the client device is exhausted during the transmission of the digital content.

22. (Currently Amended) The one or more computer-readable media as recited in claim 17, wherein the message to the ~~user~~ client device includes information

related to the at least one instance where the first quality of the output of the digital content or the second quality of the ~~streaming~~ transmission of the digital content fails to comply with the one or more threshold values.

23. (Currently Amended) A method comprising:

under control of one or more computer systems configured with executable instructions:

~~receive~~ receiving a request for digital content from a client device associated with a user, wherein the request includes request attributes associated with transmission of a digital content item;

determining a performance of a network associated with the client device;

generating testing results based at least on the performance of the network;

~~determine~~ determining, based at least partly on the testing results, that the request attributes received from the client device ~~user~~ are not likely to cause a reduction in a first quality of an output of the digital content item;

streaming the digital content item to [[a]]the client device associated with the user;

monitoring parameters indicative of a user experience associated with the streaming of the digital content item during the streaming of the digital content item;

determining, by the one or more computer systems, during the streaming of the digital content item and based at least in part on the ~~monitored~~ parameters, whether a second quality of the user experience is less than a threshold value;

presenting a message to the user on a presentation interface associated with the client device offering restitution to the user upon determining that the second quality of the user experience is less than the threshold value;

receiving, via a user input associated with the presentation interface, a user input accepting the restitution; and

initiating the restitution to the user based at least in part on receipt of the user input.

24. (Currently Amended) The method as recited in claim 23, wherein the user experience associated with the streaming of the digital content item is based at least in part on at least one of a third quality of transmission of the digital content item, a fourth quality of the digital content item, or a fifth quality of rendering of the digital content item.

25. (Currently Amended) The method as recited in claim 23, wherein

the monitoring the user experience comprises determining a number of rebuffer events that occurred on the client device during the streaming of the digital content item;

the threshold value comprises a threshold number of rebuffer events; and

the initiating the restitution occurs at least partly in response to determining that the number of rebuffer events that occurred on the client device is greater than the threshold number of rebuffer events.

26. (Previously Presented) The method as recited in claim 23, wherein

the monitoring the user experience comprises determining an amount or percentage of time a lower quality level of the digital content item is streamed to the client device as compared to a selected quality of the digital content item that is expected to be received by the client device;

the threshold value comprises a threshold amount or percentage of time; and

the initiating the restitution occurs at least partly in response to determining that the streaming of the digital content item occurs at the lower quality level for an amount or percentage of time that is greater than the threshold amount or percentage of time.

27. (Previously Presented) The method as recited in claim 23, wherein:

the monitoring the user experience comprises determining an amount or percentage of time a lower frame rate of the digital content item rendered by the client device as compared to an anticipated frame rate of the digital content item that is expected to be rendered by the client device;

the threshold value comprises a threshold amount or percentage of time; and

the initiating the restitution occurs at least partly in response to determining that the rendering of the digital content item occurs at the lower frame rate for an amount or percentage of time that is greater than the threshold amount or percentage of time.

28. (Currently Amended) The method as recited in claim 1, further comprising determining, at the content provider, whether a fraud has occurred when the ~~stored~~ metrics indicate that the second quality of the streaming of the digital content item fails to achieve at least one of the one or more threshold values.

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# NOTICE OF ALLOWANCE AND FEE(S) DUE

29150 7590 04/07/2017

LEE & HAYES, PLLC
601 W. RIVERSIDE AVENUE
SUITE 1400
SPOKANE, WA 99201

| EXAMINER | |
|---|---|
| FISHER, PAUL R | |
| ART UNIT | PAPER NUMBER |
| 3689 | |

DATE MAILED: 04/07/2017

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 13/033,378 | 02/23/2011 | James H. Wood | AM2-0491US | 8745 |

TITLE OF INVENTION: DIGITAL RETURNS

| APPLN. TYPE | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | UNDISCOUNTED | $960 | $0 | $0 | $960 | 07/07/2017 |

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**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

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601 W. RIVERSIDE AVENUE
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| (Signature) |
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|---|---|---|---|---|---|---|
| nonprovisional | UNDISCOUNTED | $960 | $0 | $0 | $960 | 07/07/2017 |

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|---|---|---|
| FISHER, PAUL R | 3689 | 705-304000 |

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- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
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- ❑ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
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PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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LEE & HAYES, PLLC
601 W. RIVERSIDE AVENUE
SUITE 1400
SPOKANE, WA 99201

| EXAMINER | |
|---|---|
| FISHER, PAUL R | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 3689 | |

DATE MAILED: 04/07/2017

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## Privacy Act Statement

**The Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

| Notice of Allowability | Application No. 13/033,378 | Applicant(s) WOOD ET AL. | |
|---|---|---|---|
| | Examiner PAUL R. FISHER | Art Unit 3689 | AIA (First Inventor to File) Status No |

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *RCE filed on March 2, 2016*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *1-4 and 6-28*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   **Certified copies:**

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   **Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 3/29/2013
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☒ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/PAUL R FISHER/
Primary Examiner, Art Unit 3689

## DETAILED ACTION

1. The Request for Continued Examination filed on March 2, 2016 has been acknowledged. Claims 5 has been canceled. Claims 1-4 and 6-28, as amended, are currently pending and have been considered below.

### *Notice of Pre-AIA or AIA Status*

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

### *Continued Examination Under 37 CFR 1.114*

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 2, 2016 has been entered.

### *Allowable Subject Matter*

4. Claims 1-4 and 6-28 allowed.

5. The following is an examiner's statement of reasons for allowance: The art of record fails to explicitly teach the combination of elements as currently claimed. Specifically that the second quality for the digital content is monitored from the start to

the end of the streaming of the digital content. This indicating that the stream is monitored on the client side to determine the quality of the content either in bandwidth or buffer fill is monitored for the specific digital content start to finish. The monitored metrics are compared to the threshold values to determine if the content has not met it is quality thresholds and restitution is in order. The closest prior art shows issuing refunds based on degraded images it does not show for quality service being bandwidth or buffer fill levels. While the combination shows bandwidth monitoring it does not show that this is done on the client side. The art of record fails to show all of the combination of limitations and as such the claims stand allowed over the prior art.

6. The 101 rejection has been withdrawn as the claims are directed toward a computer centric form of monitoring quality of service and issuing restitution. The unique manner of monitoring client side activity ensures that the users are compensated if they do not receive the service quality they have been promised. Similar to Bascom and Enfish these limitations improve the functionality of the system and by applying the unique system on the client side to ensure quality.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

## *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL R. FISHER whose telephone number is (571)270-5097. The examiner can normally be reached on Mon/Fri [8am/4:30pm].

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janice Mooneyham can be reached on (571) 272-6805. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an 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. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PAUL R FISHER/
Primary Examiner, Art Unit 3689
3/29/17