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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/148,140	06/29/2021	11050855	PMOR0120M	7968

92045 7590 06/09/2021

The Caldwell Firm, LLC
PO Box 59655
Dept. SVIPGP
Dallas, TX 75229

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

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 Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

JENAM TECH, LLC, Longview, TX;
Robert Paul Morris, Madison, GA;

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IR103 (Rev. 10/09)

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/148,140	01/13/2021	Robert Paul Morris	PMOR0120M	7968

92045 7590 05/24/2021

The Caldwell Firm, LLC
PO Box 59655
Dept. SVIPGP
Dallas, TX 75229

EXAMINER	
MEKY, MOUSTAFA M	

ART UNIT	PAPER NUMBER
2457	

NOTIFICATION DATE	DELIVERY MODE
05/24/2021	ELECTRONIC

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

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

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

eofficeaction@appcoll.com
pcaldwell@thecaldwellfirm.com

Supplemental ***Notice of Allowability***	**Application No.** 17/148,140	**Applicant(s)** Morris, Robert Paul	
	Examiner Moustafa M Meky	**Art Unit** 2457	**AIA (FITF) 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 the amendment filed 04/16/2021.
   ☐ 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 1-7,9-20 and 22-233 . 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. ☐ 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 _____.

/MOUSTAFA M MEKY/
Primary Examiner, Art Unit 2457

Notice of Pre-AIA or AIA Status

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

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the Claims:

59. (Amended) The apparatus of claim 54, wherein the apparatus is configured such that the first duration is not negotiated between the apparatus and the node during the connection set up, and at least one aspect of the second duration is negotiated during the connection set up between the apparatus and the node for the connection[,].

180. (Amended) The method of claim 179, wherein the first duration is not negotiated between the apparatus and the node during the connection set up, and at least one aspect of the second duration is negotiated during the connection set up between the apparatus and the node for the connection[,].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Moustafa M Meky whose telephone number is (571)272-4005. The examiner can normally be reached on Monday-Friday 9AM-5PM.

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, Ario Etienne can be reached on 571-272-4001. 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 https://ppair-my.uspto.gov/pair/PrivatePair. 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.

MOUSTAFA M. MEKY
Primary Patent Examiner
Art Unit 2457

/MOUSTAFA M MEKY/
Primary Examiner, Art Unit 2457

05/19/2021

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/148,140	Morris, Robert Paul
	Examiner	**Art Unit**
	Moustafa M Meky	2457

CPC								
Symbol							**Type**	**Version**
H04L	/	69	/	16			F	2013-01-01

CPC Combination Sets								
Symbol							**Type**	**Set**	**Ranking**	**Version**
	/		/							

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	231	
/MOUSTAFA M MEKY/ Primary Examiner, Art Unit 2457	19 May 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

U.S. Patent and Trademark Office — Part of Paper No.: 20210519

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/148,140	Morris, Robert Paul
	Examiner	**Art Unit**
	Moustafa M Meky	2457

INTERNATIONAL CLASSIFICATION				
CLAIMED				
G06F	/	15	/	16

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
709	201

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	231	
/MOUSTAFA M MEKY/ Primary Examiner, Art Unit 2457	19 May 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

U.S. Patent and Trademark Office — Part of Paper No.: 20210519

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/148,140	Morris, Robert Paul
	Examiner	**Art Unit**
	Moustafa M Meky	2457

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☑ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	33	31	63	61	93	91	123	121	149	151	179	181	209	211
2	2	34	32	64	62	94	92	124	122	150	152	180	182	210	212
3	3	35	33	65	63	95	93	125	123	151	153	181	183	227	213
4	4	36	34	66	64	96	94	127	124	152	154	182	184	212	214
5	5	37	35	67	65	97	95	128	125	153	155	183	185	213	215
6	6	38	36	68	66	98	96	129	126	154	156	184	186	214	216
7	7	39	37	69	67	99	97	130	127	155	157	185	187	215	217
-	8	40	38	70	68	100	98	131	128	156	158	186	188	216	218
8	9	41	39	71	69	101	99	132	129	157	159	187	189	217	219
9	10	42	40	72	70	102	100	133	130	158	160	188	190	218	220
10	11	43	41	73	71	103	101	134	131	159	161	189	191	219	221
11	12	44	42	74	72	104	102	135	132	160	162	190	192	220	222
12	13	45	43	75	73	105	103	136	133	161	163	191	193	221	223
17	14	46	44	76	74	106	104	137	134	162	164	192	194	222	224
18	15	47	45	77	75	107	105	138	135	163	165	193	195	223	225
19	16	48	46	78	76	108	106	139	136	164	166	194	196	224	226
20	17	49	47	79	77	109	107	140	137	165	167	195	197	225	227
21	18	50	48	80	78	110	108	141	138	166	168	196	198	226	228
22	19	51	49	81	79	111	109	142	139	167	169	197	199	228	229
23	20	52	50	82	80	112	110	143	140	168	170	198	200	229	230
-	21	53	51	83	81	113	111	144	141	169	171	199	201	230	231
24	22	54	52	84	82	114	112	145	142	170	172	200	202	211	232
25	23	55	53	85	83	115	113	146	143	171	173	201	203	231	233
26	24	56	54	86	84	116	114	126	144	172	174	202	204		
27	25	57	55	87	85	117	115	147	145	173	175	203	205		
28	26	58	56	88	86	118	116	13	146	174	176	204	206		
29	27	59	57	89	87	119	117	14	147	175	177	205	207		
30	28	60	58	90	88	120	118	15	148	176	178	206	208		
31	29	61	59	91	89	121	119	16	149	177	179	207	209		
32	30	62	60	92	90	122	120	148	150	178	180	208	210		

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	231	
/MOUSTAFA M MEKY/ Primary Examiner, Art Unit 2457	19 May 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

U.S. Patent and Trademark Office — Part of Paper No.: 20210519

OK to enter
MMM
05/19/2021

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Confirmation No.: 7968
Robert Paul Morris	Examiner: Moustafa M MEKY
Application No.: 17/148,140	Art Unit: 2457
File Date: 2021-01-13	Docket No.: PMOR0120M
Title: METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD	Date: Apr 16, 2021

AMENDMENT AFTER ALLOWANCE
UNDER 37 C.F.R. § 1.312

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Examiner:

Prior to issuance of the patent, applicant respectfully requests entry of this amendment under 37 C.F.R. 1.312 for the above-captioned patent application. On 3/30/2021, applicant filed an amendment in response to the communication mailed 3/29/2021. On 4/16/2021, the Notice of Allowance was mailed. Applicant respectfully notes that the claims mentioned in the Notice of Allowance do not reflect the new claims added in the communication mailed 3/30/2021. This appears to be an inadvertent error on the part of the Examiner. Thus, a supplemental Notice of Allowance and entry of the new claims of applicant's 3/30/2021 amendment (replicated below) are respectfully requested.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Confirmation No.: 7968
Robert Paul Morris	Examiner: Moustafa M MEKY
Application No.: 17/148,140	Art Unit: 2457
File Date: 2021-01-13	Docket No.: PMOR0120M
Title: METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD	Date: Apr 16, 2021

AMENDMENT AFTER ALLOWANCE
UNDER 37 C.F.R. § 1.312

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Examiner:

Prior to issuance of the patent, applicant respectfully requests entry of this amendment under 37 C.F.R. 1.312 for the above-captioned patent application. On 3/30/2021, applicant filed an amendment in response to the communication mailed 3/29/2021. On 4/16/2021, the Notice of Allowance was mailed. Applicant respectfully notes that the claims mentioned in the Notice of Allowance do not reflect the new claims added in the communication mailed 3/30/2021. This appears to be an inadvertent error on the part of the Examiner. Thus, a supplemental Notice of Allowance and entry of the new claims of applicant's 3/30/2021 amendment (replicated below) are respectfully requested.

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

1. (Original) An apparatus comprising:

a non-transitory memory storing instructions; and

one or more processors in communication with the non-transitory memory, wherein the one or more processors execute the instructions to:

identify first information;

generate, based on first information, a set up packet including a time period parameter field identifying first metadata, the set up packet for use in a protocol that is not transmission control protocol (TCP);

set up a connection, by sending, from the apparatus to a node, the set up packet to provide the first metadata to the node, for use by the node in determining a timeout attribute associated with the connection;

detect, by the apparatus, a time period during which no packet is received in the connection and processed to keep the connection active; and

in response to detecting the time period, at least partially deactivate, by the apparatus, the connection.

2. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the protocol does not include a TCP-extension.

3. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the protocol varies from request for comments (RFC) 793 by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a RFC 793 header of a RFC 793 connection packet sent during a RFC 793 connection after the RFC 793 connection is set up.

4. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the protocol varies from TCP by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a TCP header of a TCP connection packet sent during a TCP connection after the TCP connection is set up.

5. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the set up packet is not a synchronize (SYN) packet.

6. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the connection is at least partially deactivated, by releasing, by the apparatus, a resource allocated for the connection, without signaling the node in relation to the detection of the time period after detecting the time period.

7. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the connection is at least partially deactivated unilaterally by the apparatus.

8. (Cancelled)

9. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the at least partial deactivation is in response to the detection without sending any signal after the detection to the node to cause the at least partial deactivation.

10. (Currently Amended) The apparatus of claim 1 wherein the apparatus is configured such that the time period is detected without utilizing an acknowledgement timer that is reset based on a receipt of one or more acknowledgements.

11. (Original) The apparatus of claim 1 wherein the apparatus is configured such that an end of the time period is detected without utilizing an acknowledgement timer.

12. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the time period is that during which no packet is received that is unacknowledged.

13. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the time period is that during which no packet is sent by the apparatus to cause the node to respond.

14. (Currently Amended) An apparatus comprising:

a non-transitory memory storing instructions; and

one or more processors in communication with the non-transitory memory, wherein the one or more processors execute the instructions to:

receive, by the apparatus from a node, a set up packet during a setup of a connection, the set up packet for use in a protocol that is not transmission control protocol (TCP);

identify first metadata in a time period parameter field in the set up packet, for a time period, where, as a result of a detection of the time period, the connection is at least partially deactivated; and

determine, based on the first metadata, a timeout attribute associated with the connection.

15. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the protocol does not include a TCP-extension.

16. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the protocol varies from request for comments (RFC) 793 by including information in a header of a connection packet sent during the connection after the connection is set up, where the

information is not included in a RFC 793 header of a RFC 793 connection packet sent during a RFC 793 connection after the RFC 793 connection is set up.

17. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the protocol varies from TCP by including information in a header of a connection packet sent during the connection after the connection is set up, where the information is not included in a TCP header of a TCP connection packet sent during a TCP connection after the TCP connection is set up.

18. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the set up packet is not a synchronize (SYN) packet.

19. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the connection is at least partially deactivated, by releasing, by the apparatus, a resource allocated for the connection, without signaling the node in relation to the detection of the time period after detecting the time period.

20. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the connection is at least partially deactivated unilaterally by the apparatus.

21. (Cancelled)

22. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the time period is detected by detecting an absence of any packet being received at the apparatus and processed by the apparatus to keep the connection active.

23. (Original) The apparatus of claim 22 wherein the apparatus is configured such that the at least partial deactivation results from the detection of the absence without sending any signal after the detection of the absence to the node to cause the at least partial deactivation.

24. (Currently Amended) The apparatus of claim 22 wherein the apparatus is configured such that the absence further includes an absence of any packet being received that [[is]]has been unacknowledged.

25. (Original) The apparatus of claim 22 wherein the apparatus is configured such that the absence further includes an absence of any packet being sent by the apparatus to cause the node to respond.

26. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the time period is detected without utilizing an acknowledgement timer.

27. (Original) The apparatus of claim 14 wherein the apparatus is configured such that an end of the time period is detected without utilizing an acknowledgement timer.

28. (New) The apparatus of claim 14, wherein the time period includes a first time period detected based on a first duration, and the apparatus is configured to: in response to detecting, based on a second duration, a second time period, perform at least one action.

29. (New) The apparatus of claim 28, wherein the apparatus is configured such that the at least one action includes resetting a timer utilized in detecting a time period of a same type as the second time period.

30. (New) The apparatus of claim 29, wherein the apparatus is configured such that the time period of the same type as the second time period, includes the second time period.

31. (New) The apparatus of claim 29, wherein the apparatus is configured such that the time period of the same type as the second time period, includes another second time period.

32. (New) The apparatus of claim 28, wherein the apparatus is configured such that the first time period and the second time period are of different types.

33. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is an acknowledgement time period, and the first time period is an idle time period.

34. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected based on the second duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the second duration, for a sent packet sent by the apparatus in the connection.

35. (New) The apparatus of claim 34, wherein the apparatus is configured such that the second time period is detected based on the second duration, even when an acknowledgement

packet is received by the apparatus in the connection and processed as an acknowledgement, during the second duration, for at least one other sent packet sent by the apparatus in the connection.

36. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected based on the second duration, by being detected when an expected acknowledgement packet is not received by the apparatus in the connection, during the second duration, for a sent packet sent by the apparatus in the connection.

37. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected only in response to an acknowledgement packet not being received, for the second duration, in the connection for a sent packet sent in the connection.

38. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected in response to no acknowledgement packet being received in the connection and processed as an acknowledgement for a sent packet sent in the connection.

39. (New) The apparatus of claim 28, wherein the apparatus is configured such that the set up packet also includes data, separate from the first metadata, for use in determining the second time period.

40. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected utilizing a timer that is not utilized to detect the first time period.

41. (New) The apparatus of claim 28, wherein the apparatus is configured such that at least one aspect of the first and second durations are negotiated during the connection set up between the apparatus and the node for the connection.

42. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is an acknowledgment timeout period during which an expected acknowledgment for a sent packet is not received for at least one sent packet.

43. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second duration is determined using the time period parameter field identifying the first metadata.

44. (New) The apparatus of claim 28, wherein the apparatus is configured such that the first duration is determined based on the second duration.

45. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second duration is determined based on the first duration.

46. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected based on the second duration, by being detected when no acknowledgement packet is detected, by the apparatus during the second duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets sent by the apparatus, where the second duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer is utilized for detecting the second time period in connection with the plurality of sent packets.

47. (New) The apparatus of claim 46, wherein the apparatus is configured such that the second time period is detected based on the second duration, even when an acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the second duration, for at least one other sent packet of a plurality of other sent packets sent by the apparatus in the connection.

48. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected based on the second duration, by being detected when no acknowledgement packet is detected, by the apparatus during the second duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets sent by the apparatus, where the second duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent.

49. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected based on the second duration, by being detected when no acknowledgement packet is detected, by the apparatus during the second duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets sent by the apparatus, where the second duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer and a single timeout variable are utilized for detecting the second time period in connection with the plurality of sent packets.

50. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second duration is determined using an other time period parameter field identifying second metadata, where the other time period parameter field is communicated in the connection.

51. (New) The apparatus of claim 50, wherein the apparatus is configured such that the second duration is determined using the time period parameter field identifying the first metadata, and the other time period parameter field identifying the second metadata.

52. (New) The apparatus of claim 50, wherein the apparatus is configured such that the first duration is determined using the time period parameter field identifying the first metadata, and the other time period parameter field identifying the second metadata.

53. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is an acknowledgment timeout period.

54. (New) The apparatus of claim 14, wherein the time period includes a second time period detected based on a second duration, and the apparatus is configured to: in response to detecting, based on a first duration, a first time period, at least partially deactivate, by the apparatus, the connection.

55. (New) The apparatus of claim 54, wherein the apparatus is configured such that the second duration is detected by the apparatus after the first duration is changed to the second duration.

56. (New) The apparatus of claim 54, wherein the apparatus is configured such that the first duration is detected by the apparatus during at least a portion of the connection including at least a portion of the connection set up.

57. (New) The apparatus of claim 54, wherein the apparatus is configured such that the first time period and the second time period are a same type of time period.

58. (New) The apparatus of claim 54, wherein the apparatus is configured such that the first time period and the second time period are idle time periods.

59. (New) The apparatus of claim 54, wherein the apparatus is configured such that the first duration is not negotiated between the apparatus and the node during the connection set up, and at least one aspect of the second duration is negotiated during the connection set up between the apparatus and the node for the connection,

60. (New) The apparatus of claim 54, wherein the apparatus is configured such that the first duration is based on previous metadata previously exchanged with the node.

61. (New) The apparatus of claim 54, wherein the apparatus is configured such that the first duration is based on previous metadata previously exchanged with the node during a connection set up between the apparatus and the node for a previous connection.

62. (New) The apparatus of claim 14, wherein the time period includes a second time period that is of a first type of time period and that is detected based on a second duration, where the apparatus is configured to:

in response to detecting, based on a first duration and by the apparatus during at least a portion of the connection including at least a portion of the connection set up, a first time

period of the first type of time period, at least partially deactivate, by the apparatus, the connection;

in response to detecting, based on the second duration and by the apparatus after the first duration is changed to the second duration, the second time period of the first type of time period, at least partially deactivate, by the apparatus, the connection; and

in response to detecting, based on a third duration, a third time period of a second type of time period, perform at least one action.

63. (New) The apparatus of claim 62, wherein the apparatus is configured such that the at least one action includes restarting a timer utilized to detect the third time period.

64. (New) The apparatus of claim 62, wherein the apparatus is configured such that the at least one action includes starting a timer utilized to detect another time period of the second type of time period.

65. (New) The apparatus of claim 62, wherein the apparatus is configured such that the at least one action does not include connection deactivation.

66. (New) The apparatus of claim 62, wherein the apparatus is configured such that the at least one action includes sending a signal.

67. (New) The apparatus of claim 62, wherein the third duration is determined based on a first algorithm that is different from a second algorithm on which a determination of the second duration is based.

68. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is detected based on the third duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for a sent packet sent by the apparatus in the connection.

69. (New) The apparatus of claim 68, wherein the apparatus is configured such that the third time period is detected based on the third duration, when an acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for at least one other sent packet sent by the apparatus in the connection.

70. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is detected based on the third duration, by being detected when an expected acknowledgement packet is not received by the apparatus in the connection, during the third duration, for a sent packet sent by the apparatus in the connection.

71. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is detected only in response to an acknowledgement packet not being received, for the third duration, in the connection for a sent packet sent in the connection.

72. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is detected in response to no acknowledgement packet being received in the connection and processed as an acknowledgement for a sent packet sent in the connection.

73. (New) The apparatus of claim 62, wherein the apparatus is configured such that the set up packet also includes data, separate from the first metadata, for use in determining the third time period.

74. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is detected utilizing a timer that is not utilized to detect the first time period nor the second time period.

75. (New) The apparatus of claim 62, wherein the apparatus is configured such that the first duration is not negotiated between the apparatus and the node during the connection set up, at least one aspect of the second duration is negotiated during the connection set up between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is negotiated, via a metadata negotiation, during the connection set up between the apparatus and the node for the connection.

76. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is an acknowledgment timeout period during which an expected acknowledgment for a sent packet is not received.

77. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is an acknowledgement timeout.

78. (New) The apparatus of claim 62, wherein the apparatus is configured such that the second duration is determined using the time period parameter field.

79. (New) The apparatus of claim 62, wherein the apparatus is configured such that the second duration is determined based on the third duration.

80. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third duration is determined based on the second duration.

81. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is detected based on the third duration, by being detected when no acknowledgement packet is detected, by the apparatus during the third duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets sent by the apparatus, where the third duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer and a single timeout variable are utilized for detecting the third time period in connection with the plurality of sent packets.

82. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third duration is determined using an other time period parameter field identifying second metadata, where the other time period parameter field is communicated during the connection setup.

83. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third duration is determined using an other time period parameter field identifying second metadata, where the other time period parameter field is communicated in the connection after the connection setup.

84. (New) The apparatus of claim 62, wherein the apparatus is configured such that the second duration is determined using the time period parameter field identifying the first metadata, and an other time period parameter field identifying second metadata.

85. (New) The apparatus of claim 62, wherein the apparatus is configured such that:

the third time period is detected in response to no acknowledgement packet being received in the connection and processed, during the third duration, to acknowledge a sent packet sent in the connection, where the third duration starts in response to the sent packet being sent;

the first duration is not capable of being negotiated between the apparatus and the node for the connection during the connection set up, at least one aspect of the second duration is capable of being negotiated between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is capable of being negotiated between the apparatus and the node for the connection; and

the third time period is an acknowledgment timeout period.

86. (New) The apparatus of claim 62, wherein the apparatus is configured such that a name of the protocol does not have phrase TCP therein.

87. (New) The apparatus of claim 14, wherein the time period includes a second time period that is of a first type of time period and that is detected based on a second duration, where the apparatus is configured to:

in response to detecting, based on a first duration and by the apparatus during at least a portion of the connection including at least a portion of the connection set up, a first time period of the first type of time period, at least partially deactivate, by the apparatus, the connection;

in response to detecting, based on the second duration and by the apparatus after the first duration is changed to the second duration, the second time period of the first type of time period, at least partially deactivate, by the apparatus, the connection; and

in response to detecting, based on a third duration, a third time period of a second type of time period, perform at least one action, where the third time period is detected based on the third duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for a sent packet sent by the apparatus in the connection;

wherein the apparatus is configured such that: during the second time period of the first type of time period, an empty packet is sent without causing a timer utilized to detect the second time period to be reset;

wherein the apparatus is configured such that:

the protocol is not a TCP-extension;

the first duration is not capable of being negotiated between the apparatus and the node for the connection during the connection set up, at least one aspect of the second duration is capable of being negotiated between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is capable of being negotiated between the apparatus and the node for the connection;

the set up packet is not a synchronize (SYN) packet; and

the first time period and the second time period are started in response to at least one of a received packet or a transmitted packet,

wherein the apparatus is configured such that the connection set up further includes, in addition to (a-1) receiving the set up packet:

(a-2) after receiving the set up packet and without any other communication between the apparatus and the node after (a-1) and before (a-2), sending, from the apparatus to the node, another set up packet, and

(a-3) after sending the another set up packet and without any other communication between the apparatus and the node after (a-2) and before (a-3), receiving, at the apparatus from the node, yet another set up packet.

88. (New) The apparatus of claim 87, wherein the apparatus is configured such that the first time period is only capable of being detected during the connection set up.

89. (New) The apparatus of claim 87, wherein the apparatus is configured such that the second time period is capable of being detected at a time at least one of: during the connection set up, or thereafter during the connection.

90. (New) The apparatus of claim 87, wherein the apparatus is configured such that only one of the first time period or the second time period is detected for the connection.

91. (New) The apparatus of claim 87, wherein the apparatus is configured such that the first duration is used and the second duration is not used, for detecting the first type of time period until being changed to the second duration.

92. (New) The apparatus of claim 87, wherein the apparatus is configured such that the first type of time period includes an idle time period.

93. (New) The apparatus of claim 87, wherein the apparatus is configured to, in response to detecting the first time period of the first type of time period, unilaterally at least partially close the connection.

94. (New) The apparatus of claim 87, wherein the apparatus is configured to, in response to detecting the first time period of the first type of time period, at least partially close the connection, without signaling the node in relation to the detection of the first time period after detecting the first time period.

95. (New) The apparatus of claim 87, wherein the apparatus is configured to, in response to detecting the first time period of the first type of time period, at least partially close the connection, by releasing, by the apparatus, a first resource allocated for the connection.

96. (New) The apparatus of claim 87, wherein the apparatus is configured such that the second duration is capable of being different from the first duration.

97. (New) The apparatus of claim 87, wherein the apparatus is configured such that the second duration is different from the first duration.

98. (New) The apparatus of claim 87, wherein the apparatus is configured such that the second duration is the same as the first duration, despite being capable of being different from the first duration.

99. (New) The apparatus of claim 87, wherein the apparatus is configured such that an idle timeout attribute is utilized for the first type of time period, and another timeout attribute, that is separate from the idle timeout attribute, is utilized for controlling communication of one or more acknowledgment packets.

100. (New) The apparatus of claim 87, wherein the apparatus is configured such that the first type of time period is started in response to the received packet.

101. (New) The apparatus of claim 87, wherein the apparatus is configured such that the first type of time period is started in response to the transmitted packet.

102. (New) The apparatus of claim 87, wherein the apparatus is configured such that, after the first duration is changed to the second duration, the detection of the second time period of the first type of time period is based on the second duration, by being only based on whether, for the second duration after the second time period of the first type of time period is started, no packet is received and processed to keep the connection active.

103. (New) The apparatus of claim 87, wherein the apparatus is configured such that the connection does not involve the TCP-extension.

104. (New) The apparatus of claim 87, wherein the apparatus is configured such that a name of the protocol does not have TCP therein.

105. (New) The apparatus of claim 87, wherein the apparatus is configured such that the at least one action does not include connection deactivation, and the at least one action includes starting a timer.

106. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third time period is detected based on the third duration, by being detected when an expected

acknowledgement packet is not received by the apparatus in the connection, during the third duration, for the sent packet sent by the apparatus in the connection.

107. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third time period is detected only in response to the acknowledgement packet not being received, for the third duration, in the connection for the sent packet sent in the connection.

108. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third time period is detected in response to no acknowledgement packet being received in the connection and processed as an acknowledgement for the sent packet sent in the connection.

109. (New) The apparatus of claim 87, wherein the apparatus is configured such that the set up packet also includes data, separate from the first metadata, for use in determining the third time period.

110. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third time period is detected utilizing a timer that is not utilized to detect the first time period nor the second time period.

111. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third time period is an acknowledgment timeout period during which an expected acknowledgment for the sent packet is not received.

112. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third duration is determined using the time period parameter field identifying the first metadata.

113. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third duration is determined based on the second duration.

114. (New) The apparatus of claim 87, wherein the apparatus is configured such that the second duration is determined based on the third duration.

115. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third time period is detected based on the third duration, by being detected when no acknowledgement packet is detected, by the apparatus during the third duration, as being received and processed as an acknowledgement in the connection to acknowledge one or more sent packets of a plurality of sent packets sent by the apparatus, where the third duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer and a single timeout variable are utilized for detecting the third time period in connection with the plurality of sent packets.

116. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third duration is determined using an other time period parameter field identifying second metadata.

117. (New) The apparatus of claim 116, wherein the apparatus is configured such that the second duration is determined using the time period parameter field identifying the first

metadata, and the other time period parameter field identifying the second metadata identifying the second metadata.

118. (New) The apparatus of claim 87, wherein the apparatus is configured such that:

the third time period is detected in response to no acknowledgement packet being received in the connection and processed, during the third duration, to acknowledge a sent packet sent in the connection, where the third duration starts in response to the sent packet being sent; and

the third time period is an acknowledgment timeout period.

119. (New) The apparatus of claim 87, wherein the apparatus is configured such that: after the first duration is changed to the second duration, the detection of the second time period of the first type of time period is based on the second duration, by being based on whether, during the second duration after the second time period is started, no packet is received in the connection and processed to keep the connection active.

120. (New) The apparatus of claim 87, wherein the apparatus is configured such that: during the at least portion of the connection including the at least portion of the connection set up, the detection of the first time period of the first type of time period is based on the first duration, by being based on whether, during the first duration after the first time period is started, no packet is received in the connection and processed to keep the connection active.

121. (New) The apparatus of claim 120, wherein the apparatus is configured such that: after the first duration is changed to the second duration, the detection of the second time period of the first type of time period is based on the second duration, by being based on whether, during the second duration after the second time period is started, no packet is received in the connection and processed to keep the connection active.

122. (New) The apparatus of claim 121, wherein the apparatus is configured such that the third time period is detected based on the third duration, by being detected when no acknowledgement packet is detected, by the apparatus during the third duration, as being received and processed as an acknowledgement in the connection to acknowledge one or more sent packets of a plurality of sent packets sent by the apparatus.

123. (New) The apparatus of claim 122, wherein the apparatus is configured such that the third duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer and a single timeout variable are utilized for detecting the third time period in connection with the plurality of sent packets.

124. (New) The apparatus of claim 122, wherein the apparatus is configured such that the third time period is detected based on the third duration, even when an acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for at least one other sent packet of the plurality of sent packets sent by the apparatus in the connection.

125. (New) The apparatus of claim 122, wherein the apparatus is configured such that at least one packet is received in connection with at least one of the first time period or the

second time period, but is not received and processed to keep the connection active, as a result of at least one of:

the at least one packet being un-processable,

the at least one packet being discarded,

the at least one packet being a duplicate, or

the at least one packet not being received in a manner so as to be processed by a software component.

126. (New) The apparatus of claim 122, wherein the apparatus is configured such that at least one packet is received in connection with the third time period, but is not received and processed to acknowledge at least one of the plurality of sent packets with which the third duration is associated, as a result of at least one of:

the at least one packet being un-processable,

the at least one packet being discarded,

the at least one packet being a duplicate, or

the at least one packet not being received in a manner so as to be processed by a software component.

127. (New) The apparatus of claim 14, wherein the apparatus is configured such that the connection set up is for the protocol that is not TCP, instead of TCP, based on code communicated utilizing TCP.

128. (New) The apparatus of claim 127, wherein the apparatus is configured to send the code utilizing TCP.

129. (New) The apparatus of claim 128, wherein the apparatus is configured to send the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP.

130. (New) The apparatus of claim 128, wherein the apparatus is configured to send the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, such that, based on the code, the node is capable of utilizing TCP or the protocol is utilized.

131. (New) The apparatus of claim 128, wherein the apparatus is configured to send the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, such that, based on the code, the node is capable of determining which of the TCP or the protocol is utilized.

132. (New) The apparatus of claim 127, wherein the apparatus is configured to receive the code utilizing TCP.

133. (New) The apparatus of claim 132, wherein the apparatus is configured to receive the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP.

134. (New) The apparatus of claim 132, wherein the apparatus is configured to receive the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to utilize either TCP or the protocol that is not TCP.

135. (New) The apparatus of claim 132, wherein the apparatus is configured to receive the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to determine which of the TCP or the protocol is utilized.

136. (New) The apparatus of claim 132, wherein the apparatus is configured to receive, from the node utilizing TCP, the code.

137. (New) The apparatus of claim 132, wherein the apparatus is configured to receive, from another node utilizing TCP, the code.

138. (New) The apparatus of claim 132, wherein the apparatus is configured to receive, from another node utilizing TCP, the code, the code for permitting communication utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to utilize either TCP or the protocol that is not TCP.

139. (New) The apparatus of claim 132, wherein the apparatus is configured to receive, from another node, the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to determine which of the TCP or the protocol is utilized.

140. (New) The apparatus of claim 132, wherein the apparatus is configured to receive, from another node utilizing TCP, the code, the code for permitting communication utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to automatically utilize either TCP or the protocol that is not TCP.

141. (New) The apparatus of claim 132, wherein the apparatus is configured to receive, from another node, the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to automatically determine at least one aspect of the TCP or the protocol.

142. (New) The apparatus of claim 127, wherein the apparatus is configured such that the code is communicated, by only being sent, by the apparatus utilizing TCP.

143. (New) The apparatus of claim 127, wherein the apparatus is configured such that the code is communicated, by only being received, by the apparatus utilizing TCP.

144. (New) The apparatus of claim 123, wherein at least one of:

the at least one action includes at least partial closure of the connection;

the at least one action includes a closure of the connection;

the at least one action does not include a closure of the connection;

the at least one action does not include any part of a closure of the connection;

the apparatus includes a particular node;

the apparatus includes a device, including a network interface, that is a component of the apparatus;

the apparatus includes a network interface that is a component of the apparatus;

the apparatus includes a web server;

the timer includes a hardware timer;

the timer includes a software timer;

the by the apparatus includes caused, at least in part, by the apparatus;

the by the apparatus includes caused by the apparatus;

the by the apparatus includes caused entirely by the apparatus;

the by the apparatus includes performed, at least in part, by the apparatus;

the by the apparatus includes performed entirely by the apparatus;

the at least partial deactivation in response to detecting the first time period is the same as the at least partial deactivation in response to detecting the second time period;

the at least partial deactivation in response to detecting the first time period is different from the at least partial deactivation in response to detecting the second time period;

the empty packet is sent without causing the timer utilized to detect the second time period to be reset, by resetting a first software timer-related component not utilized to detect the second time period, without resetting a second software timer-related component utilized to detect the second time period;

the empty packet is sent without causing the timer utilized to detect the second time period to be reset, by resetting a first software timer-related component not utilized to detect the second time period, without resetting a second software timer-related component utilized to detect

the second time period, where the first software timer-related component and the second software timer-related component utilize a same hardware timer-related component;

the empty packet is sent without causing the timer utilized to detect the second time period to be reset, by resetting a first software timer-related component not utilized to detect the second time period, without resetting a second software timer-related component utilized to detect the second time period, where the first software timer-related component and the second software timer-related component do not utilize a same hardware timer-related component;

the set up packet is an initial non-TCP packet;

the set up packet is first-in-time;

the time period parameter field is part of a data portion in the set up packet;

the time period parameter field is part of a header of the set up packet;

the set up packet is informational;

the setup of the connection includes a period of time starting prior to the set up packet being sent;

the setup of the connection includes a period of time starting prior to the set up packet being sent, when information is identified;

the setup of the connection includes a period of time starting prior to the set up packet being sent, when information is received;

the setup of the connection includes a period of time starting prior to the set up packet being sent, when the set up packet is generated;

the setup of the connection includes a period of time starting prior to the set up packet being sent, when received information is used to generate the set up packet;

the setup of the connection includes a period of time starting with the set up packet being sent;

the set up packet includes a packet that is used for the setup of the connection;

the set up packet includes a packet that is used in association with the setup of the connection;

the set up packet includes a packet that is used in advance of a completion of the setup of the connection;

the set up packet is for use in the protocol, by being capable of being used by the node in accordance with the protocol;

the at least partial deactivation includes only a partial deactivation;

the at least partial deactivation includes a full deactivation;

the at least partial deactivation includes a release of a resource;

the at least partial deactivation includes a partial closure;

the at least partial deactivation includes a closure;

the at least partial deactivation includes a deactivation only for the apparatus;

the at least partial deactivation results in the connection no longer being fully active;

the at least partial deactivation results in the connection no longer being active;

the connection includes one or more features of TCP, and one or more features not of TCP;

the set up packet includes one or more features of a TCP packet, and one or more features not of a TCP packet;

the connection includes one or more features of a TCP connection, and one or more features not of a TCP connection;

the first duration for detecting the first type of time period is based on first information, by the first information specifying the first duration;

the first duration for detecting the first type of time period is based on first information, by information identifying at least one generator for generating the first duration;

only the first duration for detecting the first type of time period is based on first information;

the connection includes (a-1), (a-2), and (a-3);

the second duration of the second time period is different from the duration of the first time period;

the second duration of the second time period is the same as the duration of the first time period;

the third duration of the third time period is different from the duration of the first time period;

the third duration of the third time period is the same as the duration of the first time period;

the third duration of the third time period is different from the duration of the second time period;

the third duration of the third time period is the same as the duration of the second time period;

the set up packet also includes data for use in determining the first time period;

first information includes a first value representative of the first duration of the first time period, and a second value representative of the second duration of the second time period;

first information includes a first value representative of the first duration of the first time period, and identification of a generator for generating a second value representative of the second duration of the second time period;

first information includes identification of a generator for generating a first value representative of the first duration of the first time period, and for generating a second value representative of the second duration of the second time period;

first information includes identification of a first generator for generating a first value representative of the first duration of the first time period, and identification of a second generator for generating a second value representative of the second duration of the second time period;

the first time period is detected in a first use scenario without the second nor third time periods being detected, the second time period is detected in a second use scenario without the first nor third time periods being detected, the third time period is detected in a third use scenario without the first nor second time periods being detected, and neither the first, second, nor third time periods are detected in a fourth use scenario;

the first duration of the first time period is determined based on first information, after identifying the first information;

the first duration of the first time period is determined based on first information, before setting up the connection;

the first duration of the first time period is determined based on first information, during setting up the connection;

the first duration of the first time period is determined based on first information, after setting up the connection;

the first time period is triggered by one or more non-duration-related criteria that triggers the second time period;

the first time period is triggered by the same one or more non-duration-related criteria that triggers the second time period;

the first time period is triggered by different one or more non-duration-related criteria than that which triggers the second time period;

the first time period is that during which no packet is received in the connection nor expected to be received;

the first time period is that during which no packet is received in the connection;

the third time period is triggered by one or more non-duration-related criteria that triggers the second time period;

the third time period is triggered by the same one or more non-duration-related criteria that triggers the second time period;

the third time period is triggered by different one or more non-duration-related criteria than that which triggers the second time period;

the third time period is that during which no packet is received in the connection nor expected to be received;

the third time period is that during which no packet is received in the connection;

the first metadata is based on first information;

the change occurs while detection of the first time period is attempted;

the change occurs via a negotiation;

the second time period is a changed version of the first time period;

the second time period is a changed instance of the first time period;

the change to the second duration includes a change in use of the first duration to a use of the second duration;

the change to the second duration includes a change in use of the first duration to a use of the second duration, in connection with different time periods;

the change to the second duration includes a change from an attempt to detect the first time period to an attempt to detect the second time period;

the change to the second duration includes a change from detecting the first time period to detecting the second time period;

the first time period and the second time period have at least one additional difference, in addition to duration, despite both being of the first type of time period;

the first time period and the second time period do not have at least one additional difference, in addition to duration;

the second time period is determined based on first information;

the first duration of the first time period is negotiated between the apparatus and the node for the connection, during the connection set up;

the connection set up includes all communications that precede completion of the connection set up;

the duration of the second time period is determined based on first information;

the duration of the third time period is determined based on first information;

the first and second time periods are of a same duration;

the first and second time periods are of a different duration;

the first and second time periods are different instances of the same type of time period;

the first and second time periods are of the same type of time period, but are applied at different times during the connection;

the first duration of the first time period is determined by being negotiated;

the second duration of the second time period is determined by being negotiated;

the third duration of the third time period is determined by being negotiated;

the first metadata is also for use in determining the second duration of the second time period;

the first metadata is not for use in determining the second duration of the second time period;

the first metadata is also for use in determining the third duration of the third time period;

the first metadata is not for use in determining the third duration of the third time period;

the first metadata describes a definition of at least one duration;

the first metadata defines at least one duration;

the first metadata includes at least one duration;

the first metadata describes a definition of at least one time period;

the first metadata describes other data that defines at least one duration;

the first metadata describes other data that defines at least one time period;

the first metadata describes other criteria-related data that defines at least one time period;

the first metadata describes duration data that defines at least one time period;

the first metadata describes duration criteria-related data that defines at least one time period;

the at least portion of the connection includes only a subset of setting up the connection;

the at least portion of the connection includes an entirety of setting up the connection;

the at least portion of the connection set up includes one or more packet exchanges that occur after the set up packet is sent;

the at least portion of the connection set up includes one or more packet exchanges that occur after the set up packet is sent prior to completion of the connection set up;

the set up packets are non-TCP;

the set up packets are non-TCP by not being required by any TCP standard specification;

the first time period is detected based on the first duration, by being detected when packet activity or a lack thereof meets one or more criteria for a span of the first duration;

the second time period is detected based on the second duration, by being detected when packet activity or a lack thereof meets one or more criteria for a span of the second duration;

the empty packet includes a ping;

the empty packet includes an empty acknowledgement packet;

the first type of time period includes an idle time period type;

the first and second time periods of the first type of time period differ only in duration;

the first and second time periods of the first type of time period are capable of differing in duration, but may have a same duration;

the first and second time periods of the first type of time period are capable of differing only in duration, but may have a same duration;

the first and second time periods of the first type of time period differ in duration and at least one criteria involving packet activity or a lack thereof over a duration span;

the first and second time periods of the first type of time period are capable of differing in duration and further differ in at least one criteria involving packet activity or a lack thereof over a duration span;

the set up packet includes a portion of data sent at any layer;

the set up packet includes a frame;

the set up packet is a non-TCP frame;

the first time period is started in response to a received packet and the second time period are started in response to a sent packet;

the first time period is started in response to a sent packet and the second time period are started in response to a received packet;

the first time period is started in response to a received packet and the second time period are started in response to a received packet;

the first time period is started in response to a sent packet and the second time period are started in response to a sent packet;

the first time period and the second time period are started in response to different packets;

the first time period and the second time period are started in response to different types of packets;

the third time period is detected based on the third duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an

acknowledgement, during the third duration, for any sent packet sent by the apparatus in the connection;

the third time period is detected based on the third duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration;

the timeout attribute is an attribute associated with a particular timeout;

the timeout attribute is an attribute associated with at least one timeout;

the timeout attribute is an attribute of the time period;

the timeout attribute is an attribute of the second time period;

the timeout attribute includes a duration;

the timeout attribute includes duration information;

the timeout attribute includes a duration indication;

the timeout attribute includes a duration indicator of the second time period; or

the protocol that is not TCP is a non-TCP protocol.

145. (New) The apparatus of claim 14, wherein the apparatus is configured such that the protocol does not require use of a TCP_OPT header.

146. (New) The apparatus of claim 1, wherein the apparatus is configured such that at least one packet is received in connection with the time period, but is not received in the connection and processed to keep the connection active, as a result of the at least one packet being un-processable.

147. (New) The apparatus of claim 1, wherein the apparatus is configured such that at least one packet is received in connection with the time period, but is not received in the connection and processed to keep the connection active, as a result of the at least one packet being discarded, wherein the apparatus is configured such that the at least one packet is a duplicate packet, or a packet not to be processed.

148. (New) The apparatus of claim 1, wherein the apparatus is configured such that at least one packet is received during the time period, but is not received in the connection and processed to keep the connection active, as a result of the at least one packet not being received in a manner so as to be processed by a software component.

149. (New) The apparatus of claim 1, wherein the time period includes a second time period that is of a first type of time period and that is detected based on a second duration, where the apparatus is configured to:

in response to detecting, based on a first duration and by the apparatus during at least a portion of the connection including at least a portion of the connection set up, a first time period of the first type of time period, at least partially deactivate, by the apparatus, the connection;

in response to detecting, based on the second duration and by the apparatus after the connection set up, the second time period of the first type of time period, at least partially deactivate, by the apparatus, the connection; and

in response to detecting, based on a third duration, a third time period of a second type of time period, perform at least one action, where the third time period is detected based on

the third duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for a sent packet sent by the apparatus in the connection;

wherein the apparatus is configured such that: during the second time period of the first type of time period, an empty packet is sent without causing a timer utilized to detect the second time period to be reset;

wherein the apparatus is configured such that:

the protocol is not a TCP-extension;

the first duration is not capable of being negotiated between the apparatus and the node for the connection during the connection set up, at least one aspect of the second duration is capable of being negotiated between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is capable of being negotiated between the apparatus and the node for the connection;

the set up packet is not a synchronize (SYN) packet; and

the first time period and the second time period are started in response to at least one of a received packet or a transmitted packet,

wherein the apparatus is configured such that the connection set up further includes, in addition to (a-1) sending the set up packet:

(a-2) after sending the set up packet and without any other communication between the apparatus and the node after (a-1) and before (a-2), receiving, at the apparatus from the node, another set up packet, and

(a-3) after receiving the another set up packet and without any other communication between the apparatus and the node after (a-2) and before (a-3), sending, from the apparatus to the node, yet another set up packet.

150. (New) A method, comprising:

at an apparatus:

receiving, by the apparatus from a node, a set up packet during a setup of a connection, the set up packet for use in a protocol that is not transmission control protocol (TCP);

identifying first metadata in a time period parameter field in the set up packet, for a time period, where, as a result of a detection of the time period, the connection is at least partially deactivated; and

determining, based on the first metadata, a timeout attribute associated with the connection.

151. (New) The method of claim 150, wherein the time period includes a first time period detected based on a first duration, and further comprising: in response to detecting, based on a second duration, a second time period, performing at least one action.

152. (New) The method of claim 151, wherein the at least one action includes resetting a timer utilized in detecting a time period of a same type as the second time period.

153. (New) The method of claim 152, wherein the time period of the same type as the second time period, includes the second time period.

154. (New) The method of claim 152, wherein the time period of the same type as the second time period, includes another second time period.

155. (New) The method of claim 151, wherein the first time period and the second time period are of different types.

156. (New) The method of claim 155, wherein the protocol varies from request for comments (RFC) 793 by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a RFC 793 header of a RFC 793 connection packet sent during a RFC 793 connection after the RFC 793 connection is set up.

157. (New) The method of claim 155, wherein the protocol varies from TCP by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a TCP header of a TCP connection packet sent during a TCP connection after the TCP connection is set up.

158. (New) The method of claim 155, wherein the second time period is detected based on the second duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the second duration, for a sent packet sent by the apparatus in the connection.

159. (New) The method of claim 158, wherein the second time period is detected based on the second duration, even when an acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the second duration, for at least one other sent packet sent by the apparatus in the connection.

160. (New) The method of claim 155, wherein the second time period is detected based on the second duration, by being detected when an expected acknowledgement packet is not received by the apparatus in the connection, during the second duration, for a sent packet sent by the apparatus in the connection.

161. (New) The method of claim 155, wherein the second time period is detected only in response to an acknowledgement packet not being received, for the second duration, in the connection for a sent packet sent in the connection.

162. (New) The method of claim 155, wherein the second time period is detected in response to no acknowledgement packet being received in the connection and processed as an acknowledgement for a sent packet sent in the connection.

163. (New) The method of claim 155, wherein the set up packet also includes data, separate from the first metadata, for use in determining the second time period.

164. (New) The method of claim 155, wherein the second time period is detected utilizing a timer that is not utilized to detect the first time period.

165. (New) The method of claim 155, wherein at least one aspect of the first and second durations are negotiated during the connection set up between the apparatus and the node for the connection.

166. (New) The method of claim 155, wherein the second time period is an acknowledgment timeout period during which an expected acknowledgment for a sent packet is not received for at least one sent packet.

167. (New) The method of claim 155, wherein the second duration is determined using the time period parameter field identifying the first metadata.

168. (New) The method of claim 155, wherein the second time period is detected based on the second duration, by being detected when no acknowledgement packet is detected, by the apparatus during the second duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets

which are associated with the second duration of the second time period and which are sent by the apparatus, where the second duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer is utilized for detecting the second time period in connection with the plurality of sent packets.

169. (New) The method of claim 168, wherein the second time period is detected based on the second duration, even when an acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the second duration, for at least one other sent packet of a plurality of other sent packets sent by the apparatus in the connection.

170. (New) The method of claim 155, wherein the second time period is detected based on the second duration, by being detected when no acknowledgement packet is detected, by the apparatus during the second duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets which are associated with the second duration of the second time period and which are sent by the apparatus, where the second duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent.

171. (New) The method of claim 155, wherein the second time period is detected based on the second duration, by being detected when no acknowledgement packet is detected, by the apparatus during the second duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets which are associated with the second duration of the second time period and which are sent by the apparatus, where the second duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer and a single

timeout variable are utilized for detecting the second time period in connection with the plurality of sent packets.

172. (New) The method of claim 155, wherein the second duration is determined using an other time period parameter field identifying second metadata, where the other time period parameter field is communicated in the connection.

173. (New) The method of claim 172, wherein the second duration is determined using the time period parameter field identifying the first metadata, and the other time period parameter field identifying the second metadata.

174. (New) The method of claim 172, wherein the first duration is determined using the time period parameter field identifying the first metadata, and the other time period parameter field identifying the second metadata.

175. (New) The method of claim 155, wherein the second time period is an acknowledgment timeout period.

176. (New) The method of claim 150, wherein the time period includes a second time period detected based on a second duration, and further comprising: in response to detecting, based on a first duration, a first time period, at least partially deactivating, by the apparatus, the connection.

177. (New) The method of claim 176, wherein the second duration is detected by the apparatus after the first duration is used to at least attempt to detect the first time period.

178. (New) The method of claim 177, wherein the first duration is detected by the apparatus during at least a portion of the connection including at least a portion of the connection set up.

179. (New) The method of claim 178, wherein the first time period and the second time period are a same type of time period.

180. (New) The method of claim 179, wherein the first duration is not negotiated between the apparatus and the node during the connection set up, and at least one aspect of the second duration is negotiated during the connection set up between the apparatus and the node for the connection,

181. (New) The method of claim 180, wherein the first duration is based on previous metadata previously exchanged with the node.

182. (New) The method of claim 180, wherein the first duration is based on previous metadata previously exchanged with the node during a connection set up between the apparatus and the node for a previous connection.

183. (New) The method of claim 180 wherein the protocol does not include a TCP-extension.

184. (New) The method of claim 180 wherein the protocol varies from request for comments (RFC) 793 by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not

included in a RFC 793 header of a RFC 793 connection packet sent during a RFC 793 connection after the RFC 793 connection is set up.

185. (New) The method of claim 180 wherein the protocol varies from TCP by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a TCP header of a TCP connection packet sent during a TCP connection after the TCP connection is set up.

186. (New) The method of claim 180 wherein the set up packet is not a synchronize (SYN) packet.

187. (New) The method of claim 180 wherein the connection is at least partially deactivated, by releasing, by the apparatus, a resource allocated for the connection, without signaling the node in relation to the detection of the time period after detecting the time period.

188. (New) The method of claim 180 wherein the connection is at least partially deactivated unilaterally by the apparatus.

189. (New) The method of claim 180 wherein the at least partial deactivation is in response to the detection without sending any signal after the detection to the node to cause the at least partial deactivation.

190. (New) The method of claim 180 wherein the time period is detected without utilizing an acknowledgement timer that is reset based on a receipt of one or more acknowledgements.

191. (New) The method of claim 180 wherein an end of the time period is detected without utilizing an acknowledgement timer.

192. (New) The method of claim 180 wherein the time period is that during which no packet is received that is unacknowledged.

193. (New) The method of claim 180 wherein the time period is that during which no packet is sent by the apparatus to cause the node to respond.

194. (New) The method of claim 150, wherein the time period includes a second time period that is of a first type of time period and that is detected based on a second duration, and further comprising:

in response to detecting, based on a first duration and by the apparatus during at least a portion of the connection including at least a portion of the connection set up, a first time period of the first type of time period, at least partially deactivating, by the apparatus, the connection;

in response to detecting, based on the second duration and by the apparatus after the first duration is changed to the second duration, the second time period of the first type of time period, at least partially deactivating, by the apparatus, the connection; and

in response to detecting, based on a third duration, a third time period of a second type of time period, performing at least one action.

195. (New) The method of claim 194, wherein the at least one action includes restarting a timer utilized to detect the third time period.

196. (New) The method of claim 194, wherein the at least one action includes starting a timer utilized to detect another time period of the second type of time period.

197. (New) The method of claim 194, wherein the at least one action does not include connection deactivation.

198. (New) The method of claim 197, wherein the at least one action includes sending a signal.

199. (New) The method of claim 198, wherein the third duration is determined based on a first algorithm that is different from a second algorithm on which a determination of the second duration is based.

200. (New) The method of claim 199, wherein the first duration is not negotiated between the apparatus and the node during the connection set up, at least one aspect of the second duration is negotiated during the connection set up between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is negotiated during the connection set up between the apparatus and the node for the connection.

201. (New) The method of claim 200, wherein the third time period is detected based on the third duration, by being detected when no acknowledgement packet is received by the

apparatus in the connection and processed as an acknowledgement, during the third duration, for a sent packet sent by the apparatus in the connection.

202. (New) The method of claim 201, wherein the third time period is detected based on the third duration, when an acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for at least one other sent packet sent by the apparatus in the connection.

203. (New) The method of claim 200, wherein the third time period is detected based on the third duration, by being detected when an expected acknowledgement packet is not received by the apparatus in the connection, during the third duration, for a sent packet sent by the apparatus in the connection.

204. (New) The method of claim 200, wherein the third time period is detected only in response to an acknowledgement packet not being received, for the third duration, in the connection for a sent packet sent in the connection.

205. (New) The method of claim 200, wherein the third time period is detected in response to no acknowledgement packet being received in the connection and processed as an acknowledgement for a sent packet sent in the connection.

206. (New) The method of claim 200, wherein the third time period is detected utilizing a timer that is not utilized to detect the first time period nor the second time period.

207. (New) The method of claim 200, wherein the third time period is an acknowledgment timeout period during which an expected acknowledgment for a sent packet is not received.

208. (New) The method of claim 200, wherein the third time period is an acknowledgement timeout.

209. (New) The method of claim 200, wherein the second duration is determined using the time period parameter field.

210. (New) The method of claim 200, wherein the second duration is determined based on the third duration.

211. (New) The method of claim 200, wherein the third duration is determined based on the second duration.

212. (New) The method of claim 200, wherein the third time period is detected based on the third duration, by being detected when no acknowledgement packet is detected, by the apparatus during the third duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets which are associated with the third duration of the third time period and which are sent by the apparatus, where the third duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer and a single timeout variable are utilized for detecting the third time period in connection with the plurality of sent packets.

213. (New) The method of claim 194, wherein:

the third time period is detected in response to no acknowledgement packet being received in the connection and processed, during the third duration, to acknowledge a sent packet sent in the connection, where the third duration starts in response to the sent packet being sent;

the first duration is not capable of being negotiated between the apparatus and the node for the connection during the connection set up, at least one aspect of the second duration is capable of being negotiated between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is capable of being negotiated between the apparatus and the node for the connection; and

the third time period is an acknowledgment timeout period.

214. (New) The method of claim 200, wherein the connection set up is for the protocol that is not TCP, instead of TCP, based on code communicated utilizing TCP.

215. (New) The method of claim 214, and further comprising: sending the code utilizing TCP.

216. (New) The method of claim 215, wherein the code is sent is sent utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP.

217. (New) The method of claim 215, wherein the code is sent is sent utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, such that, based on the code, the node is capable of utilizing TCP or the protocol is utilized.

218. (New) The method of claim 215, wherein the code is sent utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, such that, based on the code, the node is capable of determining which of the TCP or the protocol is utilized.

219. (New) The method of claim 214, and further comprising: receiving the code utilizing TCP.

220. (New) The method of claim 219, wherein the code is received utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP.

221. (New) The method of claim 219, wherein the code is received utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to utilize either TCP or the protocol that is not TCP.

222. (New) The method of claim 219, wherein the code is received utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to determine which of the TCP or the protocol is utilized.

223. (New) The method of claim 219, wherein the code is received from the node utilizing TCP.

224. (New) The method of claim 219, wherein the code is received from another node, other than the node, utilizing TCP.

225. (New) The method of claim 219, wherein the code is received from another node utilizing TCP, the code for permitting communication utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to utilize either TCP or the protocol that is not TCP.

226. (New) The method of claim 219, wherein the code is received from another node utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to determine which of the TCP or the protocol is utilized.

227. (New) The method of claim 219, wherein the code is received from another node utilizing TCP, the code for permitting communication utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to automatically utilize either TCP or the protocol that is not TCP.

228. (New) The method of claim 219, wherein the code is received from another node utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to automatically determine at least one aspect of the TCP or the protocol.

229. (New) The method of claim 150, wherein the time period includes a second time period that is of a first type of time period and that is detected based on a second duration, and further comprising:

in response to detecting, based on a first duration and by the apparatus during at least a portion of the connection including at least a portion of the connection set up, a first time period of the first type of time period, at least partially deactivating, by the apparatus, the connection;

in response to detecting, based on the second duration and by the apparatus after the connection set up, the second time period of the first type of time period, at least partially deactivating, by the apparatus, the connection; and

in response to detecting, based on a third duration, a third time period of a second type of time period, performing at least one action, where the third time period is detected based on the third duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for a sent packet sent by the apparatus in the connection;

wherein:

the protocol is not a TCP-extension;

the first duration is not capable of being negotiated between the apparatus and the node for the connection during the connection set up, at least one aspect of the second duration is capable of being negotiated between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is capable of being negotiated between the apparatus and the node for the connection;

the set up packet is not a synchronize (SYN) packet;

the first type of time period does not include a user timeout period; and

the first time period and the second time period are started in response to at least one of a received packet or a transmitted packet.

230. (New) The method of claim 229, wherein the protocol varies from request for comments (RFC) 793 by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a RFC 793 header of a RFC 793 connection packet sent during a RFC 793 connection after the RFC 793 connection is set up.

231. (New) The method of claim 229, wherein the protocol varies from TCP by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a TCP header of a TCP connection packet sent during a TCP connection after the TCP connection is set up.

232. (New) The method of claim 212, wherein at least one of:

the at least one action includes at least partial closure of the connection;

the receiving, the identification, and the determination are acts;

the at least one action includes a closure of the connection;

the at least one action does not include a closure of the connection;

the at least one action does not include any part of a closure of the connection;

the apparatus includes a particular node;

the apparatus includes a device, including a network interface, that is a component of the apparatus;

the apparatus includes a network interface that is a component of the apparatus;

the apparatus includes a web server;

the timer includes a hardware timer;

the timer includes a software timer;

the set up packet is an initial non-TCP packet;

the set up packet is first-in-time;

the time period parameter field is part of a data portion in the set up packet;

the time period parameter field is part of a header of the set up packet;

the set up packet is informational;

the connection includes one or more features of TCP, and one or more features not of TCP;

the set up packet includes one or more features of a TCP packet, and one or more features not of a TCP packet;

the connection includes one or more features of a TCP connection, and one or more features not of a TCP connection;

the first duration for detecting the first type of time period is based on the first information, by the first information identifying the first duration;

the first duration for detecting the first type of time period is based on the first information, by the first information specifying the first duration;

the first duration for detecting the first type of time period is based on the first information, by the first information identifying at least one generator for generating the first duration;

only the first duration for detecting the first type of time period is based on the first information;

the second duration of the second time period is different from the duration of the first time period;

the second duration of the second time period is the same as the duration of the first time period;

the third duration of the third time period is different from the duration of the first time period;

the third duration of the third time period is the same as the duration of the first time period;

the third duration of the third time period is different from the duration of the second time period;

the third duration of the third time period is the same as the duration of the second time period;

the set up packet also includes data for use in determining the first time period;

the first information includes a first value representative of the first duration of the first time period, and a second value representative of the second duration of the second time period;

the first information includes a first value representative of the first duration of the first time period, and identification of a generator for generating a second value representative of the second duration of the second time period;

the first information includes identification of a generator for generating a first value representative of the first duration of the first time period, and for generating a second value representative of the second duration of the second time period;

the first information includes identification of a first generator for generating a first value representative of the first duration of the first time period, and identification of a second

generator for generating a second value representative of the second duration of the second time period;

the first time period is detected in a first use scenario without the second nor third time periods being detected, the second time period is detected in a second use scenario without the first nor third time periods being detected, the third time period is detected in a third use scenario without the first nor second time periods being detected, and neither the first, second, nor third time periods are detected in a fourth use scenario;

the first duration of the first time period is determined based on the first information, after identifying the first information;

the first duration of the first time period is determined based on the first information, before setting up the connection;

the first duration of the first time period is determined based on the first information, during setting up the connection;

the first duration of the first time period is determined based on the first information, after setting up the connection;

the first time period is triggered by one or more non-duration-related criteria that triggers the second time period;

the first time period is triggered by the same one or more non-duration-related criteria that triggers the second time period;

the first time period is triggered by different one or more non-duration-related criteria than that which triggers the second time period;

the first time period is that during which no packet is received in the connection nor expected to be received;

the first time period is that during which no packet is received in the connection;

the third time period is triggered by one or more non-duration-related criteria that triggers the second time period;

the third time period is triggered by the same one or more non-duration-related criteria that triggers the second time period;

the third time period is triggered by different one or more non-duration-related criteria than that which triggers the second time period;

the third time period is that during which no packet is received in the connection nor expected to be received;

the third time period is that during which no packet is received in the connection;

the first metadata is based on the first information;

the change occurs while detection of the first time period is attempted;

the change occurs via a negotiation;

the second time period is a changed version of the first time period;

the second time period is a changed instance of the first time period;

the first time period and the second time period have at least one additional difference, in addition to duration, despite both being of the first type of time period;

the first time period and the second time period do not have at least one additional difference, in addition to duration;

the second time period is determined based on the first information;

the first duration of the first time period is negotiated between the apparatus and the node for the connection, during the connection set up;

the connection set up includes all communications that precede completion of the connection set up;

the duration of the second time period is determined based on the first information;

the duration of the third time period is determined based on the first information;

the first and second time periods are of a same duration;

the first and second time periods are of a different duration;

the first and second time periods are different instances of the same type of time period;

the first and second time periods are of the same type of time period, but are applied at different times during the connection;

the first duration of the first time period is determined by being negotiated;

the second duration of the second time period is determined by being negotiated;

the third duration of the third time period is determined by being negotiated;

the first metadata is also for use in determining the second duration of the second time period;

the first metadata is not for use in determining the second duration of the second time period;

the first metadata is also for use in determining the third duration of the third time period;

the first metadata is not for use in determining the third duration of the third time period;

the first metadata describes a definition of at least one duration;

the first metadata defines at least one duration;

the first metadata includes at least one duration;

the first metadata describes a definition of at least one time period;

the first metadata describes other data that defines at least one duration;

the first metadata describes other data that defines at least one time period;

the first metadata describes other criteria-related data that defines at least one time period;

the first metadata describes duration data that defines at least one time period;

the first metadata describes duration criteria-related data that defines at least one time period;

the at least portion of the connection includes only a subset of setting up the connection;

the at least portion of the connection includes an entirety of setting up the connection;

the at least portion of the connection set up includes one or more packet exchanges that occur after the set up packet is sent;

the at least portion of the connection set up includes one or more packet exchanges that occur after the set up packet is sent prior to completion of the connection set up;

the set up packets are non-TCP;

the set up packets are non-TCP by not being required by any TCP standard specification;

the first time period is detected based on the first duration, by being detected when packet activity or a lack thereof meets one or more criteria for a span of the first duration;

the second time period is detected based on the second duration, by being detected when packet activity or a lack thereof meets one or more criteria for a span of the second duration;

the first type of time period includes an idle time period type;

the first and second time periods of the first type of time period differ only in duration;

the first and second time periods of the first type of time period are capable of differing in duration, but may have a same duration;

the first and second time periods of the first type of time period are capable of differing only in duration, but may have a same duration;

the first and second time periods of the first type of time period differ in duration and at least one criteria involving packet activity or a lack thereof over a duration span;

the first and second time periods of the first type of time period are capable of differing in duration and further differ in at least one criteria involving packet activity or a lack thereof over a duration span;

the set up packet includes a portion of data sent at any layer;

the set up packet includes a frame;

the set up packet is a non-TCP frame;

the first time period is started in response to a received packet and the second time period are started in response to a sent packet;

the first time period is started in response to a sent packet and the second time period are started in response to a received packet;

the first time period is started in response to a received packet and the second time period are started in response to a received packet;

the first time period is started in response to a sent packet and the second time period are started in response to a sent packet;

the first time period and the second time period are started in response to different packets;

the first time period and the second time period are started in response to different types of packets; or

the protocol that is not TCP is a non-TCP protocol;

the protocol that is not TCP is a TCP a variant.

233. (New) An apparatus comprising:

a non-transitory memory means storing instructions means; and

one or more processor means in communication with the non-transitory memory means, wherein the one or more processor means execute the instructions means to:

receive, by the apparatus from a node, a set up packet during a setup of a connection, the set up packet for use in a protocol that is not transmission control protocol (TCP);

identify first metadata in a time period parameter field in the set up packet, for a time period, where, as a result of a detection of the time period, the connection is at least partial deactivated; and

determine, based on the first metadata, a timeout attribute associated with the connection.

Remarks:

On 3/30/2021, applicant filed an amendment in response to the communication mailed 3/29/2021. On 4/16/2021, the Notice of Allowance was mailed. Applicant respectfully notes that the claims mentioned in the Notice of Allowance do not reflect the new claims added in the communication mailed 3/30/2021. This appears to be an inadvertent error on the part of the Examiner. Thus, a supplemental Notice of Allowance and entry of the new claims of applicant's 3/30/2021 amendment (replicated below) are respectfully requested.

No new matter has been added. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-5939, under Order No. PMOR0120M from which the undersigned is authorized to draw.

Respectfully submitted,



Dated: 16 Apr 2021

The Caldwell Firm, LLC
PO Box 59655
Dallas, Texas 75229-0655
Telephone: (214) 734-2313
pcaldwell@thecaldwellfirm.com

Patrick E. Caldwell, Esq.
Reg. No. 44,580

Electronic Patent Application Fee Transmittal

Application Number:	17148140
Filing Date:	13-Jan-2021
Title of Invention:	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD
First Named Inventor/Applicant Name:	Robert Paul Morris
Filer:	Patrick Edgar Caldwell
Attorney Docket Number:	PMOR0120M

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	1200	1200

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1200**

Electronic Acknowledgement Receipt	
EFS ID:	42480870
Application Number:	17148140
International Application Number:	
Confirmation Number:	7968
Title of Invention:	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD
First Named Inventor/Applicant Name:	Robert Paul Morris
Customer Number:	92045
Filer:	Patrick Edgar Caldwell
Filer Authorized By:	
Attorney Docket Number:	PMOR0120M
Receipt Date:	16-APR-2021
Filing Date:	13-JAN-2021
Time Stamp:	23:30:42
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$1200
RAM confirmation Number	E20214FN31180258
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	PMOR0120M_fee-transmittal_vF_16-Apr-2021.pdf	106438 7d9f8c4b6d40cd80b2aee9dd55d3c1d800f4e553	no	1
Warnings:					
Information:					
2	Post Allowance Communication - Incoming	PMOR0120M_Comments_vF_16-Apr-2021.pdf	139232 7e367f792d9cda1fafef017d0c005e0f0200e424	no	6
Warnings:					
Information:					
3		PMOR0120M_312Amendment_vF_16-Apr-2021.pdf	280018 1088cfa9d37ba46dbb59af16680fcd58583ec276	yes	69

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment after Notice of Allowance (Rule 312)	1	1
Claims	2	68
Amendment after Notice of Allowance (Rule 312)	69	69

Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	30271 f54b6848af051a3dda30afd9892253ac541c6e3d	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	555959		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

92045 7590 04/16/2021

The Caldwell Firm, LLC
PO Box 59655
Dept. SVIPGP
Dallas, TX 75229

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/148,140	01/13/2021	Robert Paul Morris	PMOR0120M	7968

TITLE OF INVENTION: METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	07/16/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
MEKY, MOUSTAFA M	2457	709-201000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

0 Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

0 "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Patrick E. Caldwell, Esq.
2 The Caldwell Firm, LLC
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE	(B) RESIDENCE: (CITY and STATE OR COUNTRY)
JENAM TECH, LLC	Longview TX

Please check the appropriate assignee category or categories (will not be printed on the patent) : 0 Individual 0X Corporation or other private group entity O Government

4a. Fees submitted: [X] Issue Fee [X] Publication Fee (if required) [ ] Advance Order - # of Copies

4b. Method of Payment. *(Please first reapply any previously paid fee shown above)*

[X] Electronic Payment via EFS-Web 0 Enclosed check 0 Non-electronic payment by credit card (Attach form PTO-2038)

0 The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No.

5. Change in Entity Status (from status indicated above)

0 Applicant certifying micro entity status. See 37 CFR 1.29

0 Applicant asserting small entity status. See 37 CFR 1.27

0 Applicant changing to regular undiscounted fee status.

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.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Patrick Caldwell/ Date 16 Apr 2021

Typed or printed name Patrick Caldwell Registration No. 44580

PTOL-85 Part B (08-18) Approved for use through 01/31/2020 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Confirmation No.: 7968
Robert Paul Morris	Examiner: Moustafa M MEKY
Application No.: 17/148,140	Art Unit: 2457
File Date: 2021-01-13	Docket No.: PMOR0120M
Title: METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD	Date: Apr 16, 2021

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE UNDER 37 C.F.R. § 1.104(e)

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Examiner:

In response to the Notice of Allowance dated 04/16/2021, please enter the following remarks.

Remarks:

The Examiner has stated the following in the Examiner's Statement of Reasons for Allowance:

> 2 The following is an examiner's statement of reasons for allowance. None of the prior art of record taken singularly or in combination teaches or suggests:
>
> - generate, based on first information, a set up packet including a time period parameter field identifying first metadata, the set up packet for use in a protocol that is not transmission control protocol (TCP); set up a connection, by sending, from apparatus to a node, the set up packet to provide the first metadata to the node, for use by the node in determining a timeout attribute associated with the connection; detect, by the apparatus, a time period during which no packet is received in the connection and processed to keep the connection active, and in response to detecting the time period, at least partially deactivate, by the apparatus, the connection [claim 1]; and
> - receive, by an apparatus from a node, a set up packet during a setup of a connection, the set up packet for use in a protocol that is not transmission control protocol (TCP); identify first metadata in a time period parameter field in the set up packet, for a time period, where, as a result of a detection of the time period, the connection is at least partially deactivated; and determine, based on the first metadata, a timeout attribute associated with the connection [claim 14].

In response, applicant respectfully points out that features of at least some of the independent claims (e.g., 1, 14, 150, and 233) are not necessarily the same as those the Examiner has highlighted above. For example, Claim 1 includes "set up a connection, by sending, from the apparatus to a node, the set up packet to provide the first metadata to the node, for use by the node in determining a timeout attribute associated with the connection," in the context claimed.

Applicant notes as well that claims 28-233 that were filed 2021-03-30 in applicant's last response have not yet been entered. A 312 amendment is being filed herewith as well.

As additional, non-exhaustive examples, Claims 1, 14, 150, and 233 recite the following, respectively:

1. An apparatus comprising:

a non-transitory memory storing instructions; and

one or more processors in communication with the non-transitory memory, wherein the one or more processors execute the instructions to:

identify first information;

generate, based on first information, a set up packet including a time period parameter field identifying first metadata, the set up packet for use in a protocol that is not transmission control protocol (TCP);

set up a connection, by sending, from the apparatus to a node, the set up packet to provide the first metadata to the node, for use by the node in determining a timeout attribute associated with the connection;

detect, by the apparatus, a time period during which no packet is received in the connection and processed to keep the connection active; and

in response to detecting the time period, at least partially deactivate, by the apparatus, the connection.

14. An apparatus comprising:

a non-transitory memory storing instructions; and

one or more processors in communication with the non-transitory memory, wherein the one or more processors execute the instructions to:

receive, by the apparatus from a node, a set up packet during a setup of a connection, the set up packet for use in a protocol that is not transmission control protocol (TCP);

identify first metadata in a time period parameter field in the set up packet, for a time period, where, as a result of a detection of the time period, the connection is at least partially deactivated; and

determine, based on the first metadata, a timeout attribute associated with the connection.

150. A method, comprising:

at an apparatus:

receiving, by the apparatus from a node, a set up packet during a setup of a connection, the set up packet for use in a protocol that is not transmission control protocol (TCP);

identifying first metadata in a time period parameter field in the set up packet, for a time period, where, as a result of a detection of the time period, the connection is at least partially deactivated; and

determining, based on the first metadata, a timeout attribute associated with the connection.

233. An apparatus comprising:

a non-transitory memory means storing instructions means; and

one or more processor means in communication with the non-transitory memory means, wherein the one or more processor means execute the instructions means to:

receive, by the apparatus from a node, a set up packet during a setup of a connection, the set up packet for use in a protocol that is not transmission control protocol (TCP);

identify first metadata in a time period parameter field in the set up packet, for a time period, where, as a result of a detection of the time period, the connection is at least partial deactivated; and

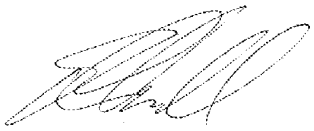
determine, based on the first metadata, a timeout attribute associated with the connection.

Clearly, at least some of the independent claims are not necessarily limited to the features that the Examiner has noted in the Examiner's Statement of Reasons for Allowance, as noted above (by way of example only). Instead, each of the claims should only be limited by the language existing therein.

Further, although Applicant agrees with the Examiner's conclusion that these claims are allowable, Applicant notes that the claims may be allowable for reasons other than those identified by the Examiner and does not concede that the Examiner's characterizations of the terms of the claims and the prior art are correct. Each of the claims stands on its own merits and is patentable because of the combination it recites and not because of the presence or absence of any one particular element.

The Examiner's Statement was not prepared by Applicant and only contains the Examiner's possible positions in one or more reasons for allowability. Thus, any interpretation with respect to the Examiner's Statement of Reasons for Allowance should not be imputed to the Applicant.

Respectfully submitted,



Dated: 16 Apr 2021

The Caldwell Firm, LLC
PO Box 59655
Dallas, Texas 75229-0655
Telephone: (214) 734-2313
pcaldwell@thecaldwellfirm.com

Patrick E. Caldwell, Esq.
Reg. No. 44,580

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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NOTICE OF ALLOWANCE AND FEE(S) DUE

92045 7590 04/16/2021

The Caldwell Firm, LLC
PO Box 59655
Dept. SVIPGP
Dallas, TX 75229

EXAMINER	
MEKY, MOUSTAFA M	
ART UNIT	PAPER NUMBER
2457	

DATE MAILED: 04/16/2021

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/148,140	01/13/2021	Robert Paul Morris	PMOR0120M	7968

TITLE OF INVENTION: METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	07/16/2021

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE 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.

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.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

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By fax, send to: (571)-273-2885

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CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

92045 7590 04/16/2021

The Caldwell Firm, LLC
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Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/148,140	01/13/2021	Robert Paul Morris	PMOR0120M	7968

TITLE OF INVENTION: METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	07/16/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
MEKY, MOUSTAFA M	2457	709-201000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required) ❑ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

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.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/148,140	01/13/2021	Robert Paul Morris	PMOR0120M	7968

92045 7590 04/16/2021

The Caldwell Firm, LLC
PO Box 59655
Dept. SVIPGP
Dallas, TX 75229

EXAMINER	
MEKY, MOUSTAFA M	
ART UNIT	PAPER NUMBER
2457	

DATE MAILED: 04/16/2021

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 30 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. 17/148,140	Applicant(s) Morris, Robert Paul	
	Examiner Moustafa M Meky	Art Unit 2457	AIA (FITF) 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 the terminal disclaimer filed 03/30/2021.
   ☐ 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 1-27 . 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 03/30/2021.
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 _____.

/MOUSTAFA M MEKY/
Primary Examiner, Art Unit 2457

Notice of Pre-AIA or AIA Status

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

1. Claims 1-27 are allowable in view of the prior art of record.

Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance: None of the prior art of record taken singularly or in combination teaches or suggests:

- generate, based on first information, a set up packet including a time period parameter field identifying first metadata, the set up packet for use in a protocol that is not transmission control protocol (TCP); set up a connection, by sending, from apparatus to a node, the set up packet to provide the first metadata to the node, for use by the node in determining a timeout attribute associated with the connection; detect, by the apparatus, a time period during which no packet is received in the connection and processed to keep the connection active; and
  in response to detecting the time period, at least partially deactivate, by the apparatus, the connection [claim 1]; and
- receive, by an apparatus from a node, a set up packet during a setup of a connection, the set up packet for use in a protocol that is not transmission control protocol (TCP); identify first metadata in a time period parameter field in the set up packet, for a time period, where, as a result of a detection of the time period, the connection is at least partially deactivated; and determine, based on the first metadata, a timeout attribute associated with the connection [claim 14].

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."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Moustafa M Meky whose telephone number is (571)272-4005. The examiner can normally be reached on Monday-Friday 9AM-5PM.

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, Ario Etienne can be reached on 571-272-4001. 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 https://ppair-my.uspto.gov/pair/PrivatePair. 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.

/MOUSTAFA M MEKY/
Primary Examiner, Art Unit 2457 04/09/2021

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/148,140	Morris, Robert Paul
	Examiner	Art Unit
	Moustafa M Meky	2457

CPC - Searched*		
Symbol	Date	Examiner
H04L 69/16	03/24/2021	MMM

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
709	201	03/24/2021	MMM

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
WEST (ALL FILES) ATTACH	03/24/2021	MMM
GOOGLE PATENTS ATTACH	03/24/2021	MMM
GOOGLE NPL ATTACH	03/24/2021	MMM
WEST (ALL FILES) ATTACH	04/09/2021	MMM
GOOGLE PATENTS ATTACH	04/09/2021	MMM
GOOGLE NPL ATTACH	04/09/2021	MMM

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
H04L	69/16	04/09/2021	MMM

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	Moustafa M Meky	2457

CPC						
Symbol					**Type**	**Version**
H04L	/	69	/	16	F	2013-01-01

CPC Combination Sets								
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	27	
/MOUSTAFA M MEKY/ Primary Examiner, Art Unit 2457	09 April 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

U.S. Patent and Trademark Office — Part of Paper No.: 20210409

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/148,140	Morris, Robert Paul
	Examiner	**Art Unit**
	Moustafa M Meky	2457

INTERNATIONAL CLASSIFICATION					
CLAIMED					
G06F	/	15	/	16	

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
709	201

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	27	
/MOUSTAFA M MEKY/ Primary Examiner, Art Unit 2457	09 April 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

U.S. Patent and Trademark Office — Part of Paper No.: 20210409

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	17/148,140	Morris, Robert Paul
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	Moustafa M Meky	2457

☑ Claims renumbered in the same order as presented by applicant ☐ CPA ☑ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		10		19										
	2		11		20										
	3		12		21										
	4		13		22										
	5		14		23										
	6		15		24										
	7		16		25										
	8		17		26										
	9		18		27										

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	27	
/MOUSTAFA M MEKY/ Primary Examiner, Art Unit 2457	09 April 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

U.S. Patent and Trademark Office — Part of Paper No.: 20210409

PTO/SB/08a (02-18)
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Application Number	17148140
Filing Date	2021-01-13
First Named Inventor	Robert Paul Morris
Art Unit	2457
Examiner Name	MEKY, MOUSTAFA M
Attorney Docket Number	PMOR0120M

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5371852	A	1994-12-06	Attanasio et al.	Entire Document
	2	5495480	A	1996-02-27	Yoshida	Entire Document
	3	6412006	B2	2002-06-25	Naudus	Entire Document
	4	6273622	B1	2001-08-14	Ben-David	Entire Document
	5	6412009	B1	2002-06-25	Erickson et al.	Entire Document
	6	6674713	B1	2004-01-06	Berg et al.	Entire Document
	7	6704786	B1	2004-03-09	Gupta et al.	Entire Document
	8	6757248	B1	2004-06-29	Li et al.	Entire Document

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.M.M/

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	Examiner Name	MEKY, MOUSTAFA M
	Attorney Docket Number	PMOR0120M

	9	6880013	B2	2005-04-12	Kashyap	Entire Document
	10	6981048	B1	2005-12-27	Abdolbaghian et al.	Entire Document
	11	7404210	B2	2008-07-22	Lin	Entire Document
	12	7426569	B2	2008-09-16	Dunk	Entire Document
	13	7684346	B2	2010-03-23	Valli	Entire Document
	14	7720989	B2	2010-05-18	Dunk	Entire Document
	15	7729271	B2	2010-06-01	Tsuchiya et al.	Entire Document
	16	7808941	B2	2010-10-05	Ramos et al.	Entire Document
	17	7876678	B2	2011-01-25	Ong	Entire Document
	18	7002917	B1	2006-02-21	Saleh	Entire Document
	19	7035214	B1	2006-04-25	Seddigh et al.	Entire Document

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	20	7050940	B2	2006-05-23	Basso et al.	Entire Document
	21	7152111	B2	2006-12-19	Allred et al.	Entire Document
	22	7428595	B2	2008-09-23	Deshpande	Entire Document
	23	7606191	B1	2009-10-20	Breau et al.	Entire Document
	24	7848351	B2	2010-12-07	Kim et al.	Entire Document
	25	7962623	B2	2011-06-14	Undery et al.	Entire Document
	26	8073964	B2	2011-12-06	Dunk	Entire Document
	27	8077737	B2	2011-12-13	Ji	Entire Document
	28	8031617	B2	2011-10-04	Mogul et al.	Entire Document
	29	8219606	B2	2012-07-10	Morris	Entire Document
	30	8228830	B2	2012-07-24	Babin et al.	Entire Document

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	31	8375134	B2	2013-02-12	Herzog et al.	Entire Document
	32	8483095	B2	2013-07-09	Hegde et al.	Entire Document
	33	8700695	B2	2014-04-15	Sundarrajan et al.	Entire Document
	34	8711851	B1	2014-04-29	Subramonian et al.	Entire Document
	35	9060310	B2	2015-06-16	Ji	Entire Document
	36	9923996	B1	2018-03-20	Morris	Entire Document
	37	9923995	B1	2018-03-20	Morris	Entire Document

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20050054347	A1	2005-03-10	Kakani	
	2	20050063304	A1	2005-03-24	Sillasto et al.	

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	Attorney Docket Number	PMOR0120M

	3	20050135248	A1	2005-06-23	Ahuja et al.	Entire Document
	4	20060034179	A1	2006-02-16	Carter et al.	Entire Document
	5	20060195547	A1	2006-08-31	Sundarrajan et al.	Entire Document
	6	20070008884	A1	2007-01-11	Tang	Entire Document
	7	20070064677	A1	2007-03-22	Xiong	Entire Document
	8	20070086461	A1	2007-04-19	Ward et al.	Entire Document
	9	20070110046	A1	2007-05-17	Farrell et al.	Entire Document
	10	20070140193	A1	2007-06-21	Dosa et al.	Entire Document
	11	20070171921	A1	2007-07-26	Wookey et al.	Entire Document
	12	20080084826	A1	2008-04-10	Ong	Entire Document
	13	20080095124	A1	2008-04-24	Ramos et al.	Entire Document

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	14	20080261596	A1	2008-10-23	Khetawat et al.	Entire Document	
	15	20090201857	A1	2009-08-13	Daudin et al.	Entire Document	
	16	20090252072	A1	2009-10-08	Lind et al.		
	17	20100057844	A1	2010-03-04	Johnson		
	18	20100074273	A1	2010-03-25	Ji	Entire Document	
	19	20110213820	A1	2011-09-01	Morris		

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	1242882	EP	A2	2002-09-25	Hankinson et al.	Entire Document	
	2	2007069046	WO	A1	2007-06-21	Eronen et al.	Entire Document	

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	Attorney Docket Number	PMOR0120M

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	"A Border Gateway Protocol 4 (BGP-4)" RFC 1771, published in March 1995, available at https://tools.ietf.org/html/rfc1771.	
	2	"Discussion Lists," IETF, available at https://www.ietf.org/how/lists/discussion/	
	3	"IETF Announce Mailing List," IETF, April 2004	
	4	"IETF Document Management System Datatracker 2 for Eggert," IETF, Datatracker	
	5	"IETF TCP Maintenance," IETF, April 2004	
	6	"TCP Option Kind Numbers," Network Working Group, RFC 2780	
	7	"Using SCTP as a Transport Layer Protocol for HTTP," draft-natarajan-httpbis-sctp-00.txt, published October 27, 2008, available at https://tools.ietf.org/id/draft-natarajan-httpbis-sctp-00.html.	
	8	Allman, M., Paxson, V., Stevens, W., "TCP Congestion Control", RFC 2581, Internet Engineering Task Force, http://tools.ietf.org/rfc/rfc2581.txt,-April 1999	
	9	Apogee Communications, Rapport de Veille Technologique Securite No. 69, (Security Technology Watch Report) (April, 2004)	
	10	BT Mobile BlackBerry Enterprise Server 4.0, Information Sheet, published in 2005, available at https://www.bt.com/static/i/media/pdf/blackberry_ITadvice_june05.pdf.	

EFS Web 2.1.18

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	Attorney Docket Number	PMOR0120M

	11	Busatto, Fabio, "TCP Keepalive Overview", TCP Keepalive HOWTO, Section 2, http://tldp.org/HOWTO/html_single/TCP-Keepalive-HOWTO/#overview, accessed January 2010, May 2007	
	12	Cisco 7200 Series Network Processing Engine NPE-G1 Data Sheet, published in June 2006, available at https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/network-processor-modules/product_data_sheet09186a00800c6bd6.pdf	
	13	Cisco 7200 Series Router Architecture, published in February 2008, available at https://www.cisco.com/c/en/us/support/docs/routers/7200-series-routers/5810-arch-7200-5810.pdf.	
	14	Cisco 7200 VXR Series Routers Data Sheet, published in 2008.	
	15	Cisco 7200 VXR Series Routers Quick Look Guide published in November 2007.	
	16	Cisco IOS BGP Configuration Guide, Release 12.4T, Chapter: Cisco BGP Overview, published in 2007, available at https://www.cisco.com/c/en/us/td/docs/ios/12_2sr/12_2srb/feature/guide/tbgp_c/tbrbover.html	
	17	Cisco IOS BGP Configuration Guide, Release 12.4T, Chapter: Configuring BGP Neighbor Session Options ("Cisco IOS BGP Options"), published in 2007, available at https://www.cisco.com/c/en/us/td/docs/ios/12_2sr/12_2srb/feature/guide/tbgp_c/brbpeer.html	
	18	Cristian Zamfir, Live Migration of User Environments Across WideArea Networks, Master's Thesis, Department of Computing Science, University of Glasgow (October, 2008)	
	19	Digital cellular telecommunications system (Phase 2+); Generic access to the A/Gb interface; Stage 2 (3GPP TS 43.318 version 6.7.0 Release 6) ("TS 43.318"), published in June 2006.	
	20	Eggert, L., Gont, F., "TCP User Timeout Option", RFC 5482, Internet Engineering Task Force (IEFT), http://tools.ietf.org/html/rfc5482.txt, March 2009,	
	21	F. Gont, "TCP Adaptive User TimeOut (AUTO) Option," Network Working Group, May 19, 2004	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.M.M/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17148140
	Filing Date	2021-01-13
	First Named Inventor	Robert Paul Morris
	Art Unit	2457
	Examiner Name	MEKY, MOUSTAFA M
	Attorney Docket Number	PMOR0120M

	22	HP Compaq Business Desktop d530 Series, QuickSpecs ("d530 QuickSpecs"), published on July 14, 2003, available at http://www.hp.com/ecomcat/hpcatalog/specs/emeapsg/99/D530SERIES.pdf.	
	23	HP iPAQ H4000 Series User Guide, published in August 2003	
	24	Hypertext Transfer Protocol – HTTP/1.1 RFC 2068, published in January 1997, available at https://tools.ietf.org/html/rfc2068.	
	25	Hypertext Transfer Protocol RFC 2616, published in June 1999, available at https://tools.ietf.org/html/rfc2616.	
	26	IESG Statement: Normative and Informative References, Apr 19, 2006, available at https://www.ietf.org/blog/iesg-statement-normative-and-informative-references/	
	27	IETF Document Management System Datatracker 1 for Eggert, available at https://datatracker.ietf.org/doc/draft-eggert-tcpm-tcp-abort-timeout-option/	
	28	IETF face-to-face meeting (San Diego, August 2, 2004)	
	29	Internet Domain Survey, January 2010, Internet Systems Consortium available at https://downloads.isc.org/www/survey/reports/2010/01/	
	30	J. Moy, "The OSPF Specification," Network Working Group, RFC 1131, October 1989	
	31	Jacobson et al, "TCP Extensions for High Performance," Network Working Group, RFC 1323, May 1002, available at https://tools.ietf.org/html/rfc1323	
	32	Jacobson et al, "TCP Extensions for Long-Delay Paths," Network Working Group, RFC 1072, October 1988, available at https://tools.ietf.org/html/rfc1072	

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	33	Jim Roskind, QUIC Quick UDP Internet Connections, Multiplexed Stream Transport Over UDP, 11/7/2013 (first draft earlier), available at https://www.ietf.org/proceedings/88/slides/slides-88-tsvarea-10.pdf	
	34	Jon Postel, "Transmission Control Protocol," DARPA Internet Program Protocol Specification, RFC 793, dated September 1981	
	35	Koziero, Charles M., TCP Connection Management and Problem Handling, the Connection Reset Function, and TCP "Keepalives", The TCP/IP Guide, p. 3, http://www.tcpipguide.com/free/t_TCPConnectionManagementandProblemHandlingtheConnec-3.htm, accessed February 2010, (c) 2003-2010	
	36	Mathis et al, "TCP Selective Acknowledgment Options," Network Working Group, RFC 2018, October 1996, available at https://tools.ietf.org/html/rfc2018	
	37	Mathis, M., Mahdave, J., Floyd, S., Romanow, A., "TCP Selective Acknowledgement Options", RFC 2018, Internet Engineering Task Force, http://tools.ietf.org/rfc/rfc2018.txt, October 1996	
	38	Mobile IP Traversal of Network Address Translation (NAT) Devices RFC 3519 ("RFC 3519"), published in April 2003, available at https://tools.ietf.org/html/rfc3519.	
	39	Nagle, John, "Congestion Control in IP/TCP Internetworks", RFC 896, Ford Aerospace and Communications Corporation, http://tools.ietf.org/rfc/rfc896.txt, January 1984	
	40	NetEx "'C' Configuration Manager and NetEx® Alternate Path Retry (APR) Release 4.0" software reference manual, published in 2002, available at http://www.netexsw.com/nesi/support/ReleasedDocs/ConfMgr/man-cnet-conf-mgr-02.pdf.	
	41	NetEx/IP™ for UNIX Systems Release 6.0 Software Reference Manual, published in 2004, available at http://www.netexsw.com/nesi/support/ReleasedDocs/Hxx0IP/man-hunxip-03.pdf.	
	42	Network Support for Intermittently Connected Mobile Nodes, Simon Schütz, published on June 13, 2004, available at https://eggert.org/students/schuetz-thesis.pdf.	
	43	Network Working Group, "QUIC: A UDP-Based Secure and Reliable Transport for HTTP/2 draft-tsvwg-quic-protocol-00", June 17, 2015	

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	44	Office Action Summary in U.S. Pat. App. No. 12/714,063 dated 2012-06-21	
	45	Office Action Summary in U.S. Pat. App. No. 12/714,063 dated 2013-03-04	
	46	Office Action Summary in U.S. Pat. App. No. 12/714,063 dated 2013-09-27	
	47	Office Action Summary in U.S. Pat. App. No. 12/714454 dated 2012-02-23	
	48	Office Action Summary in U.S. Pat. App. No. 13/477,402 dated 2014-09-24	
	49	Office Action Summary in U.S. Pat. App. No. 15/694,802 dated 2017-11-29	
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That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2021-03-30
Name/Print	Patrick Caldwell	Registration Number	44580

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Google packet and connection and deactivate and metadata and timeout

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Define Firebox Global Settings - WatchGuard Technologies

... SYN packet and connection state verification; TCP connection idle timeout ... To disable device feedback on your Firebox, clear the Send device feedback to ...

https://tech.ebayinc.com › engineering › a-vip-connecti...

Troubleshooting a Connection Timeout Issue with ...

The second screenshot shows how the SNAT (Source Network Address Translation) IP sent the SYN packets three times, but the server ignored all of them. After ...

https://docs.confluent.io › installation › producer-configs

Producer Configurations — Confluent Documentation

For send() this timeout bounds the total time waiting for both metadata fetch and buffer ... The connection setup timeout will increase exponentially for each ...

https://docs.microsoft.com › Azure › Data Factory

Troubleshoot package execution in the SSIS integration ...

Apr 15, 2019 — This article provides troubleshooting guidance for SSIS package execution in the ... Error message: "Connection Timeout Expired" or "The service has ... to do the deployment, SSMS will remove the component and cause the error. ... Error message: "A connection is required when requesting metadata.

https://www.envoyproxy.io › docs › latest › api-v2 › api

Listener configuration — envoy 1.18.0-dev-fcdaf2 ...

metadata. (core.Metadata) Listener metadata. drain_type. (Listener. ... Specify 0 to disable the timeout. ... (bool) Whether a connection should be created when listener filters timeout. ... this field specifies the actual udp listener to create, i.e. udp_listener_name = "raw_udp_listener" for creating a packet-oriented UDP listener.

https://dev.mysql.com › doc › connector-odbc › conne...

MySQL :: MySQL Connector/ODBC Developer Guide :: 5.2 ...

Each attempt uses this timeout value and there are retries if necessary, so the total ... in the connection string can only enable, but not disable parameters enabled on ... BIG_PACKETS, Allow big result set, 8, Do not set any packet limit for results ... Don't use INFORMATION_SCHEMA for metadata, 1073741824, Tells catalog ...

https://docs.oracle.com › wls › WLACH › pagehelp › J...

JDBC Data Source: Configuration: Connection Pool

The connection pool within a JDBC data source contains a group of JDBC connections ... The full package name of JDBC driver class used to create the physical database ... You can use the inactive Connection Timeout feature to reclaim leaked ... If you disable removing infected connections, you must make sure that the ...

https://docs.oracle.com › wlevs › docs30 › mssqlserver

The MS SQL Server Type 4 JDBC Driver - Oracle Help Center

To connect to a Microsoft SQL Server database, use the following URL format: ... If set to false (the default), the cancel request does not time out. ... NOTE: If SSL is enabled, the driver communicates with database protocol packets set by the server's ... See ResultSet MetaData Support for more information about returning ...

https://www.cisco.com › docs › cucm › admin › comfeat

Features and Services Guide for Cisco Unified ...

Nov 12, 2020 — ... which allows administrative users to **access** certain Cisco Unified Communications Manager ... A SAML **metadata** file must be generated for the specified server, and downloaded using the browser. ... SSO **Metadata** Test **Timed Out** ... **Deactivate** the Cisco Web Dialer web service if it is already activated.

http://infocenter.sybase.com › html › prjdbc › prjdbc14

List of jConnect connection properties - Sybase InfoCenter

On subsequent executions, the **metadata** is re-used without having to be reconstructed. ... When this **connection** property is set, it is used as the default query **timeout** for ... To **disable** these warnings (which can help performance), set this property to true. ... Allows you to specify if you want to use server-specified **packet** size.

Related searches

how to fix tcp connection timeout	**connect** timeout
packet timeout	**lbs** connection timeout **5401**
how to fix connection timeout	**write tcp write:** connection **timed out**
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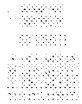
Patents packet and connection and deactivate and metadata and timeout

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Method for remotely controlling a streaming media server with a pause and ...



WO EP US 9A · US8688846B2 · Kavi Maharajh · Quickplay Media Inc.

Priority 2006-12-13 · Filed 2012-08-07 · Granted 2014-10-07 · Published 2014-10-07

In embodiments, the present invention provides a method and system for managing playback of content delivered to a mobile device with a pause and resume functionality. The method and system includes receiving delivered content on a mobile device, initiating playback of the delivered content, ...

System and method for providing requested quality of service in a hybrid ...



US · US7869423B2 · Isaac K. Elliott · Mci Communications Corporation

Priority 1996-11-18 · Filed 2007-10-30 · Granted 2011-01-11 · Published 2011-01-11

Telephone calls, data and other multimedia information is routed through a hybrid network which includes transfer of information across the internet. A media order entry captures complete user profile information for a user. This profile information is utilized by the system throughout the media ..

The devices, systems, and methods of the data in management storage device are ...

WO EP US CN JP KR CA ES · CN101004950B8 · 大卫 赖冰 · 威睿信息技术公司

Priority 2006-12-06 · Filed 2007-12-06 · Granted 2018-01-02 · Published 2018-01-02

The invention discloses the devices, systems, and methods of empty data segment directive management data are used in storage device (150).For managing the described device of data, system and method include write request receiver module (1302) and data segment token storage module (1304).The ...

Device control profile for a fabric network



WO EP US · US9270561B1 · Jay D. Logue · Google Inc.

Priority 2014-10-08 · Filed 2015-01-08 · Granted 2016-02-23 · Published 2016-02-23

Methods and systems for controlling a remote device that includes receiving, at an assisting device, a remote passive rendezvous request from a commissioning device. The commissioning device manages access to a fabric on which the assisting device resides, and the assisting device is configured to ...

Sending a communications header with voice recording to send metadata for use ...



US · US8635243B2 · Michael S. Phillips · Research In Motion Limited

Priority 2007-03-07 · Filed 2010-08-27 · Granted 2014-01-21 · Published 2014-01-21

In embodiments of the present invention improved capabilities are described for sending a communications header with the voice recording to send metadata for use in speech recognition, formatting, and search in searching for web content on a mobile communication facility comprising capturing ...

Systems and methods for adaptive load balanced communications, routing, ...



WO EP US GA · US20150271255A1 · Kenneth J. Mackay · Disrupt Networks, Ltd.

Priority 2012-10-03 · Filed 2015-03-30 · Published 2015-09-24

The disclosure provides examples of systems and methods for adaptive load balancing, prioritization, bandwidth reservation, and/or routing in a network communication system. In various embodiments, the disclosed methods can provide reliable multi-path load-balancing, overflow, and/or failover ..

Data expiry in a non-volatile device



US · US9519647B2 · Ashish Batwara · Sandisk Technologies Llc

Priority 2012-04-17 · Filed 2013-01-23 · Granted 2016-12-13 · Published 2016-12-13

Apparatuses, systems, and methods for data expiry include examining metadata associated with data in a non-volatile recording medium. Apparatuses, systems, and methods include expiring data from a non-volatile recording medium in response to metadata indicating that an expiration period for the ...

System and method for distributed flow state p2p setup in virtual networks

WO EP US JP · JP2020162146A · ユルーンズ、アルアルア・エドゥールディンアスリゼッド

Priority 2014-10-14 · Filed 2020-06-10 · Published 2020-10-01

To enable a system for overlaying a virtual network over a physical network to implement an overlay network without dependence on a database storing a state.SOLUTION: In a system for virtual network implementation and management based on a peer-to-peer metadata exchange, metadata pertaining to a ...

Selective activation of network management policies of mobile devices in a ...



WO US · US8923116B1 · Alexandr SELEZNYOV · Seven Networks, Inc.

Priority 2013-06-17 · Filed 2013-09-12 · Granted 2014-12-30 · Published 2014-12-30

Systems and methods described herein employ techniques for generation and selective activation (or triggering) of network management policies in a congested network to, for example, prevent further aggravation of network congestion are disclosed. In order to address mobile network congestion it is ...

Radio-awareness of mobile device for sending server-side control signals using ...

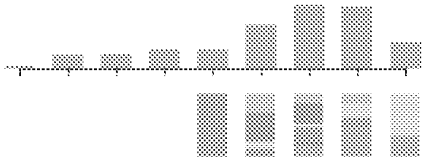
WO US · US9277443B2 · Ari Backholm · Seven Networks, Llc

Priority 2011-12-07 · Filed 2012-12-07 · Granted 2016-03-01 · Published 2016-03-01

System and method of radio-awareness of mobile device for sending server-side control signals using a wireless network optimized transport protocol are disclosed. One embodiment includes a method of sending a message over an alternate channel to a mobile device in the presence of an open TCP ...

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	1	Office Action Summary in U.S. Pat. App. No. 17148824	
	2	Palm Treo 650 Manual, published in 2004, available at https://www.wireless.att.com/download/phone_manual/treo_650.pdf.	
	3	Postel, J. "The TCP Maximum Segment Size and Related Topics," Network Working Group, RFC 879, available at https://tools.ietf.org/html/rfc879	
	4	Postel, John(ed.), Editor; "Transmission Control Protocol - DARPA Internet Protocol Specification", RFC 793, USC/Information Sciences Institute, http://tools.ietf.org/rfc/rfc793.txt, September 1981	
	5	Protocol Enhancements for Intermittently Connected Hosts, Schütz et al., ACM SIGCOMM Computer Communication Review, Vol. 35, Number 2, July 2005, published in July 2005.	
	6	Real-Time Transport Protocol (RTP) Payload Format and File Storage Format for the Adaptive Multi-Rate (AMR) and Adaptive Multi-Rate Wideband (AMR-WB) Audio Codecs (aka Framing Parameters for GAN) ("RFC 3267"), published in June 2002, available at https://tools.ietf.org/html/rfc3267.	
	7	Requirements for Internet Hosts - Communication Layers RFC 1122 ("RFC 1122"), published in October 1989, available at https://tools.ietf.org/html/rfc1122.	
	8	Roskind, Jim "Multiplexed Stream Transport Over UDP," QUIC, 12/2/2013, 51 pages	
	9	S. Bradner "IETF Working Group Guidelines and Procedures," Network Working Group, RFC 2418, Sept 1998	
	10	S. Bradner, "The Internet Standards Process -- Revision 3" Network Working Group, RFC 2026	
	11	Stream Control Transmission Protocol (SCTP) – ("SCTP") RFC 2960, R. Stewart et al., published in October 2000, available at https://tools.ietf.org/html/rfc2960.	

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	12	Sun Blade 1000 and Sun Blade 2000 Getting Started Guide, Part No. 816-3216-10, published in January 2002, available at https://docs.oracle.com/cd/E19127-01/blade1000.ws/816-3216-10/816-3216-10.pdf.
	13	T Bova et al. "Reliable UDP Protocol" (Internet-Draft for the Internet Engineering Task Force, dated Feb 25, 1999
	14	TCP Abort Timeout Option (draft-eggert-tcpm-tcp-abort-timeout-option-00), published April 14, 2004, available at https://tools.ietf.org/html/draft-eggert-tcpm-tcp-abort-timeout-option-00
	15	TCP User Timeout Option RFC 5482, published in March 2009, available at https://tools.ietf.org/html/rfc5482
	16	TCP/IP Illustrated, Volume 1: The Protocols, W. Richard Stevens, published in 1994.
	17	The Federal Networking Council, The Networking and Information Technology Research and Development Program, Oct 10, 1997, available at https://www.nitrd.gov/historical/fnc-material.aspx
	18	Transmission Control Protocol RFC 793, published in September 1981, available at https://tools.ietf.org/html/rfc793.

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature	/MOUSTAFA M MEKY/	Date Considered	04/09/2021

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.M.M/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17148140
	Filing Date	2021-01-13
	First Named Inventor	Robert Paul Morris
	Art Unit	2457
	Examiner Name	MEKY, MOUSTAFA M
	Attorney Docket Number	PMOR0120M

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2021-03-30
Name/Print	Patrick Caldwell	Registration Number	44580

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.M.M/

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 the Freedom of Information Act requires disclosure of these record s.

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 inspections 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.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.M.M/

WEST Search History for Application 17148140

Creation Date: 2021040923:36

Prior Art Searches

Query	DB	Hits	Op.	Plur.	Thes.	Date
((set$4 adj up) or establish$4 or initiat$4 or open$4 or creat$4) near2 (connection or communication or link or session)	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD, FPRS	1994220	ADJ	YES		03-24-2021
connection near3 deactivat$4	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD, FPRS	5825	ADJ	YES		03-24-2021
(connection near3 deactivat$4) with (((set$4 adj up) or establish$4 or initiat$4 or open$4 or creat$4) near2 (connection or communication or link or session))	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD, FPRS	520	ADJ	YES		03-24-2021
(connection near3 deactivat$4 with ((set$4 adj up) or establish$4 or initiat$4 or open$4 or creat$4) near2 (connection or communication or link or session)) with packet	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD, FPRS	25	ADJ	YES		03-24-2021
(connection near3 deactivat$4 with ((set$4 adj up) or establish$4 or initiat$4 or open$4 or creat$4) near2 (connection or communication or link or session) with packet) same (metadata or time or period or timeout)	PGPB, USPT, USOC, EPAB, JPAB, DWPI,	9	ADJ	YES		03-24-2021

	TDBD, FPRS					
(connection near3 deactivat$4 with ((set$4 adj up) or establish$4 or initiat$4 or open$4 or creat$4) near2 (connection or communication or link or session) with packet) not (connection near3 deactivat$4 with ((set$4 adj up) or establish$4 or initiat$4 or open$4 or creat$4) near2 (connection or communication or link or session) with packet same (metadata or time or period or timeout))	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD, FPRS	16	ADJ	YES		03-24-2021
packet with connection	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD, FPRS	193826	ADJ	YES		04-09-2021
(packet with connection) with deactivat$5	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD, FPRS	598	ADJ	YES		04-09-2021
time adj1 period	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD, FPRS	1713523	ADJ	YES		04-09-2021
(time adj1 period) or timeout or metadata	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD, FPRS	2141756	ADJ	YES		04-09-2021
(time adj1 period or timeout or metadata) with (packet with connection with	PGPB, USPT,	28	ADJ	YES		04-09-2021

deactivat$5)	USOC, EPAB, JPAB, DWPI, TDBD, FPRS					

Electronic Acknowledgement Receipt	
EFS ID:	42371420
Application Number:	17148140
International Application Number:	
Confirmation Number:	7968
Title of Invention:	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD
First Named Inventor/Applicant Name:	Robert Paul Morris
Customer Number:	92045
Filer:	Patrick Edgar Caldwell
Filer Authorized By:	
Attorney Docket Number:	PMOR0120M
Receipt Date:	05-APR-2021
Filing Date:	13-JAN-2021
Time Stamp:	19:31:23
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	QUIC_protocol2.pdf	290159 12b732063e8eee2acd0db1a3aab51c4f3e18b77f	no	60

Warnings:

Information:					
2	Non Patent Literature	tcp-selective-ack-options2.pdf	825554 637fa82cb18bfad5a8c9b896279410b2ff6c395c	no	11
Warnings:					
Information:					
			Total Files Size (in bytes):	1115713	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt	
EFS ID:	42327463
Application Number:	17148140
International Application Number:	
Confirmation Number:	7968
Title of Invention:	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD
First Named Inventor/Applicant Name:	Robert Paul Morris
Customer Number:	92045
Filer:	Patrick Edgar Caldwell
Filer Authorized By:	
Attorney Docket Number:	PMOR0120M
Receipt Date:	31-MAR-2021
Filing Date:	13-JAN-2021
Time Stamp:	00:05:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	darpa-internet-program_vR.pdf	8230527 c6aeed398329ff16fc909dbcdc19d199d6ed9fdf	no	81

Warnings:

Information:					
2	Non Patent Literature	QUIC_Design_vR.pdf	1373612 102af237b722982413244 8f2705170348e5c5aaf	no	4
Warnings:					
Information:					
3	Non Patent Literature	tcp-congestion-control_vR.pdf	1227262 a3aa34388563829e746c4cda278a32605a743e91	no	13
Warnings:					
Information:					
4	Non Patent Literature	tcp-connection-mgmt-problem-handling_vR.pdf	334008 edbff8e579a4131ac852eeb1ec6fa18ea3469f53	no	2
Warnings:					
Information:					
5	Non Patent Literature	tcp-keepalive-overview_vR.pdf	293252 33ff7e7e754179552937f8c69e090ab8e27b10ff	no	2
Warnings:					
Information:					
6	Non Patent Literature	tcp-selective-ack-options_vR.pdf	1351745 ffbe972d8be59c5e0eed6d3ca2618f6190b436cd	no	11
Warnings:					
Information:					
			Total Files Size (in bytes):	12810406	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Patent Application Fee Transmittal

Application Number:	17148140
Filing Date:	13-Jan-2021
Title of Invention:	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD
First Named Inventor/Applicant Name:	Robert Paul Morris
Filer:	Patrick Edgar Caldwell
Attorney Docket Number:	PMOR0120M

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	1202	34	100	3400
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**3400**

Electronic Acknowledgement Receipt	
EFS ID:	42327429
Application Number:	17148140
International Application Number:	
Confirmation Number:	7968
Title of Invention:	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD
First Named Inventor/Applicant Name:	Robert Paul Morris
Customer Number:	92045
Filer:	Patrick Edgar Caldwell
Filer Authorized By:	
Attorney Docket Number:	PMOR0120M
Receipt Date:	30-MAR-2021
Filing Date:	13-JAN-2021
Time Stamp:	23:53:53
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$3400
RAM confirmation Number	E20213TN54092313
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	RFC1072.pdf	63380 4d2c4bd8f9e41b97f3e9ff8246452a292a606a74	no	16
Warnings:					
Information:					
2	Non Patent Literature	RFC1131.pdf	1045032 f459b3dd048c296846ae1c85f4d96e03bafaf803	no	107
Warnings:					
Information:					
3	Non Patent Literature	RFC1323.pdf	112206 32878ae5364ba6fdb2ffd0632ae73dd9b9ccd0d8	no	37
Warnings:					
Information:					
4	Non Patent Literature	RFC2018.pdf	54945 c815062fb089fbe6cc514cf973d6d51e06387673	no	12
Warnings:					
Information:					
5	Non Patent Literature	RFC2026.pdf	111285 61146d7d7bf77457edc3b08632b2c62a6c13730e	no	36
Warnings:					
Information:					
6	Non Patent Literature	RFC2418.pdf	90444 5e857e08ee818b4be4276a80ae6e8cd6126f022e	no	26
Warnings:					
Information:					

7	Non Patent Literature	TCPKindnumbers.pdf	680960 545390bde609fb07f6bba505e35ced1ff0d8 9d13	no	1
Warnings:					
Information:					
8	Non Patent Literature	TCPMIETF60.pdf	162860 ee319522c4d882d7eb2353c3926a93a2694 f31c0	no	13
Warnings:					
Information:					
9	Non Patent Literature	ZamfirThesis.pdf	2393736 d76fba8318dc153d03ab32db44f9fecc94cb 939d	no	99
Warnings:					
Information:					
10	Fee Worksheet (SB06)	fee-info.pdf	30270 08fb2d2574a730d32ff5a1f5387d2ada5def e612	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	4745118		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

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New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc Code: DIST.E.FILE **Document Description: Electronic Terminal Disclaimer - Filed**	PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT**
Application Number	17148140
Filing Date	13-Jan-2021
First Named Inventor	Robert Morris
Attorney Docket Number	PMOR0120M
Title of Invention	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
Jenam Tech, LLC	100%

The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

8219606

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

◯ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.

◉ I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.	
THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES I certify, in accordance with 37 CFR 1.4(d)(4) that I am: ◉ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application Registration Number 44580 ◯ A sole inventor ◯ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application ◯ A joint inventor; all of whom are signing this request	
Signature	/Patrick Caldwell/
Name	Patrick Caldwell

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 17148140

Filing Date: 13-Jan-2021

Applicant/Patent under Reexamination: Morris

Electronic Terminal Disclaimer filed on March 30, 2021

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt	
EFS ID:	42327412
Application Number:	17148140
International Application Number:	
Confirmation Number:	7968
Title of Invention:	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD
First Named Inventor/Applicant Name:	Robert Paul Morris
Customer Number:	92045
Filer:	Patrick Edgar Caldwell
Filer Authorized By:	
Attorney Docket Number:	PMOR0120M
Receipt Date:	30-MAR-2021
Filing Date:	13-JAN-2021
Time Stamp:	23:48:15
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	31947 303411c7dac5d3fe047c6692c2b52e22052130cc	no	2

Warnings:

Information:	
Total Files Size (in bytes):	31947

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
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National Stage of an International Application under 35 U.S.C. 371
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New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 17/148,140	Filing Date 01/13/2021	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $480 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	03/30/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 227	Minus	** 197	= 30		x $100 =	3000
	Independent (37 CFR 1.16(h))	* 4	Minus	*** 4	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	3000

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	SLIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/ADRIENE D. SELLMAN/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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PTO/SB/08a (02-18)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17148140
Filing Date	2021-01-13
First Named Inventor	Robert Paul Morris
Art Unit	2457
Examiner Name	MEKY, MOUSTAFA M
Attorney Docket Number	PMOR0120M

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17148140
	Filing Date	2021-01-13
	First Named Inventor	Robert Paul Morris
	Art Unit	2457
	Examiner Name	MEKY, MOUSTAFA M
	Attorney Docket Number	PMOR0120M

	1	Office Action Summary in U.S. Pat. App. No. 17148824	
	2	Palm Treo 650 Manual, published in 2004, available at https://www.wireless.att.com/download/phone_manual/treo_650.pdf.	
	3	Postel, J. "The TCP Maximum Segment Size and Related Topics," Network Working Group, RFC 879, available at https://tools.ietf.org/html/rfc879	
	4	Postel, John(ed.), Editor; "Transmission Control Protocol - DARPA Internet Protocol Specification", RFC 793, USC/Information Sciences Institute, http://tools.ietf.org/rfc/rfc793.txt, September 1981	
	5	Protocol Enhancements for Intermittently Connected Hosts, Schütz et al., ACM SIGCOMM Computer Communication Review, Vol. 35, Number 2, July 2005, published in July 2005.	
	6	Real-Time Transport Protocol (RTP) Payload Format and File Storage Format for the Adaptive Multi-Rate (AMR) and Adaptive Multi-Rate Wideband (AMR-WB) Audio Codecs (aka Framing Parameters for GAN) ("RFC 3267"), published in June 2002, available at https://tools.ietf.org/html/rfc3267.	
	7	Requirements for Internet Hosts - Communication Layers RFC 1122 ("RFC 1122"), published in October 1989, available at https://tools.ietf.org/html/rfc1122.	
	8	Roskind, Jim "Multiplexed Stream Transport Over UDP," QUIC, 12/2/2013, 51 pages	
	9	S. Bradner "IETF Working Group Guidelines and Procedures," Network Working Group, RFC 2418, Sept 1998	
	10	S. Bradner, "The Internet Standards Process -- Revision 3" Network Working Group, RFC 2026	
	11	Stream Control Transmission Protocol (SCTP) – ("SCTP") RFC 2960, R. Stewart et al., published in October 2000, available at https://tools.ietf.org/html/rfc2960.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17148140
	Filing Date	2021-01-13
	First Named Inventor	Robert Paul Morris
	Art Unit	2457
	Examiner Name	MEKY, MOUSTAFA M
	Attorney Docket Number	PMOR0120M

	12	Sun Blade 1000 and Sun Blade 2000 Getting Started Guide, Part No. 816-3216-10, published in January 2002, available at https://docs.oracle.com/cd/E19127-01/blade1000.ws/816-3216-10/816-3216-10.pdf.	
	13	T Bova et al. "Reliable UDP Protocol" (Internet-Draft for the Internet Engineering Task Force, dated Feb 25, 1999	
	14	TCP Abort Timeout Option (draft-eggert-tcpm-tcp-abort-timeout-option-00), published April 14, 2004, available at https://tools.ietf.org/html/draft-eggert-tcpm-tcp-abort-timeout-option-00	
	15	TCP User Timeout Option RFC 5482, published in March 2009, available at https://tools.ietf.org/html/rfc5482	
	16	TCP/IP Illustrated, Volume 1: The Protocols, W. Richard Stevens, published in 1994.	
	17	The Federal Networking Council, The Networking and Information Technology Research and Development Program, Oct 10, 1997, available at https://www.nitrd.gov/historical/fnc-material.aspx	
	18	Transmission Control Protocol RFC 793, published in September 1981, available at https://tools.ietf.org/html/rfc793.	

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17148140
	Filing Date	2021-01-13
	First Named Inventor	Robert Paul Morris
	Art Unit	2457
	Examiner Name	MEKY, MOUSTAFA M
	Attorney Docket Number	PMOR0120M

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2021-03-30
Name/Print	Patrick Caldwell	Registration Number	44580

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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:

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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.

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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 inspections or an issued patent.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Confirmation No.: 7968
Robert Paul Morris	Examiner: MEKY, Moustafa M.
Application No.: 17/148,140	Art Unit: 2457
File Date: 1-21-2021	Docket No.: PMOR0120M
Title: METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD	Date: March 30, 2021

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§ 1.56 AND 1.97(b)

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Examiner:

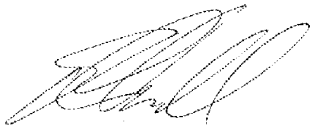
The reference(s) listed in the attached PTO Form 1449, cop(ies) of which is attached (when necessary), may be material to examination of the above-identified patent application. Applicants submit the reference(s) in compliance with their duty of disclosure pursuant to 37 CFR §§ 1.56 and 1.97. The Examiner is requested to make the reference(s) of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that the reference(s) indeed constitutes prior art.

Additionally, one or more patents (e.g. 9923995, 9923996, 10069945, 10075564, 10075565, 10375215, 10306026, 10742774, 10951742) are (or were) the subject of litigation (EDTX 4:19-cv-00250; EDTX 4:19-cv-00249; EDTX 4:20-cv-00279; WDTX 6:20-cv-00453; WDTX 6:21-cv-00271). Additionally, one or more patents (e.g. 9923995, 10375215, 10075564, 10075565) are the subject of pending Inter Partes Review (IPR2020-00742; IPR2020-00845; IPR2021-00628; IPR2021-00629; IPR2021-00627; IPR2021-00630), the first two of which have been instituted. Further, Claims 25, 26, and 28 of 9923995 have been disclaimed.

This Information Disclosure Statement is being filed after the mailing date of a non-final Office Action. Accordingly, applicants are including payment in the amount of $260.00 for the fee due in connection with the filing of this Information Disclosure Statement. However, if it is determined that any additional fees are due, the Commissioner is hereby authorized to charge such fees or credit any overpayment to Deposit Account 50-4964.

Respectfully submitted,



Dated: 30 Mar 2021

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Dallas, Texas 75229-0655
Telephone: (214) 734-2313
pcaldwell@thecaldwellfirm.com

Patrick E. Caldwell, Esq.
Reg. No. 44,580

Electronic Patent Application Fee Transmittal

Application Number:	17148140
Filing Date:	13-Jan-2021
Title of Invention:	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD
First Named Inventor/Applicant Name:	Robert Paul Morris
Filer:	Patrick Edgar Caldwell
Attorney Docket Number:	PMOR0120M

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	1202	170	100	17000
INDEPENDENT CLAIMS IN EXCESS OF 3	1201	1	480	480
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	1806	1	260	260
STATUTORY OR TERMINAL DISCLAIMER	1814	1	170	170
		Total in USD ($)		**17910**

Electronic Acknowledgement Receipt	
EFS ID:	42327406
Application Number:	17148140
International Application Number:	
Confirmation Number:	7968
Title of Invention:	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD
First Named Inventor/Applicant Name:	Robert Paul Morris
Customer Number:	92045
Filer:	Patrick Edgar Caldwell
Filer Authorized By:	
Attorney Docket Number:	PMOR0120M
Receipt Date:	30-MAR-2021
Filing Date:	13-JAN-2021
Time Stamp:	23:45:35
Application Type:	Utility under 35 USC 111(a)

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1		PMOR0120M_ROA_vF_30-Mar-2021.pdf	198429 1534f98b60b4cd59a89a127150164 7f073f59c4b	yes	58

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment/Req. Reconsideration-After Non-Final Reject	1	1
Claims	2	57
Amendment/Req. Reconsideration-After Non-Final Reject	58	58

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3	Information Disclosure Statement (IDS) Form (SB08)	PMOR0120M_IDS_20210330_2_OF_2_vF.pdf	1054328 1472195d8a140c9bb19e6279c617e7e65235cebc	no	5

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5	Non Patent Literature	1-draft-natarajan.pdf	262973 469dbcd44dafd0b5c255c79991204fd572420287	no	11
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10	Non Patent Literature	6_Cisco7200VXR.pdf	148543 8be90eaed24068d4d96cb7069c763187487a8def	no	4
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22	Non Patent Literature	18_thesis.pdf	2484430 e8bdcde01392cf321eca96f56aa4ef407d602cc8	no	107
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24	Non Patent Literature	20_Protocol.pdf	2169270 3a95f5e070d32ae6f3eb69b6e9fd395e51798701	no	14
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26	Non Patent Literature	22_RFC1122.pdf	716435 2808738ab42ace6f8ab59c7fd87ede05b73a7069	no	117
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27	Non Patent Literature	23_RFC2960.pdf	835087 4f7e54e0a5570a7a3d23ba1d9d01e9bde9533e8b	no	135
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31	Non Patent Literature	27_Richar.pdf	17309012 b6607f804fa2849985ea280788620c8c611ed2a8	no	1059
Warnings:					
Information:					
32	Non Patent Literature	28_RFC793.pdf	663591 cb8ee69fec4cd5d6f320b8dd922fe00019328b0f	no	176
Warnings:					
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33	Non Patent Literature	29_Cisco7200.pdf	474463 3c0d60378e9494c9cd9bc2ae28c6a2025d0fca07	no	6
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34	Non Patent Literature	12714063_PMOR110_2012-06-21.pdf	166146 fda5519a62597bfc84a097d2520b339b52d67c58	no	6
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35	Non Patent Literature	12714063_PMOR110_2013-03-04.pdf	254056 6b405611b589e7279137d6c4cfaed6f6baf1acd3	no	8
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36	Non Patent Literature	12714063_PMOR110_2013-09-27.pdf	302505 1316af7957cdacd2fcc417a1c00e9bc53e9982fa	no	9
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37	Non Patent Literature	12714454_PMOR120_2012-02-23.pdf	378122 5fa5d67ed45f567ffa03129b225da7407423580d	no	7
Warnings:					
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38	Non Patent Literature	13477402_PMOR120A_2014-09-24.pdf	646849 d3beb93e67487fc70aca66f847d25ae169ab15ce	no	19
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39	Non Patent Literature	15694802_PMOR120B_2017-11-29.pdf	177699 da8891cdc82bb986a51cc2dc8fe4af41925e6f0e	no	5
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40	Non Patent Literature	Apogee.pdf	2853853 2925d7db74c020ec56be6c4f43904200ae17accc	no	64
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41	Non Patent Literature	congestion-control-ip-tcp_vR.pdf	1148738 1565d26cf1789e00fd6b57d0a632011f19ce94ac	no	7
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42	Non Patent Literature	draft-ietf-sigtran-reliable-udp-00.pdf	112150 d3373bd63f46cbfdaf351e03e591e2e4f2856949	no	17
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43	Non Patent Literature	FNC.pdf	760331 b64f087a0a91d48ac2f691b30d142e96437281d3	no	2
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44	Non Patent Literature	Gont.pdf	45622 c5df1769e1469cc24a772acec4f8f69c8d765840	no	8
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Information:					
45	Non Patent Literature	IETF_IESG_Statement.pdf	173306 8f759430e3be01797558104dab849d4caf966460	no	2
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48	Non Patent Literature	IETFDatatracker2.pdf	685074 891bb33331b3848576df6c8174a2c9b3b597fec9	no	1
Warnings:					
Information:					
49	Non Patent Literature	IETFMailingLists.pdf	204964 b426d44a85847657dc37e21760bf04823f175b71	no	7
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50	Non Patent Literature	IETFtcpmmailinglistApril2004.pdf	440028 abbde2e12676bec3ae2023410870bb3d583efd41	no	15
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51	Non Patent Literature	InternetDomainSurvey.pdf	74836 d8e1921f9dbc91c0606f3eb9f4c1a126f9411444	no	2
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52	Non Patent Literature	PMOR0120K_OA.pdf	3981290 ad8d4562a9874330c119d22e0e982cd831364cda	no	37
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53	Non Patent Literature	PMOR0120L_OA.pdf	4049262 85d9a4d04703c3bb4abe4c8943d17a4c86bf1439	no	46
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54	Non Patent Literature	rfc793.pdf	432181 beab243f84257dad62b4ca934cf3a58d8ade9d51	no	81
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55	Non Patent Literature	RFC879.pdf	50683 8d3efc8b0d39e1c4903956eb9d9ac946730e5ff6	no	11
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56	Fee Worksheet (SB06)	fee-info.pdf	35131 bf70eb7b4563e5ab6ef4bbf5476a941387e05a08	no	2
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17148140
Filing Date	2021-01-13
First Named Inventor	Robert Paul Morris
Art Unit	2457
Examiner Name	MEKY, MOUSTAFA M
Attorney Docket Number	PMOR0120M

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	1	5371852	A	1994-12-06	Attanasio et al.	Entire Document
	2	5495480	A	1996-02-27	Yoshida	Entire Document
	3	6412006	B2	2002-06-25	Naudus	Entire Document
	4	6273622	B1	2001-08-14	Ben-David	Entire Document
	5	6412009	B1	2002-06-25	Erickson et al.	Entire Document
	6	6674713	B1	2004-01-06	Berg et al.	Entire Document
	7	6704786	B1	2004-03-09	Gupta et al.	Entire Document
	8	6757248	B1	2004-06-29	Li et al.	Entire Document

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	Attorney Docket Number	PMOR0120M

	9	6880013	B2	2005-04-12	Kashyap	Entire Document
	10	6981048	B1	2005-12-27	Abdolbaghian et al.	Entire Document
	11	7404210	B2	2008-07-22	Lin	Entire Document
	12	7426569	B2	2008-09-16	Dunk	Entire Document
	13	7684346	B2	2010-03-23	Valli	Entire Document
	14	7720989	B2	2010-05-18	Dunk	Entire Document
	15	7729271	B2	2010-06-01	Tsuchiya et al.	Entire Document
	16	7808941	B2	2010-10-05	Ramos et al.	Entire Document
	17	7876678	B2	2011-01-25	Ong	Entire Document
	18	7002917	B1	2006-02-21	Saleh	Entire Document
	19	7035214	B1	2006-04-25	Seddigh et al.	Entire Document

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	20	7050940	B2	2006-05-23	Basso et al.	Entire Document
	21	7152111	B2	2006-12-19	Allred et al.	Entire Document
	22	7428595	B2	2008-09-23	Deshpande	Entire Document
	23	7606191	B1	2009-10-20	Breau et al.	Entire Document
	24	7848351	B2	2010-12-07	Kim et al.	Entire Document
	25	7962623	B2	2011-06-14	Undery et al.	Entire Document
	26	8073964	B2	2011-12-06	Dunk	Entire Document
	27	8077737	B2	2011-12-13	Ji	Entire Document
	28	8031617	B2	2011-10-04	Mogul et al.	Entire Document
	29	8219606	B2	2012-07-10	Morris	Entire Document
	30	8228830	B2	2012-07-24	Babin et al.	Entire Document

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	31	8375134	B2	2013-02-12	Herzog et al.	Entire Document
	32	8483095	B2	2013-07-09	Hegde et al.	Entire Document
	33	8700695	B2	2014-04-15	Sundarrajan et al.	Entire Document
	34	8711851	B1	2014-04-29	Subramonian et al.	Entire Document
	35	9060310	B2	2015-06-16	Ji	Entire Document
	36	9923996	B1	2018-03-20	Morris	Entire Document
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	1	20050054347	A1	2005-03-10	Kakani	
	2	20050063304	A1	2005-03-24	Sillasto et al.	

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	3	20050135248	A1	2005-06-23	Ahuja et al.	Entire Document
	4	20060034179	A1	2006-02-16	Carter et al.	Entire Document
	5	20060195547	A1	2006-08-31	Sundarrajan et al.	Entire Document
	6	20070008884	A1	2007-01-11	Tang	Entire Document
	7	20070064677	A1	2007-03-22	Xiong	Entire Document
	8	20070086461	A1	2007-04-19	Ward et al.	Entire Document
	9	20070110046	A1	2007-05-17	Farrell et al.	Entire Document
	10	20070140193	A1	2007-06-21	Dosa et al.	Entire Document
	11	20070171921	A1	2007-07-26	Wookey et al.	Entire Document
	12	20080084826	A1	2008-04-10	Ong	Entire Document
	13	20080095124	A1	2008-04-24	Ramos et al.	Entire Document

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	14	20080261596	A1	2008-10-23	Khetawat et al.	Entire Document	
	15	20090201857	A1	2009-08-13	Daudin et al.	Entire Document	
	16	20090252072	A1	2009-10-08	Lind et al.		
	17	20100057844	A1	2010-03-04	Johnson		
	18	20100074273	A1	2010-03-25	Ji	Entire Document	
	19	20110213820	A1	2011-09-01	Morris		

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	1	1242882	EP	A2	2002-09-25	Hankinson et al.	Entire Document	
	2	2007069046	WO	A1	2007-06-21	Eronen et al.	Entire Document	

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	1	"A Border Gateway Protocol 4 (BGP-4)" RFC 1771, published in March 1995, available at https://tools.ietf.org/html/rfc1771.	
	2	"Discussion Lists," IETF, available at https://www.ietf.org/how/lists/discussion/	
	3	"IETF Announce Mailing List," IETF, April 2004	
	4	"IETF Document Management System Datatracker 2 for Eggert," IETF, Datatracker	
	5	"IETF TCP Maintenance," IETF, April 2004	
	6	"TCP Option Kind Numbers," Network Working Group, RFC 2780	
	7	"Using SCTP as a Transport Layer Protocol for HTTP," draft-natarajan-httpbis-sctp-00.txt, published October 27, 2008, available at https://tools.ietf.org/id/draft-natarajan-httpbis-sctp-00.html.	
	8	Allman, M., Paxson, V., Stevens, W., "TCP Congestion Control", RFC 2581, Internet Engineering Task Force, http://tools.ietf.org/rfc/rfc2581.txt,-April 1999	
	9	Apogee Communications, Rapport de Veille Technologique Securite No. 69, (Security Technology Watch Report) (April, 2004)	
	10	BT Mobile BlackBerry Enterprise Server 4.0, Information Sheet, published in 2005, available at https://www.bt.com/static/i/media/pdf/blackberry_ITadvice_june05.pdf.	

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	11	Busatto, Fabio, "TCP Keepalive Overview", TCP Keepalive HOWTO, Section 2, http://tldp.org/HOWTO/html_single/TCP-Keepalive-HOWTO/#overview, accessed January 2010, May 2007
	12	Cisco 7200 Series Network Processing Engine NPE-G1 Data Sheet, published in June 2006, available at https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/network-processor-modules/product_data_sheet09186a00800c6bd6.pdf
	13	Cisco 7200 Series Router Architecture, published in February 2008, available at https://www.cisco.com/c/en/us/support/docs/routers/7200-series-routers/5810-arch-7200-5810.pdf.
	14	Cisco 7200 VXR Series Routers Data Sheet, published in 2008.
	15	Cisco 7200 VXR Series Routers Quick Look Guide published in November 2007.
	16	Cisco IOS BGP Configuration Guide, Release 12.4T, Chapter: Cisco BGP Overview, published in 2007, available at https://www.cisco.com/c/en/us/td/docs/ios/12_2sr/12_2srb/feature/guide/tbgp_c/tbrbover.html
	17	Cisco IOS BGP Configuration Guide, Release 12.4T, Chapter: Configuring BGP Neighbor Session Options ("Cisco IOS BGP Options"), published in 2007, available at https://www.cisco.com/c/en/us/td/docs/ios/12_2sr/12_2srb/feature/guide/tbgp_c/brbpeer.html
	18	Cristian Zamfir, Live Migration of User Environments Across WideArea Networks, Master's Thesis, Department of Computing Science, University of Glasgow (October, 2008)
	19	Digital cellular telecommunications system (Phase 2+); Generic access to the A/Gb interface; Stage 2 (3GPP TS 43.318 version 6.7.0 Release 6) ("TS 43.318"), published in June 2006.
	20	Eggert, L., Gont, F., "TCP User Timeout Option", RFC 5482, Internet Engineering Task Force (IEFT), http://tools.ietf.org/html/rfc5482.txt, March 2009,
	21	F. Gont, "TCP Adaptive User TimeOut (AUTO) Option," Network Working Group, May 19, 2004

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Attorney Docket Number	PMOR0120M

	22	HP Compaq Business Desktop d530 Series, QuickSpecs ("d530 QuickSpecs"), published on July 14, 2003, available at http://www.hp.com/ecomcat/hpcatalog/specs/emeapsg/99/D530SERIES.pdf.	
	23	HP iPAQ H4000 Series User Guide, published in August 2003	
	24	Hypertext Transfer Protocol – HTTP/1.1 RFC 2068, published in January 1997, available at https://tools.ietf.org/html/rfc2068.	
	25	Hypertext Transfer Protocol RFC 2616, published in June 1999, available at https://tools.ietf.org/html/rfc2616.	
	26	IESG Statement: Normative and Informative References, Apr 19, 2006, available at https://www.ietf.org/blog/iesg-statement-normative-and-informative-references/	
	27	IETF Document Management System Datatracker 1 for Eggert, available at https://datatracker.ietf.org/doc/draft-eggert-tcpm-tcp-abort-timeout-option/	
	28	IETF face-to-face meeting (San Diego, August 2, 2004)	
	29	Internet Domain Survey, January 2010, Internet Systems Consortium available at https://downloads.isc.org/www/survey/reports/2010/01/	
	30	J. Moy, "The OSPF Specification," Network Working Group, RFC 1131, October 1989	
	31	Jacobson et al, "TCP Extensions for High Performance," Network Working Group, RFC 1323, May 1002, available at https://tools.ietf.org/html/rfc1323	
	32	Jacobson et al, "TCP Extensions for Long-Delay Paths," Network Working Group, RFC 1072, October 1988, available at https://tools.ietf.org/html/rfc1072	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Attorney Docket Number	PMOR0120M

	33	Jim Roskind, QUIC Quick UDP Internet Connections, Multiplexed Stream Transport Over UDP, 11/7/2013 (first draft earlier), available at https://www.ietf.org/proceedings/88/slides/slides-88-tsvarea-10.pdf	
	34	Jon Postel, "Transmission Control Protocol," DARPA Internet Program Protocol Specification, RFC 793, dated September 1981	
	35	Koziero, Charles M., TCP Connection Management and Problem Handling, the Connection Reset Function, and TCP "Keepalives", The TCP/IP Guide, p. 3, http://www.tcpipguide.com/free/t_TCPConnectionManagementandProblemHandlingtheConnec-3.htm, accessed February 2010, (c) 2003-2010	
	36	Mathis et al, "TCP Selective Acknowledgment Options," Network Working Group, RFC 2018, October 1996, available at https://tools.ietf.org/html/rfc2018	
	37	Mathis, M., Mahdave, J., Floyd, S., Romanow, A., "TCP Selective Acknowledgement Options", RFC 2018, Internet Engineering Task Force, http://tools.ietf.org/rfc/rfc2018.txt, October 1996	
	38	Mobile IP Traversal of Network Address Translation (NAT) Devices RFC 3519 ("RFC 3519"), published in April 2003, available at https://tools.ietf.org/html/rfc3519.	
	39	Nagle, John, "Congestion Control in IP/TCP Internetworks", RFC 896, Ford Aerospace and Communications Corporation, http://tools.ietf.org/rfc/rfc896.txt, January 1984	
	40	NetEx "'C' Configuration Manager and NetEx® Alternate Path Retry (APR) Release 4.0" software reference manual, published in 2002, available at http://www.netexsw.com/nesi/support/ReleasedDocs/ConfMgr/man-cnet-conf-mgr-02.pdf.	
	41	NetEx/IP™ for UNIX Systems Release 6.0 Software Reference Manual, published in 2004, available at http://www.netexsw.com/nesi/support/ReleasedDocs/Hxx0IP/man-hunxip-03.pdf.	
	42	Network Support for Intermittently Connected Mobile Nodes, Simon Schütz, published on June 13, 2004, available at https://eggert.org/students/schuetz-thesis.pdf.	
	43	Network Working Group, "QUIC: A UDP-Based Secure and Reliable Transport for HTTP/2 draft-tsvwg-quic-protocol-00", June 17, 2015	

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	44	Office Action Summary in U.S. Pat. App. No. 12/714,063 dated 2012-06-21	
	45	Office Action Summary in U.S. Pat. App. No. 12/714,063 dated 2013-03-04	
	46	Office Action Summary in U.S. Pat. App. No. 12/714,063 dated 2013-09-27	
	47	Office Action Summary in U.S. Pat. App. No. 12/714454 dated 2012-02-23	
	48	Office Action Summary in U.S. Pat. App. No. 13/477,402 dated 2014-09-24	
	49	Office Action Summary in U.S. Pat. App. No. 15/694,802 dated 2017-11-29	
	50	Office Action Summary in U.S. Pat. App. No. 17079397	

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☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2021-03-30
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Confirmation No.: 7968
Robert Paul Morris	Examiner: MEKY, MOUSTAFA M
Application No.: 17/148,140	Art Unit: 2457
File Date: 1-21-2021	Docket No.: PMOR0120M
Title: METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD	Date: March 30, 2021

AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

In response to the Office Action dated 3/29/2021, please enter the following.

CLAIMS

Amended claims follow:

1. (Original) An apparatus comprising:

a non-transitory memory storing instructions; and

one or more processors in communication with the non-transitory memory, wherein the one or more processors execute the instructions to:

identify first information;

generate, based on first information, a set up packet including a time period parameter field identifying first metadata, the set up packet for use in a protocol that is not transmission control protocol (TCP);

set up a connection, by sending, from the apparatus to a node, the set up packet to provide the first metadata to the node, for use by the node in determining a timeout attribute associated with the connection;

detect, by the apparatus, a time period during which no packet is received in the connection and processed to keep the connection active; and

in response to detecting the time period, at least partially deactivate, by the apparatus, the connection.

2. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the protocol does not include a TCP-extension.

3. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the protocol varies from request for comments (RFC) 793 by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a RFC 793 header of a RFC 793 connection packet sent during a RFC 793 connection after the RFC 793 connection is set up.

4. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the protocol varies from TCP by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a TCP header of a TCP connection packet sent during a TCP connection after the TCP connection is set up.

5. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the set up packet is not a synchronize (SYN) packet.

6. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the connection is at least partially deactivated, by releasing, by the apparatus, a resource allocated for the connection, without signaling the node in relation to the detection of the time period after detecting the time period.

7. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the connection is at least partially deactivated unilaterally by the apparatus.

8. (Cancelled)

9. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the at least partial deactivation is in response to the detection without sending any signal after the detection to the node to cause the at least partial deactivation.

10. (Currently Amended) The apparatus of claim 1 wherein the apparatus is configured such that the time period is detected without utilizing an acknowledgement timer that is reset based on a receipt of one or more acknowledgements.

11. (Original) The apparatus of claim 1 wherein the apparatus is configured such that an end of the time period is detected without utilizing an acknowledgement timer.

12. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the time period is that during which no packet is received that is unacknowledged.

13. (Original) The apparatus of claim 1 wherein the apparatus is configured such that the time period is that during which no packet is sent by the apparatus to cause the node to respond.

14. (Currently Amended) An apparatus comprising:

a non-transitory memory storing instructions; and

one or more processors in communication with the non-transitory memory, wherein the one or more processors execute the instructions to:

receive, by the apparatus from a node, a set up packet during a setup of a connection, the set up packet for use in a protocol that is not transmission control protocol (TCP);

identify first metadata in a time period parameter field in the set up packet, for a time period, where, as a result of a detection of the time period, the connection is at least partially deactivated; and

determine, based on the first metadata, a timeout attribute associated with the connection.

15. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the protocol does not include a TCP-extension.

16. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the protocol varies from request for comments (RFC) 793 by including information in a header of a connection packet sent during the connection after the connection is set up, where the information is not included in a RFC 793 header of a RFC 793 connection packet sent during a RFC 793 connection after the RFC 793 connection is set up.

17. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the protocol varies from TCP by including information in a header of a connection packet sent during the connection after the connection is set up, where the information is not included in a TCP header of a TCP connection packet sent during a TCP connection after the TCP connection is set up.

18. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the set up packet is not a synchronize (SYN) packet.

19. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the connection is at least partially deactivated, by releasing, by the apparatus, a resource allocated for the connection, without signaling the node in relation to the detection of the time period after detecting the time period.

20. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the connection is at least partially deactivated unilaterally by the apparatus.

21. (Cancelled)

22. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the time period is detected by detecting an absence of any packet being received at the apparatus and processed by the apparatus to keep the connection active.

23. (Original) The apparatus of claim 22 wherein the apparatus is configured such that the at least partial deactivation results from the detection of the absence without sending any signal after the detection of the absence to the node to cause the at least partial deactivation.

24. (Currently Amended) The apparatus of claim 22 wherein the apparatus is configured such that the absence further includes an absence of any packet being received that [[is]]has been unacknowledged.

25. (Original) The apparatus of claim 22 wherein the apparatus is configured such that the absence further includes an absence of any packet being sent by the apparatus to cause the node to respond.

26. (Original) The apparatus of claim 14 wherein the apparatus is configured such that the time period is detected without utilizing an acknowledgement timer.

27. (Original) The apparatus of claim 14 wherein the apparatus is configured such that an end of the time period is detected without utilizing an acknowledgement timer.

28. (New) The apparatus of claim 14, wherein the time period includes a first time period detected based on a first duration, and the apparatus is configured to: in response to detecting, based on a second duration, a second time period, perform at least one action.

29. (New) The apparatus of claim 28, wherein the apparatus is configured such that the at least one action includes resetting a timer utilized in detecting a time period of a same type as the second time period.

30. (New) The apparatus of claim 29, wherein the apparatus is configured such that the time period of the same type as the second time period, includes the second time period.

31. (New) The apparatus of claim 29, wherein the apparatus is configured such that the time period of the same type as the second time period, includes another second time period.

32. (New) The apparatus of claim 28, wherein the apparatus is configured such that the first time period and the second time period are of different types.

33. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is an acknowledgement time period, and the first time period is an idle time period.

34. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected based on the second duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the second duration, for a sent packet sent by the apparatus in the connection.

35. (New) The apparatus of claim 34, wherein the apparatus is configured such that the second time period is detected based on the second duration, even when an acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the second duration, for at least one other sent packet sent by the apparatus in the connection.

36. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected based on the second duration, by being detected when an expected acknowledgement packet is not received by the apparatus in the

connection, during the second duration, for a sent packet sent by the apparatus in the connection.

37. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected only in response to an acknowledgement packet not being received, for the second duration, in the connection for a sent packet sent in the connection.

38. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected in response to no acknowledgement packet being received in the connection and processed as an acknowledgement for a sent packet sent in the connection.

39. (New) The apparatus of claim 28, wherein the apparatus is configured such that the set up packet also includes data, separate from the first metadata, for use in determining the second time period.

40. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected utilizing a timer that is not utilized to detect the first time period.

41. (New) The apparatus of claim 28, wherein the apparatus is configured such that at least one aspect of the first and second durations are negotiated during the connection set up between the apparatus and the node for the connection.

42. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is an acknowledgment timeout period during which an expected acknowledgment for a sent packet is not received for at least one sent packet.

43. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second duration is determined using the time period parameter field identifying the first metadata.

44. (New) The apparatus of claim 28, wherein the apparatus is configured such that the first duration is determined based on the second duration.

45. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second duration is determined based on the first duration.

46. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected based on the second duration, by being detected when no acknowledgement packet is detected, by the apparatus during the second duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets sent by the apparatus, where the second duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer is utilized for detecting the second time period in connection with the plurality of sent packets.

47. (New) The apparatus of claim 46, wherein the apparatus is configured such that the second time period is detected based on the second duration, even when an acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the second duration, for at least one other sent packet of a plurality of other sent packets sent by the apparatus in the connection.

48. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected based on the second duration, by being detected when no acknowledgement packet is detected, by the apparatus during the second duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets sent by the apparatus, where

the second duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent.

49. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is detected based on the second duration, by being detected when no acknowledgement packet is detected, by the apparatus during the second duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets sent by the apparatus, where the second duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer and a single timeout variable are utilized for detecting the second time period in connection with the plurality of sent packets.

50. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second duration is determined using an other time period parameter field identifying second metadata, where the other time period parameter field is communicated in the connection.

51. (New) The apparatus of claim 50, wherein the apparatus is configured such that the second duration is determined using the time period parameter field identifying the first metadata, and the other time period parameter field identifying the second metadata.

52. (New) The apparatus of claim 50, wherein the apparatus is configured such that the first duration is determined using the time period parameter field identifying the first metadata, and the other time period parameter field identifying the second metadata.

53. (New) The apparatus of claim 28, wherein the apparatus is configured such that the second time period is an acknowledgment timeout period.

54. (New) The apparatus of claim 14, wherein the time period includes a second time period detected based on a second duration, and the apparatus is configured to: in response to detecting, based on a first duration, a first time period, at least partially deactivate, by the apparatus, the connection.

55. (New) The apparatus of claim 54, wherein the apparatus is configured such that the second duration is detected by the apparatus after the first duration is changed to the second duration.

56. (New) The apparatus of claim 54, wherein the apparatus is configured such that the first duration is detected by the apparatus during at least a portion of the connection including at least a portion of the connection set up.

57. (New) The apparatus of claim 54, wherein the apparatus is configured such that the first time period and the second time period are a same type of time period.

58. (New) The apparatus of claim 54, wherein the apparatus is configured such that the first time period and the second time period are idle time periods.

59. (New) The apparatus of claim 54, wherein the apparatus is configured such that the first duration is not negotiated between the apparatus and the node during the connection set up, and at least one aspect of the second duration is negotiated during the connection set up between the apparatus and the node for the connection,

60. (New) The apparatus of claim 54, wherein the apparatus is configured such that the first duration is based on previous metadata previously exchanged with the node.

61. (New) The apparatus of claim 54, wherein the apparatus is configured such that the first duration is based on previous metadata previously exchanged with the node during a connection set up between the apparatus and the node for a previous connection.

62. (New) The apparatus of claim 14, wherein the time period includes a second time period that is of a first type of time period and that is detected based on a second duration, where the apparatus is configured to:

in response to detecting, based on a first duration and by the apparatus during at least a portion of the connection including at least a portion of the connection set up, a first time period of the first type of time period, at least partially deactivate, by the apparatus, the connection;

in response to detecting, based on the second duration and by the apparatus after the first duration is changed to the second duration, the second time period of the first type of time period, at least partially deactivate, by the apparatus, the connection; and

in response to detecting, based on a third duration, a third time period of a second type of time period, perform at least one action.

63. (New) The apparatus of claim 62, wherein the apparatus is configured such that the at least one action includes restarting a timer utilized to detect the third time period.

64. (New) The apparatus of claim 62, wherein the apparatus is configured such that the at least one action includes starting a timer utilized to detect another time period of the second type of time period.

65. (New) The apparatus of claim 62, wherein the apparatus is configured such that the at least one action does not include connection deactivation.

66. (New) The apparatus of claim 62, wherein the apparatus is configured such that the at least one action includes sending a signal.

67. (New) The apparatus of claim 62, wherein the third duration is determined based on a first algorithm that is different from a second algorithm on which a determination of the second duration is based.

68. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is detected based on the third duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for a sent packet sent by the apparatus in the connection.

69. (New) The apparatus of claim 68, wherein the apparatus is configured such that the third time period is detected based on the third duration, when an acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for at least one other sent packet sent by the apparatus in the connection.

70. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is detected based on the third duration, by being detected when an expected acknowledgement packet is not received by the apparatus in the connection, during the third duration, for a sent packet sent by the apparatus in the connection.

71. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is detected only in response to an acknowledgement packet not being received, for the third duration, in the connection for a sent packet sent in the connection.

72. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is detected in response to no acknowledgement packet being received in the connection and processed as an acknowledgement for a sent packet sent in the connection.

73. (New) The apparatus of claim 62, wherein the apparatus is configured such that the set up packet also includes data, separate from the first metadata, for use in determining the third time period.

74. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is detected utilizing a timer that is not utilized to detect the first time period nor the second time period.

75. (New) The apparatus of claim 62, wherein the apparatus is configured such that the first duration is not negotiated between the apparatus and the node during the connection set up, at least one aspect of the second duration is negotiated during the connection set up between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is negotiated, via a metadata negotiation, during the connection set up between the apparatus and the node for the connection.

76. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is an acknowledgment timeout period during which an expected acknowledgment for a sent packet is not received.

77. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is an acknowledgement timeout.

78. (New) The apparatus of claim 62, wherein the apparatus is configured such that the second duration is determined using the time period parameter field.

79. (New) The apparatus of claim 62, wherein the apparatus is configured such that the second duration is determined based on the third duration.

80. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third duration is determined based on the second duration.

81. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third time period is detected based on the third duration, by being detected when no acknowledgement packet is detected, by the apparatus during the third duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets sent by the apparatus, where the third duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer and a single timeout variable are utilized for detecting the third time period in connection with the plurality of sent packets.

82. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third duration is determined using an other time period parameter field identifying second metadata, where the other time period parameter field is communicated during the connection setup.

83. (New) The apparatus of claim 62, wherein the apparatus is configured such that the third duration is determined using an other time period parameter field identifying second metadata, where the other time period parameter field is communicated in the connection after the connection setup.

84. (New) The apparatus of claim 62, wherein the apparatus is configured such that the second duration is determined using the time period parameter field identifying the first metadata, and an other time period parameter field identifying second metadata.

85. (New) The apparatus of claim 62, wherein the apparatus is configured such that:

the third time period is detected in response to no acknowledgement packet being received in the connection and processed, during the third duration, to acknowledge a sent packet sent in the connection, where the third duration starts in response to the sent packet being sent;

the first duration is not capable of being negotiated between the apparatus and the node for the connection during the connection set up, at least one aspect of the second duration is capable of being negotiated between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is capable of being negotiated between the apparatus and the node for the connection; and

the third time period is an acknowledgment timeout period.

86. (New) The apparatus of claim 62, wherein the apparatus is configured such that a name of the protocol does not have phrase TCP therein.

87. (New) The apparatus of claim 14, wherein the time period includes a second time period that is of a first type of time period and that is detected based on a second duration, where the apparatus is configured to:

in response to detecting, based on a first duration and by the apparatus during at least a portion of the connection including at least a portion of the connection set up, a first time period of the first type of time period, at least partially deactivate, by the apparatus, the connection;

in response to detecting, based on the second duration and by the apparatus after the first duration is changed to the second duration, the second time period of the first type of time period, at least partially deactivate, by the apparatus, the connection; and

in response to detecting, based on a third duration, a third time period of a second type of time period, perform at least one action, where the third time period is detected based on the third duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an

acknowledgement, during the third duration, for a sent packet sent by the apparatus in the connection;

wherein the apparatus is configured such that: during the second time period of the first type of time period, an empty packet is sent without causing a timer utilized to detect the second time period to be reset;

wherein the apparatus is configured such that:

the protocol is not a TCP-extension;

the first duration is not capable of being negotiated between the apparatus and the node for the connection during the connection set up, at least one aspect of the second duration is capable of being negotiated between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is capable of being negotiated between the apparatus and the node for the connection;

the set up packet is not a synchronize (SYN) packet; and

the first time period and the second time period are started in response to at least one of a received packet or a transmitted packet,

wherein the apparatus is configured such that the connection set up further includes, in addition to (a-1) receiving the set up packet:

(a-2) after receiving the set up packet and without any other communication between the apparatus and the node after (a-1) and before (a-2), sending, from the apparatus to the node, another set up packet, and

(a-3) after sending the another set up packet and without any other communication between the apparatus and the node after (a-2) and before (a-3), receiving, at the apparatus from the node, yet another set up packet.

88. (New) The apparatus of claim 87, wherein the apparatus is configured such that the first time period is only capable of being detected during the connection set up.

89. (New) The apparatus of claim 87, wherein the apparatus is configured such that the second time period is capable of being detected at a time at least one of: during the connection set up, or thereafter during the connection.

90. (New) The apparatus of claim 87, wherein the apparatus is configured such that only one of the first time period or the second time period is detected for the connection.

91. (New) The apparatus of claim 87, wherein the apparatus is configured such that the first duration is used and the second duration is not used, for detecting the first type of time period until being changed to the second duration.

92. (New) The apparatus of claim 87, wherein the apparatus is configured such that the first type of time period includes an idle time period.

93. (New) The apparatus of claim 87, wherein the apparatus is configured to, in response to detecting the first time period of the first type of time period, unilaterally at least partially close the connection.

94. (New) The apparatus of claim 87, wherein the apparatus is configured to, in response to detecting the first time period of the first type of time period, at least partially close the connection, without signaling the node in relation to the detection of the first time period after detecting the first time period.

95. (New) The apparatus of claim 87, wherein the apparatus is configured to, in response to detecting the first time period of the first type of time period, at least partially close the connection, by releasing, by the apparatus, a first resource allocated for the connection.

96. (New) The apparatus of claim 87, wherein the apparatus is configured such that the second duration is capable of being different from the first duration.

97. (New) The apparatus of claim 87, wherein the apparatus is configured such that the second duration is different from the first duration.

98. (New) The apparatus of claim 87, wherein the apparatus is configured such that the second duration is the same as the first duration, despite being capable of being different from the first duration.

99. (New) The apparatus of claim 87, wherein the apparatus is configured such that an idle timeout attribute is utilized for the first type of time period, and another timeout attribute, that is separate from the idle timeout attribute, is utilized for controlling communication of one or more acknowledgment packets.

100. (New) The apparatus of claim 87, wherein the apparatus is configured such that the first type of time period is started in response to the received packet.

101. (New) The apparatus of claim 87, wherein the apparatus is configured such that the first type of time period is started in response to the transmitted packet.

102. (New) The apparatus of claim 87, wherein the apparatus is configured such that, after the first duration is changed to the second duration, the detection of the second time period of the first type of time period is based on the second duration, by being only based on whether, for the second duration after the second time period of the first

type of time period is started, no packet is received and processed to keep the connection active.

103. (New) The apparatus of claim 87, wherein the apparatus is configured such that the connection does not involve the TCP-extension.

104. (New) The apparatus of claim 87, wherein the apparatus is configured such that a name of the protocol does not have TCP therein.

105. (New) The apparatus of claim 87, wherein the apparatus is configured such that the at least one action does not include connection deactivation, and the at least one action includes starting a timer.

106. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third time period is detected based on the third duration, by being detected when an expected acknowledgement packet is not received by the apparatus in the connection, during the third duration, for the sent packet sent by the apparatus in the connection.

107. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third time period is detected only in response to the acknowledgement packet not being received, for the third duration, in the connection for the sent packet sent in the connection.

108. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third time period is detected in response to no acknowledgement packet being received in the connection and processed as an acknowledgement for the sent packet sent in the connection.

109. (New) The apparatus of claim 87, wherein the apparatus is configured such that the set up packet also includes data, separate from the first metadata, for use in determining the third time period.

110. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third time period is detected utilizing a timer that is not utilized to detect the first time period nor the second time period.

111. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third time period is an acknowledgment timeout period during which an expected acknowledgment for the sent packet is not received.

112. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third duration is determined using the time period parameter field identifying the first metadata.

113. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third duration is determined based on the second duration.

114. (New) The apparatus of claim 87, wherein the apparatus is configured such that the second duration is determined based on the third duration.

115. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third time period is detected based on the third duration, by being detected when no acknowledgement packet is detected, by the apparatus during the third duration, as being received and processed as an acknowledgement in the connection to acknowledge one or more sent packets of a plurality of sent packets sent by the apparatus, where the third duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer and a single timeout variable are utilized for detecting the third time period in connection with the plurality of sent packets.

116. (New) The apparatus of claim 87, wherein the apparatus is configured such that the third duration is determined using an other time period parameter field identifying second metadata.

117. (New) The apparatus of claim 116, wherein the apparatus is configured such that the second duration is determined using the time period parameter field identifying the first metadata, and the other time period parameter field identifying the second metadata identifying the second metadata.

118. (New) The apparatus of claim 87, wherein the apparatus is configured such that:

the third time period is detected in response to no acknowledgement packet being received in the connection and processed, during the third duration, to acknowledge a sent packet sent in the connection, where the third duration starts in response to the sent packet being sent; and

the third time period is an acknowledgment timeout period.

119. (New) The apparatus of claim 87, wherein the apparatus is configured such that: after the first duration is changed to the second duration, the detection of the second time period of the first type of time period is based on the second duration, by being based on whether, during the second duration after the second time period is started, no packet is received in the connection and processed to keep the connection active.

120. (New) The apparatus of claim 87, wherein the apparatus is configured such that: during the at least portion of the connection including the at least portion of the connection set up, the detection of the first time period of the first type of time period is based on the first duration, by being based on whether, during the first duration after the first time period is started, no packet is received in the connection and processed to keep the connection active.

121. (New) The apparatus of claim 120, wherein the apparatus is configured such that: after the first duration is changed to the second duration, the detection of the second time period of the first type of time period is based on the second duration, by being based on whether, during the second duration after the second time period is started, no packet is received in the connection and processed to keep the connection active.

122. (New) The apparatus of claim 121, wherein the apparatus is configured such that the third time period is detected based on the third duration, by being detected when no acknowledgement packet is detected, by the apparatus during the third duration, as being received and processed as an acknowledgement in the connection to acknowledge one or more sent packets of a plurality of sent packets sent by the apparatus.

123. (New) The apparatus of claim 122, wherein the apparatus is configured such that the third duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer and a single timeout variable are utilized for detecting the third time period in connection with the plurality of sent packets.

124. (New) The apparatus of claim 122, wherein the apparatus is configured such that the third time period is detected based on the third duration, even when an acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for at least one other sent packet of the plurality of sent packets sent by the apparatus in the connection.

125. (New) The apparatus of claim 122, wherein the apparatus is configured such that at least one packet is received in connection with at least one of the first time period or the second time period, but is not received and processed to keep the connection active, as a result of at least one of:

the at least one packet being un-processable,

the at least one packet being discarded,

the at least one packet being a duplicate, or

the at least one packet not being received in a manner so as to be processed by a software component.

126. (New) The apparatus of claim 122, wherein the apparatus is configured such that at least one packet is received in connection with the third time period, but is not received and processed to acknowledge at least one of the plurality of sent packets with which the third duration is associated, as a result of at least one of:

the at least one packet being un-processable,

the at least one packet being discarded,

the at least one packet being a duplicate, or

the at least one packet not being received in a manner so as to be processed by a software component.

127. (New) The apparatus of claim 14, wherein the apparatus is configured such that the connection set up is for the protocol that is not TCP, instead of TCP, based on code communicated utilizing TCP.

128. (New) The apparatus of claim 127, wherein the apparatus is configured to send the code utilizing TCP.

129. (New) The apparatus of claim 128, wherein the apparatus is configured to send the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP.

130. (New) The apparatus of claim 128, wherein the apparatus is configured to send the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, such that, based on the code, the node is capable of utilizing TCP or the protocol is utilized.

131. (New) The apparatus of claim 128, wherein the apparatus is configured to send the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, such that, based on the code, the node is capable of determining which of the TCP or the protocol is utilized.

132. (New) The apparatus of claim 127, wherein the apparatus is configured to receive the code utilizing TCP.

133. (New) The apparatus of claim 132, wherein the apparatus is configured to receive the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP.

134. (New) The apparatus of claim 132, wherein the apparatus is configured to receive the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to utilize either TCP or the protocol that is not TCP.

135. (New) The apparatus of claim 132, wherein the apparatus is configured to receive the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to determine which of the TCP or the protocol is utilized.

136. (New) The apparatus of claim 132, wherein the apparatus is configured to receive, from the node utilizing TCP, the code.

137. (New) The apparatus of claim 132, wherein the apparatus is configured to receive, from another node utilizing TCP, the code.

138. (New) The apparatus of claim 132, wherein the apparatus is configured to receive, from another node utilizing TCP, the code, the code for permitting communication utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to utilize either TCP or the protocol that is not TCP.

139. (New) The apparatus of claim 132, wherein the apparatus is configured to receive, from another node, the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to determine which of the TCP or the protocol is utilized.

140. (New) The apparatus of claim 132, wherein the apparatus is configured to receive, from another node utilizing TCP, the code, the code for permitting communication utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to automatically utilize either TCP or the protocol that is not TCP.

141. (New) The apparatus of claim 132, wherein the apparatus is configured to receive, from another node, the code utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to automatically determine at least one aspect of the TCP or the protocol.

142. (New) The apparatus of claim 127, wherein the apparatus is configured such that the code is communicated, by only being sent, by the apparatus utilizing TCP.

143. (New) The apparatus of claim 127, wherein the apparatus is configured such that the code is communicated, by only being received, by the apparatus utilizing TCP.

144. (New) The apparatus of claim 123, wherein at least one of:
the at least one action includes at least partial closure of the connection;
the at least one action includes a closure of the connection;
the at least one action does not include a closure of the connection;
the at least one action does not include any part of a closure of the connection;
the apparatus includes a particular node;
the apparatus includes a device, including a network interface, that is a component of the apparatus;
the apparatus includes a network interface that is a component of the apparatus;
the apparatus includes a web server;
the timer includes a hardware timer;
the timer includes a software timer;
the by the apparatus includes caused, at least in part, by the apparatus;
the by the apparatus includes caused by the apparatus;
the by the apparatus includes caused entirely by the apparatus;
the by the apparatus includes performed, at least in part, by the apparatus;
the by the apparatus includes performed entirely by the apparatus;
the at least partial deactivation in response to detecting the first time period is the same as the at least partial deactivation in response to detecting the second time period;
the at least partial deactivation in response to detecting the first time period is different from the at least partial deactivation in response to detecting the second time period;
the empty packet is sent without causing the timer utilized to detect the second time period to be reset, by resetting a first software timer-related component not utilized to detect the second time period, without resetting a second software timer-related component utilized to detect the second time period;
the empty packet is sent without causing the timer utilized to detect the second time period to be reset, by resetting a first software timer-related component not utilized to detect the second time period, without resetting a second software timer-related

component utilized to detect the second time period, where the first software timer-related component and the second software timer-related component utilize a same hardware timer-related component;

the empty packet is sent without causing the timer utilized to detect the second time period to be reset, by resetting a first software timer-related component not utilized to detect the second time period, without resetting a second software timer-related component utilized to detect the second time period, where the first software timer-related component and the second software timer-related component do not utilize a same hardware timer-related component;

the set up packet is an initial non-TCP packet;

the set up packet is first-in-time;

the time period parameter field is part of a data portion in the set up packet;

the time period parameter field is part of a header of the set up packet;

the set up packet is informational;

the setup of the connection includes a period of time starting prior to the set up packet being sent;

the setup of the connection includes a period of time starting prior to the set up packet being sent, when information is identified;

the setup of the connection includes a period of time starting prior to the set up packet being sent, when information is received;

the setup of the connection includes a period of time starting prior to the set up packet being sent, when the set up packet is generated;

the setup of the connection includes a period of time starting prior to the set up packet being sent, when received information is used to generate the set up packet;

the setup of the connection includes a period of time starting with the set up packet being sent;

the set up packet includes a packet that is used for the setup of the connection;

the set up packet includes a packet that is used in association with the setup of the connection;

the set up packet includes a packet that is used in advance of a completion of the setup of the connection;

the set up packet is for use in the protocol, by being capable of being used by the node in accordance with the protocol;
the at least partial deactivation includes only a partial deactivation;
the at least partial deactivation includes a full deactivation;
the at least partial deactivation includes a release of a resource;
the at least partial deactivation includes a partial closure;
the at least partial deactivation includes a closure;
the at least partial deactivation includes a deactivation only for the apparatus;
the at least partial deactivation results in the connection no longer being fully active;
the at least partial deactivation results in the connection no longer being active;
the connection includes one or more features of TCP, and one or more features not of TCP;
the set up packet includes one or more features of a TCP packet, and one or more features not of a TCP packet;
the connection includes one or more features of a TCP connection, and one or more features not of a TCP connection;
the first duration for detecting the first type of time period is based on first information, by the first information specifying the first duration;
the first duration for detecting the first type of time period is based on first information, by information identifying at least one generator for generating the first duration;
only the first duration for detecting the first type of time period is based on first information;
the connection includes (a-1), (a-2), and (a-3);
the second duration of the second time period is different from the duration of the first time period;
the second duration of the second time period is the same as the duration of the first time period;
the third duration of the third time period is different from the duration of the first time period;
the third duration of the third time period is the same as the duration of the first time period;

the third duration of the third time period is different from the duration of the second time period;
the third duration of the third time period is the same as the duration of the second time period;
the set up packet also includes data for use in determining the first time period;
first information includes a first value representative of the first duration of the first time period, and a second value representative of the second duration of the second time period;
first information includes a first value representative of the first duration of the first time period, and identification of a generator for generating a second value representative of the second duration of the second time period;
first information includes identification of a generator for generating a first value representative of the first duration of the first time period, and for generating a second value representative of the second duration of the second time period;
first information includes identification of a first generator for generating a first value representative of the first duration of the first time period, and identification of a second generator for generating a second value representative of the second duration of the second time period;
the first time period is detected in a first use scenario without the second nor third time periods being detected, the second time period is detected in a second use scenario without the first nor third time periods being detected, the third time period is detected in a third use scenario without the first nor second time periods being detected, and neither the first, second, nor third time periods are detected in a fourth use scenario;
the first duration of the first time period is determined based on first information, after identifying the first information;
the first duration of the first time period is determined based on first information, before setting up the connection;
the first duration of the first time period is determined based on first information, during setting up the connection;
the first duration of the first time period is determined based on first information, after setting up the connection;

the first time period is triggered by one or more non-duration-related criteria that triggers the second time period;
the first time period is triggered by the same one or more non-duration-related criteria that triggers the second time period;
the first time period is triggered by different one or more non-duration-related criteria than that which triggers the second time period;
the first time period is that during which no packet is received in the connection nor expected to be received;
the first time period is that during which no packet is received in the connection;
the third time period is triggered by one or more non-duration-related criteria that triggers the second time period;
the third time period is triggered by the same one or more non-duration-related criteria that triggers the second time period;
the third time period is triggered by different one or more non-duration-related criteria than that which triggers the second time period;
the third time period is that during which no packet is received in the connection nor expected to be received;
the third time period is that during which no packet is received in the connection;
the first metadata is based on first information;
the change occurs while detection of the first time period is attempted;
the change occurs via a negotiation;
the second time period is a changed version of the first time period;
the second time period is a changed instance of the first time period;
the change to the second duration includes a change in use of the first duration to a use of the second duration;
the change to the second duration includes a change in use of the first duration to a use of the second duration, in connection with different time periods;
the change to the second duration includes a change from an attempt to detect the first time period to an attempt to detect the second time period;
the change to the second duration includes a change from detecting the first time period to detecting the second time period;

the first time period and the second time period have at least one additional difference, in addition to duration, despite both being of the first type of time period;
the first time period and the second time period do not have at least one additional difference, in addition to duration;
the second time period is determined based on first information;
the first duration of the first time period is negotiated between the apparatus and the node for the connection, during the connection set up;
the connection set up includes all communications that precede completion of the connection set up;
the duration of the second time period is determined based on first information;
the duration of the third time period is determined based on first information;
the first and second time periods are of a same duration;
the first and second time periods are of a different duration;
the first and second time periods are different instances of the same type of time period;
the first and second time periods are of the same type of time period, but are applied at different times during the connection;
the first duration of the first time period is determined by being negotiated;
the second duration of the second time period is determined by being negotiated;
the third duration of the third time period is determined by being negotiated;
the first metadata is also for use in determining the second duration of the second time period;
the first metadata is not for use in determining the second duration of the second time period;
the first metadata is also for use in determining the third duration of the third time period;
the first metadata is not for use in determining the third duration of the third time period;
the first metadata describes a definition of at least one duration;
the first metadata defines at least one duration;
the first metadata includes at least one duration;
the first metadata describes a definition of at least one time period;
the first metadata describes other data that defines at least one duration;

the first metadata describes other data that defines at least one time period;
the first metadata describes other criteria-related data that defines at least one time period;
the first metadata describes duration data that defines at least one time period;
the first metadata describes duration criteria-related data that defines at least one time period;
the at least portion of the connection includes only a subset of setting up the connection;
the at least portion of the connection includes an entirety of setting up the connection;
the at least portion of the connection set up includes one or more packet exchanges that occur after the set up packet is sent;
the at least portion of the connection set up includes one or more packet exchanges that occur after the set up packet is sent prior to completion of the connection set up;
the set up packets are non-TCP;
the set up packets are non-TCP by not being required by any TCP standard specification;
the first time period is detected based on the first duration, by being detected when packet activity or a lack thereof meets one or more criteria for a span of the first duration;
the second time period is detected based on the second duration, by being detected when packet activity or a lack thereof meets one or more criteria for a span of the second duration;
the empty packet includes a ping;
the empty packet includes an empty acknowledgement packet;
the first type of time period includes an idle time period type;
the first and second time periods of the first type of time period differ only in duration;
the first and second time periods of the first type of time period are capable of differing in duration, but may have a same duration;
the first and second time periods of the first type of time period are capable of differing only in duration, but may have a same duration;

the first and second time periods of the first type of time period differ in duration and at least one criteria involving packet activity or a lack thereof over a duration span;
the first and second time periods of the first type of time period are capable of differing in duration and further differ in at least one criteria involving packet activity or a lack thereof over a duration span;
the set up packet includes a portion of data sent at any layer;
the set up packet includes a frame;
the set up packet is a non-TCP frame;
the first time period is started in response to a received packet and the second time period are started in response to a sent packet;
the first time period is started in response to a sent packet and the second time period are started in response to a received packet;
the first time period is started in response to a received packet and the second time period are started in response to a received packet;
the first time period is started in response to a sent packet and the second time period are started in response to a sent packet;
the first time period and the second time period are started in response to different packets;
the first time period and the second time period are started in response to different types of packets;
the third time period is detected based on the third duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for any sent packet sent by the apparatus in the connection;
the third time period is detected based on the third duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration;
the timeout attribute is an attribute associated with a particular timeout;
the timeout attribute is an attribute associated with at least one timeout;
the timeout attribute is an attribute of the time period;
the timeout attribute is an attribute of the second time period;

the timeout attribute includes a duration;
the timeout attribute includes duration information;
the timeout attribute includes a duration indication;
the timeout attribute includes a duration indicator of the second time period; or
the protocol that is not TCP is a non-TCP protocol.

145. (New) The apparatus of claim 14, wherein the apparatus is configured such that the protocol does not require use of a TCP_OPT header.

146. (New) The apparatus of claim 1, wherein the apparatus is configured such that at least one packet is received in connection with the time period, but is not received in the connection and processed to keep the connection active, as a result of the at least one packet being un-processable.

147. (New) The apparatus of claim 1, wherein the apparatus is configured such that at least one packet is received in connection with the time period, but is not received in the connection and processed to keep the connection active, as a result of the at least one packet being discarded, wherein the apparatus is configured such that the at least one packet is a duplicate packet, or a packet not to be processed.

148. (New) The apparatus of claim 1, wherein the apparatus is configured such that at least one packet is received during the time period, but is not received in the connection and processed to keep the connection active, as a result of the at least one packet not being received in a manner so as to be processed by a software component.

149. (New) The apparatus of claim 1, wherein the time period includes a second time period that is of a first type of time period and that is detected based on a second duration, where the apparatus is configured to:

in response to detecting, based on a first duration and by the apparatus during at least a portion of the connection including at least a portion of the connection set up, a

first time period of the first type of time period, at least partially deactivate, by the apparatus, the connection;

in response to detecting, based on the second duration and by the apparatus after the connection set up, the second time period of the first type of time period, at least partially deactivate, by the apparatus, the connection; and

in response to detecting, based on a third duration, a third time period of a second type of time period, perform at least one action, where the third time period is detected based on the third duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for a sent packet sent by the apparatus in the connection;

wherein the apparatus is configured such that: during the second time period of the first type of time period, an empty packet is sent without causing a timer utilized to detect the second time period to be reset;

wherein the apparatus is configured such that:

the protocol is not a TCP-extension;

the first duration is not capable of being negotiated between the apparatus and the node for the connection during the connection set up, at least one aspect of the second duration is capable of being negotiated between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is capable of being negotiated between the apparatus and the node for the connection;

the set up packet is not a synchronize (SYN) packet; and

the first time period and the second time period are started in response to at least one of a received packet or a transmitted packet,

wherein the apparatus is configured such that the connection set up further includes, in addition to (a-1) sending the set up packet:

(a-2) after sending the set up packet and without any other communication between the apparatus and the node after (a-1) and before (a-2), receiving, at the apparatus from the node, another set up packet, and

(a-3) after receiving the another set up packet and without any other communication between the apparatus and the node after (a-2) and before (a-3), sending, from the apparatus to the node, yet another set up packet.

150. (New) A method, comprising:

at an apparatus:

receiving, by the apparatus from a node, a set up packet during a setup of a connection, the set up packet for use in a protocol that is not transmission control protocol (TCP);

identifying first metadata in a time period parameter field in the set up packet, for a time period, where, as a result of a detection of the time period, the connection is at least partially deactivated; and

determining, based on the first metadata, a timeout attribute associated with the connection.

151. (New) The method of claim 150, wherein the time period includes a first time period detected based on a first duration, and further comprising: in response to

detecting, based on a second duration, a second time period, performing at least one action.

152. (New) The method of claim 151, wherein the at least one action includes resetting a timer utilized in detecting a time period of a same type as the second time period.

153. (New) The method of claim 152, wherein the time period of the same type as the second time period, includes the second time period.

154. (New) The method of claim 152, wherein the time period of the same type as the second time period, includes another second time period.

155. (New) The method of claim 151, wherein the first time period and the second time period are of different types.

156. (New) The method of claim 155, wherein the protocol varies from request for comments (RFC) 793 by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a RFC 793 header of a RFC 793 connection packet sent during a RFC 793 connection after the RFC 793 connection is set up.

157. (New) The method of claim 155, wherein the protocol varies from TCP by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a TCP header of a TCP connection packet sent during a TCP connection after the TCP connection is set up.

158. (New) The method of claim 155, wherein the second time period is detected based on the second duration, by being detected when no acknowledgement packet is

received by the apparatus in the connection and processed as an acknowledgement, during the second duration, for a sent packet sent by the apparatus in the connection.

159. (New) The method of claim 158, wherein the second time period is detected based on the second duration, even when an acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the second duration, for at least one other sent packet sent by the apparatus in the connection.

160. (New) The method of claim 155, wherein the second time period is detected based on the second duration, by being detected when an expected acknowledgement packet is not received by the apparatus in the connection, during the second duration, for a sent packet sent by the apparatus in the connection.

161. (New) The method of claim 155, wherein the second time period is detected only in response to an acknowledgement packet not being received, for the second duration, in the connection for a sent packet sent in the connection.

162. (New) The method of claim 155, wherein the second time period is detected in response to no acknowledgement packet being received in the connection and processed as an acknowledgement for a sent packet sent in the connection.

163. (New) The method of claim 155, wherein the set up packet also includes data, separate from the first metadata, for use in determining the second time period.

164. (New) The method of claim 155, wherein the second time period is detected utilizing a timer that is not utilized to detect the first time period.

165. (New) The method of claim 155, wherein at least one aspect of the first and second durations are negotiated during the connection set up between the apparatus and the node for the connection.

166. (New) The method of claim 155, wherein the second time period is an acknowledgment timeout period during which an expected acknowledgment for a sent packet is not received for at least one sent packet.

167. (New) The method of claim 155, wherein the second duration is determined using the time period parameter field identifying the first metadata.

168. (New) The method of claim 155, wherein the second time period is detected based on the second duration, by being detected when no acknowledgement packet is detected, by the apparatus during the second duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets which are associated with the second duration of the second time period and which are sent by the apparatus, where the second duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer is utilized for detecting the second time period in connection with the plurality of sent packets.

169. (New) The method of claim 168, wherein the second time period is detected based on the second duration, even when an acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the second duration, for at least one other sent packet of a plurality of other sent packets sent by the apparatus in the connection.

170. (New) The method of claim 155, wherein the second time period is detected based on the second duration, by being detected when no acknowledgement packet is detected, by the apparatus during the second duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets which are associated with the second duration of the second time period and which are sent by the apparatus, where the second duration starts for

each of the plurality of sent packets when at least one of the plurality of sent packets is sent.

171. (New) The method of claim 155, wherein the second time period is detected based on the second duration, by being detected when no acknowledgement packet is detected, by the apparatus during the second duration, as being received and processed as an acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets which are associated with the second duration of the second time period and which are sent by the apparatus, where the second duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer and a single timeout variable are utilized for detecting the second time period in connection with the plurality of sent packets.

172. (New) The method of claim 155, wherein the second duration is determined using an other time period parameter field identifying second metadata, where the other time period parameter field is communicated in the connection.

173. (New) The method of claim 172, wherein the second duration is determined using the time period parameter field identifying the first metadata, and the other time period parameter field identifying the second metadata.

174. (New) The method of claim 172, wherein the first duration is determined using the time period parameter field identifying the first metadata, and the other time period parameter field identifying the second metadata.

175. (New) The method of claim 155, wherein the second time period is an acknowledgment timeout period.

176. (New) The method of claim 150, wherein the time period includes a second time period detected based on a second duration, and further comprising: in response to

detecting, based on a first duration, a first time period, at least partially deactivating, by the apparatus, the connection.

177. (New) The method of claim 176, wherein the second duration is detected by the apparatus after the first duration is used to at least attempt to detect the first time period.

178. (New) The method of claim 177, wherein the first duration is detected by the apparatus during at least a portion of the connection including at least a portion of the connection set up.

179. (New) The method of claim 178, wherein the first time period and the second time period are a same type of time period.

180. (New) The method of claim 179, wherein the first duration is not negotiated between the apparatus and the node during the connection set up, and at least one aspect of the second duration is negotiated during the connection set up between the apparatus and the node for the connection,

181. (New) The method of claim 180, wherein the first duration is based on previous metadata previously exchanged with the node.

182. (New) The method of claim 180, wherein the first duration is based on previous metadata previously exchanged with the node during a connection set up between the apparatus and the node for a previous connection.

183. (New) The method of claim 180 wherein the protocol does not include a TCP-extension.

184. (New) The method of claim 180 wherein the protocol varies from request for comments (RFC) 793 by including second information in a header of a connection

packet sent during the connection after the connection is set up, where the second information is not included in a RFC 793 header of a RFC 793 connection packet sent during a RFC 793 connection after the RFC 793 connection is set up.

185. (New) The method of claim 180 wherein the protocol varies from TCP by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a TCP header of a TCP connection packet sent during a TCP connection after the TCP connection is set up.

186. (New) The method of claim 180 wherein the set up packet is not a synchronize (SYN) packet.

187. (New) The method of claim 180 wherein the connection is at least partially deactivated, by releasing, by the apparatus, a resource allocated for the connection, without signaling the node in relation to the detection of the time period after detecting the time period.

188. (New) The method of claim 180 wherein the connection is at least partially deactivated unilaterally by the apparatus.

189. (New) The method of claim 180 wherein the at least partial deactivation is in response to the detection without sending any signal after the detection to the node to cause the at least partial deactivation.

190. (New) The method of claim 180 wherein the time period is detected without utilizing an acknowledgement timer that is reset based on a receipt of one or more acknowledgements.

191. (New) The method of claim 180 wherein an end of the time period is detected without utilizing an acknowledgement timer.

192. (New) The method of claim 180 wherein the time period is that during which no packet is received that is unacknowledged.

193. (New) The method of claim 180 wherein the time period is that during which no packet is sent by the apparatus to cause the node to respond.

194. (New) The method of claim 150, wherein the time period includes a second time period that is of a first type of time period and that is detected based on a second duration, and further comprising:

in response to detecting, based on a first duration and by the apparatus during at least a portion of the connection including at least a portion of the connection set up, a first time period of the first type of time period, at least partially deactivating, by the apparatus, the connection;

in response to detecting, based on the second duration and by the apparatus after the first duration is changed to the second duration, the second time period of the first type of time period, at least partially deactivating, by the apparatus, the connection; and

in response to detecting, based on a third duration, a third time period of a second type of time period, performing at least one action.

195. (New) The method of claim 194, wherein the at least one action includes restarting a timer utilized to detect the third time period.

196. (New) The method of claim 194, wherein the at least one action includes starting a timer utilized to detect another time period of the second type of time period.

197. (New) The method of claim 194, wherein the at least one action does not include connection deactivation.

198. (New) The method of claim 197, wherein the at least one action includes sending a signal.

199. (New) The method of claim 198, wherein the third duration is determined based on a first algorithm that is different from a second algorithm on which a determination of the second duration is based.

200. (New) The method of claim 199, wherein the first duration is not negotiated between the apparatus and the node during the connection set up, at least one aspect of the second duration is negotiated during the connection set up between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is negotiated during the connection set up between the apparatus and the node for the connection.

201. (New) The method of claim 200, wherein the third time period is detected based on the third duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for a sent packet sent by the apparatus in the connection.

202. (New) The method of claim 201, wherein the third time period is detected based on the third duration, when an acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for at least one other sent packet sent by the apparatus in the connection.

203. (New) The method of claim 200, wherein the third time period is detected based on the third duration, by being detected when an expected acknowledgement packet is not received by the apparatus in the connection, during the third duration, for a sent packet sent by the apparatus in the connection.

204. (New) The method of claim 200, wherein the third time period is detected only in response to an acknowledgement packet not being received, for the third duration, in the connection for a sent packet sent in the connection.

205. (New) The method of claim 200, wherein the third time period is detected in response to no acknowledgement packet being received in the connection and processed as an acknowledgement for a sent packet sent in the connection.

206. (New) The method of claim 200, wherein the third time period is detected utilizing a timer that is not utilized to detect the first time period nor the second time period.

207. (New) The method of claim 200, wherein the third time period is an acknowledgment timeout period during which an expected acknowledgment for a sent packet is not received.

208. (New) The method of claim 200, wherein the third time period is an acknowledgement timeout.

209. (New) The method of claim 200, wherein the second duration is determined using the time period parameter field.

210. (New) The method of claim 200, wherein the second duration is determined based on the third duration.

211. (New) The method of claim 200, wherein the third duration is determined based on the second duration.

212. (New) The method of claim 200, wherein the third time period is detected based on the third duration, by being detected when no acknowledgement packet is detected, by the apparatus during the third duration, as being received and processed as an

acknowledgement in the connection to acknowledge a sent packet of a plurality of sent packets which are associated with the third duration of the third time period and which are sent by the apparatus, where the third duration starts for each of the plurality of sent packets when at least one of the plurality of sent packets is sent, and where a single timer and a single timeout variable are utilized for detecting the third time period in connection with the plurality of sent packets.

213. (New) The method of claim 194, wherein:

the third time period is detected in response to no acknowledgement packet being received in the connection and processed, during the third duration, to acknowledge a sent packet sent in the connection, where the third duration starts in response to the sent packet being sent;

the first duration is not capable of being negotiated between the apparatus and the node for the connection during the connection set up, at least one aspect of the second duration is capable of being negotiated between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is capable of being negotiated between the apparatus and the node for the connection; and

the third time period is an acknowledgment timeout period.

214. (New) The method of claim 200, wherein the connection set up is for the protocol that is not TCP, instead of TCP, based on code communicated utilizing TCP.

215. (New) The method of claim 214, and further comprising: sending the code utilizing TCP.

216. (New) The method of claim 215, wherein the code is sent is sent utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP.

217. (New) The method of claim 215, wherein the code is sent is sent utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, such that, based on the code, the node is capable of utilizing TCP or the protocol is utilized.

218. (New) The method of claim 215, wherein the code is sent utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, such that, based on the code, the node is capable of determining which of the TCP or the protocol is utilized.

219. (New) The method of claim 214, and further comprising: receiving the code utilizing TCP.

220. (New) The method of claim 219, wherein the code is received utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP.

221. (New) The method of claim 219, wherein the code is received utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to utilize either TCP or the protocol that is not TCP.

222. (New) The method of claim 219, wherein the code is received utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to determine which of the TCP or the protocol is utilized.

223. (New) The method of claim 219, wherein the code is received from the node utilizing TCP.

224. (New) The method of claim 219, wherein the code is received from another node, other than the node, utilizing TCP.

225. (New) The method of claim 219, wherein the code is received from another node utilizing TCP, the code for permitting communication utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to utilize either TCP or the protocol that is not TCP.

226. (New) The method of claim 219, wherein the code is received from another node utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to determine which of the TCP or the protocol is utilized.

227. (New) The method of claim 219, wherein the code is received from another node utilizing TCP, the code for permitting communication utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to automatically utilize either TCP or the protocol that is not TCP.

228. (New) The method of claim 219, wherein the code is received from another node utilizing TCP, the code for communicating utilizing TCP and the protocol that is not TCP, for permitting the apparatus, based on the code, to automatically determine at least one aspect of the TCP or the protocol.

229. (New) The method of claim 150, wherein the time period includes a second time period that is of a first type of time period and that is detected based on a second duration, and further comprising:

in response to detecting, based on a first duration and by the apparatus during at least a portion of the connection including at least a portion of the connection set up, a first time period of the first type of time period, at least partially deactivating, by the apparatus, the connection;

in response to detecting, based on the second duration and by the apparatus after the connection set up, the second time period of the first type of time period, at least partially deactivating, by the apparatus, the connection; and

in response to detecting, based on a third duration, a third time period of a second type of time period, performing at least one action, where the third time period is detected based on the third duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for a sent packet sent by the apparatus in the connection;

wherein:

the protocol is not a TCP-extension;

the first duration is not capable of being negotiated between the apparatus and the node for the connection during the connection set up, at least one aspect of the second duration is capable of being negotiated between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is capable of being negotiated between the apparatus and the node for the connection;

the set up packet is not a synchronize (SYN) packet;

the first type of time period does not include a user timeout period; and

the first time period and the second time period are started in response to at least one of a received packet or a transmitted packet.

230. (New) The method of claim 229, wherein the protocol varies from request for comments (RFC) 793 by including second information in a header of a connection

packet sent during the connection after the connection is set up, where the second information is not included in a RFC 793 header of a RFC 793 connection packet sent during a RFC 793 connection after the RFC 793 connection is set up.

231. (New) The method of claim 229, wherein the protocol varies from TCP by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a TCP header of a TCP connection packet sent during a TCP connection after the TCP connection is set up.

232. (New) The method of claim 212, wherein at least one of:
the at least one action includes at least partial closure of the connection;
the receiving, the identification, and the determination are acts;
the at least one action includes a closure of the connection;
the at least one action does not include a closure of the connection;
the at least one action does not include any part of a closure of the connection;
the apparatus includes a particular node;
the apparatus includes a device, including a network interface, that is a component of the apparatus;
the apparatus includes a network interface that is a component of the apparatus;
the apparatus includes a web server;
the timer includes a hardware timer;
the timer includes a software timer;
the set up packet is an initial non-TCP packet;
the set up packet is first-in-time;
the time period parameter field is part of a data portion in the set up packet;
the time period parameter field is part of a header of the set up packet;
the set up packet is informational;
the connection includes one or more features of TCP, and one or more features not of TCP;

the set up packet includes one or more features of a TCP packet, and one or more features not of a TCP packet;
the connection includes one or more features of a TCP connection, and one or more features not of a TCP connection;
the first duration for detecting the first type of time period is based on the first information, by the first information identifying the first duration;
the first duration for detecting the first type of time period is based on the first information, by the first information specifying the first duration;
the first duration for detecting the first type of time period is based on the first information, by the first information identifying at least one generator for generating the first duration;
only the first duration for detecting the first type of time period is based on the first information;
the second duration of the second time period is different from the duration of the first time period;
the second duration of the second time period is the same as the duration of the first time period;
the third duration of the third time period is different from the duration of the first time period;
the third duration of the third time period is the same as the duration of the first time period;
the third duration of the third time period is different from the duration of the second time period;
the third duration of the third time period is the same as the duration of the second time period;
the set up packet also includes data for use in determining the first time period;
the first information includes a first value representative of the first duration of the first time period, and a second value representative of the second duration of the second time period;

the first information includes a first value representative of the first duration of the first time period, and identification of a generator for generating a second value representative of the second duration of the second time period;
the first information includes identification of a generator for generating a first value representative of the first duration of the first time period, and for generating a second value representative of the second duration of the second time period;
the first information includes identification of a first generator for generating a first value representative of the first duration of the first time period, and identification of a second generator for generating a second value representative of the second duration of the second time period;
the first time period is detected in a first use scenario without the second nor third time periods being detected, the second time period is detected in a second use scenario without the first nor third time periods being detected, the third time period is detected in a third use scenario without the first nor second time periods being detected, and neither the first, second, nor third time periods are detected in a fourth use scenario;
the first duration of the first time period is determined based on the first information, after identifying the first information;
the first duration of the first time period is determined based on the first information, before setting up the connection;
the first duration of the first time period is determined based on the first information, during setting up the connection;
the first duration of the first time period is determined based on the first information, after setting up the connection;
the first time period is triggered by one or more non-duration-related criteria that triggers the second time period;
the first time period is triggered by the same one or more non-duration-related criteria that triggers the second time period;
the first time period is triggered by different one or more non-duration-related criteria than that which triggers the second time period;
the first time period is that during which no packet is received in the connection nor expected to be received;

the first time period is that during which no packet is received in the connection;
the third time period is triggered by one or more non-duration-related criteria that triggers the second time period;
the third time period is triggered by the same one or more non-duration-related criteria that triggers the second time period;
the third time period is triggered by different one or more non-duration-related criteria than that which triggers the second time period;
the third time period is that during which no packet is received in the connection nor expected to be received;
the third time period is that during which no packet is received in the connection;
the first metadata is based on the first information;
the change occurs while detection of the first time period is attempted;
the change occurs via a negotiation;
the second time period is a changed version of the first time period;
the second time period is a changed instance of the first time period;
the first time period and the second time period have at least one additional difference, in addition to duration, despite both being of the first type of time period;
the first time period and the second time period do not have at least one additional difference, in addition to duration;
the second time period is determined based on the first information;
the first duration of the first time period is negotiated between the apparatus and the node for the connection, during the connection set up;
the connection set up includes all communications that precede completion of the connection set up;
the duration of the second time period is determined based on the first information;
the duration of the third time period is determined based on the first information;
the first and second time periods are of a same duration;
the first and second time periods are of a different duration;
the first and second time periods are different instances of the same type of time period;
the first and second time periods are of the same type of time period, but are applied at different times during the connection;

the first duration of the first time period is determined by being negotiated;
the second duration of the second time period is determined by being negotiated;
the third duration of the third time period is determined by being negotiated;
the first metadata is also for use in determining the second duration of the second time period;
the first metadata is not for use in determining the second duration of the second time period;
the first metadata is also for use in determining the third duration of the third time period;
the first metadata is not for use in determining the third duration of the third time period;
the first metadata describes a definition of at least one duration;
the first metadata defines at least one duration;
the first metadata includes at least one duration;
the first metadata describes a definition of at least one time period;
the first metadata describes other data that defines at least one duration;
the first metadata describes other data that defines at least one time period;
the first metadata describes other criteria-related data that defines at least one time period;
the first metadata describes duration data that defines at least one time period;
the first metadata describes duration criteria-related data that defines at least one time period;
the at least portion of the connection includes only a subset of setting up the connection;
the at least portion of the connection includes an entirety of setting up the connection;
the at least portion of the connection set up includes one or more packet exchanges that occur after the set up packet is sent;
the at least portion of the connection set up includes one or more packet exchanges that occur after the set up packet is sent prior to completion of the connection set up;
the set up packets are non-TCP;
the set up packets are non-TCP by not being required by any TCP standard specification;

the first time period is detected based on the first duration, by being detected when packet activity or a lack thereof meets one or more criteria for a span of the first duration;
the second time period is detected based on the second duration, by being detected when packet activity or a lack thereof meets one or more criteria for a span of the second duration;
the first type of time period includes an idle time period type;
the first and second time periods of the first type of time period differ only in duration;
the first and second time periods of the first type of time period are capable of differing in duration, but may have a same duration;
the first and second time periods of the first type of time period are capable of differing only in duration, but may have a same duration;
the first and second time periods of the first type of time period differ in duration and at least one criteria involving packet activity or a lack thereof over a duration span;
the first and second time periods of the first type of time period are capable of differing in duration and further differ in at least one criteria involving packet activity or a lack thereof over a duration span;
the set up packet includes a portion of data sent at any layer;
the set up packet includes a frame;
the set up packet is a non-TCP frame;
the first time period is started in response to a received packet and the second time period are started in response to a sent packet;
the first time period is started in response to a sent packet and the second time period are started in response to a received packet;
the first time period is started in response to a received packet and the second time period are started in response to a received packet;
the first time period is started in response to a sent packet and the second time period are started in response to a sent packet;
the first time period and the second time period are started in response to different packets;

the first time period and the second time period are started in response to different types of packets; or
the protocol that is not TCP is a non-TCP protocol;
the protocol that is not TCP is a TCP a variant.

233. (New) An apparatus comprising:

a non-transitory memory means storing instructions means; and

one or more processor means in communication with the non-transitory memory means, wherein the one or more processor means execute the instructions means to:

receive, by the apparatus from a node, a set up packet during a setup of a connection, the set up packet for use in a protocol that is not transmission control protocol (TCP);

identify first metadata in a time period parameter field in the set up packet, for a time period, where, as a result of a detection of the time period, the connection is at least partial deactivated; and

determine, based on the first metadata, a timeout attribute associated with the connection.

REMARKS

Claims 1-27 are rejected on the ground of non-statutory double patenting as being unpatentable over claims 11-18 & 22 of U.S. Patent No. 8,219,606. Such rejection is deemed avoided by virtue of the terminal disclaimer filed herewith.

It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Still yet, nothing in this reply should be construed as intention to concede any issue with regard to any claim, except as specifically stated in this reply. Finally, it should be noted that no claims, except the last claim, are intended to be construed under 35 U.S.C. 112, paragraph 6.

In the event a telephone conversation would expedite the prosecution of this application, applicant invites the Examiner to telephone the undersigned attorney at the number listed below. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 50-4964 (Order No. PMOR120M).

Respectfully submitted,



Dated: 30 Mar 2021

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17/148,140	01/13/2021	Robert Paul Morris	PMOR0120M	7968

92045 7590 03/29/2021

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EXAMINER	
MEKY, MOUSTAFA M	

ART UNIT	PAPER NUMBER
2457	

NOTIFICATION DATE	DELIVERY MODE
03/29/2021	ELECTRONIC

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

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

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

eofficeaction@appcoll.com
pcaldwell@thecaldwellfirm.com

Office Action Summary	Application No. 17/148,140	Applicant(s) Morris, Robert Paul	
	Examiner Moustafa M Meky	Art Unit 2457	AIA (FITF) 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 01/13/2021.

☐ 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) 1-27 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) 1-27 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 01/13/2021 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: _____.

Notice of Pre-AIA or AIA Status

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

Detailed action

1. Claims 1-27 are presenting for examination.

Obvious Double Patent Rejection

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to

examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq.* for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

3. Claims 1-27 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 11-18 & 22 of U.S. Patent No. 8,219,606. Although the claims at issue are not identical, they are not patentably distinct from each other because the patent 606 teaches substantially the claimed limitations.

3.1. Claims 1-27 would be allowed upon receiving the terminal disclaimer.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Moustafa M Meky whose telephone number is (571)272-4005. The examiner can normally be reached on Monday-Friday 9AM-5PM.

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, Ario Etienne can be reached on 571-272-4001. 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 https://ppair-my.uspto.gov/pair/PrivatePair. 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.

MOUSTAFA M. MEKY
Primary Patent Examiner
Art Unit 2457

/MOUSTAFA M MEKY/
Primary Examiner, Art Unit 2457

03/24/2021

Notice of References Cited	Application/Control No. 17/148,140	Applicant(s)/Patent Under Reexamination Morris, Robert Paul	
	Examiner Moustafa M Meky	Art Unit 2457	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-9503970-B2	11-2016	Horn; Gavin Bernard	H04W48/17	1/1
*	B	US-7620808-B2	11-2009	Le; Franck	H04L63/1458	370/237
*	C	US-7023855-B2	04-2006	Haumont; Serge	H04W76/10	370/395.1
*	D	US-5987526-A	11-1999	Morales; Luis E.	H04Q11/0478	370/401
*	E	US-20110235546-A1	09-2011	Horn; Gavin Bernard	H04W48/17	370/254
*	F	US-20100069127-A1	03-2010	Fiennes; Hugo	H04W52/0264	455/574
*	G	US-20020097709-A1	07-2002	Haumont, Serge	H04W76/10	370/352
*	H	US-8219606-B2	07-2012	Morris; Robert Paul	H04L69/16	709/201
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/148,140	Morris, Robert Paul
	Examiner	Art Unit
	Moustafa M Meky	2457

CPC - Searched*		
Symbol	Date	Examiner
H04L 69/16	03/24/2021	MMM

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
709	201	03/24/2021	MMM

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
WEST (ALL FILES) ATTACH	03/24/2021	MMM
GOOGLE PATENTS ATTACH	03/24/2021	MMM
GOOGLE NPL ATTACH	03/24/2021	MMM

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

Patents | connection and deactivate and packet and setup and metadata

About 136,122 results

Download with Concepts Side-l

Sort by · Relevance · Group by · None · Deduplicate by · Family · Results / page · 10

Multi-services application gateway and system employing the same



WO US · US8543653B2 · Amir Ansari · Prodea Systems, Inc.

Priority 2006-12-29 · Filed 2007-12-31 · Granted 2013-09-24 · Published 2013-09-24

An intelligent gateway device provided at a premises (home or business) for providing and managing application services associated with use and support of a plurality of digital endpoint devices associated with the premises. The device implements includes a communications and processing ...

Method for distributing content to a user station



WO US · US7668782B2 · Richard R. Reisman · Reisman Richard R

Priority 1994-05-31 · Filed 2007-06-08 · Granted 2010-01-26 · Published 2010-01-26

A method for controlling a user station configured for communications with a multiplicity of independently-operated data sources via a non-proprietary network includes steps for providing a user interface to enable a user at the user station to select multiple ones of the multiplicity of ...

Method and system for dynamic application management



WO US · US20150227288A1 · Yogesh Chunilal Pathod · Yogesh Chunilal Pathod

Priority 2005-07-22 · Filed 2015-01-23 · Published 2015-08-13

A system for transmission, reception and accumulation of the knowledge packets to plurality of channel nodes in the network operating distributedly in a peer to peer environment via installable one or more role active Human Operating System (HOS) applications in a digital devise of each of channel ...

The design and implementation of open vswitch

Google Scholar · www.usenix.org · Pfaff B · 12th {USENIX} Symposium on Networked Systems Design and Implementation ({NSDI} 15)

Published 2015

... initial datapath was a microflow cache, essentially caching per transport **connection** forwarding decisions ... ization controller [19] uses registers to keep track of a **packet's** progress through ... this functionality is controlled through a separate com- ponent, the **configuration** database ...

Seamlessly switching among unicast, multicast, and broadcast mobile media ...



WO EP US CA · US10034066B2 · Ravi Maharajh · Quickplay Media Inc.

Priority 2006-12-13 · Filed 2014-11-25 · Granted 2018-07-24 · Published 2018-07-24

In embodiments, the present invention provides a method and system for switching between broadcast and unicast content on a mobile device. The method and system involves making unicast content available to the mobile device, making broadcast content available to the mobile device, and providing an ...

Screen interface for a mobile device apparatus



US · US10809844B1 · George Andrew Gordon · Majen Tech Llc

Priority 2013-01-10 · Filed 2020-01-13 · Granted 2020-10-13 · Published 2020-10-13

A system, method, and computer program product are provided to: display, utilizing a display, a plurality of triggers including: a time, a location, an application, a network connectivity, a connectivity with at least one other device, and a vocal input; detect, utilizing a touch surface, a touch ...

Adaptive private network (APN) bandwith enhancements



US · US10447543B2 · Sonia Kilroy Prower · Talari Networks Incorporated

Priority 2009-06-11 · Filed 2017-01-18 · Granted 2019-10-15 · Published 2019-10-15

Techniques are described to automatically activate and deactivate standby backup paths in response to changing bandwidth requirements in an adaptive private network (APN). The APN is configured with one or more regular active wide area network (WAN) links in an active mode and an on-demand WAN ...

Development and build environment for packaged software delivery



US · US7458073B1 · Glen Darling · Cisco Technology, Inc.

Priority 2003-12-02 · Filed 2003-12-03 · Granted 2008-11-25 · Published 2008-11-25

A development and build environment creates information used by the master node and nodes in a network of nodes to perform software loading and evaluation during boot and normal runtime. The invention creates metadata and dependency data for packages and modules. Module metadata are created and ...

Protected device manages

WO [illegible] US [illegible] AU [illegible] · CN102884535B · N.M. [illegible] · [illegible]

Priority 2009-12-21 · Filed 2010-11-29 · Granted 2016-08-24 · Published 2016-08-24

Carry out, by encryption, user authentication and cryptoguard and audit program, the storage method of device, equipment, system and the computer program protected for managing in virtualization and non-virtualized environment.

For automatically submitting device, the system and method for storer to

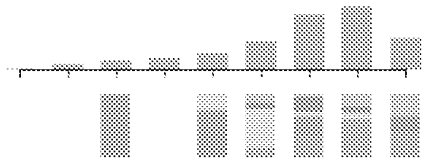
WO EP US CN · CN103226505A · 大正 齐头 · 英特尔公司

Priority 2010-12-13 · Filed 2011-12-13 · Granted 2015-11-25 · Published 2015-11-25

The invention provides one and automatically submit storer to, described automatic submission storer can implement the pre-configured submission action that is triggered to respond fault condition, such as power losses, invalid shutdown, fault etc.Computing equipment can use memory access ...

Next > >> About 136,122 results

Top 1000 results by filing date



Relative count of top 5 values

Assignees	Inventors	CPCs
엘지전자 주식회사		4.4%
Qualcomm Incorporated		1.7%
高通股份有限公司		1.7%
Lg Electronics Inc.		1.6%
Apple Inc.		1.6%

Expand

Google connection and deactivate and packet and setup and metadata

All Videos News Images Shopping More Settings Tools

About 3,720,000 results (0.70 seconds)

https://help.salesforce.com › apex › HTViewSolution

Disable a Trigger in a production environment - Salesforce Help

Note: Consider the consequences of disabling a trigger in the production ... Also, disable access to the application to non-administrators during the maintenance period. ... Create a package.xml file to retrieve the metadata of the trigger.

https://developer.salesforce.com › meta_securitysettings

SecuritySettings | Metadata API Developer Guide | Salesforce ...

For example, settings define trusted IP ranges for network access, password and login ... In the package manifest, all organization settings metadata types are ... To disable the field (not recommended), contact Salesforce Customer Support.

https://www.forcetalks.com › salesforce-topic › how-to-...

Salesforce | How to deactivate flow through WorkBench ...

you can refer below given Link : ... You can use Workbench feature and then deactivate flow through metadata when a process is installed using a managed package and that process references a custom object that isn't in the target org. ... Custom Objects, Detailed Page, Manual Sharing, Multiple Users, Public Read-Only.

https://salesforce.stackexchange.com › questions › activ...

Activate/Deactivate Apex Trigger using custom object ...

Apr 1, 2013 -- Further more (optionally) if your creating a managed package, a protected ... There's no need to link it to the trigger Id, just link it to the custom object. ... Trigger Architecture via configuration (using Custom Meta Data Types).
4 answers · 5 votes: Querying for Apex Triggers. In answer to your question you can execute the...

I want to **Deactivate** the Apex Trigger using Apex - Salesforce ... Dec 17, 2019
Deactivate process builder while uninstalling the managed ... Jan 14, 2019
Deactivating classes and triggers - Salesforce Stack Exchange Apr 15, 2017
How to **Activate** and **deactivate** a flow using **metadataService** ... Apr 9, 2018
More results from salesforce.stackexchange.com

http://support.elements.cloud › articles › 2267662-conn...

Connecting and syncing Salesforce Orgs | Support for ...

Org Model setup; Connecting Salesforce Orgs to Elements; Syncing Orgs with Elements; ... Installation and administration guide for the Catalyst managed package ... your Salesforce Org to Elements and initiate the sync of your metadata. ... Change the time of the daily scheduled sync or disable it altogether; Change if the ...

https://docs.microsoft.com › ... › Mobile broadband

Understanding and configuring Windows Connection ...

May 3, 2019 — Windows responds to Ethernet connections but does not ... Any manual connection or disconnection will update the network list ... The preference between networks in the provisioning metadata is determined by the following..
Missing: packet | Must include: packet

http://www.illuminatedcloud.com › support › faq

FAQ - Illuminated Cloud

Compile and Run, Select configuration and run (Apex unit tests), Alt + Shift + F10, Ctrl + ... Go to Visualforce page/component or metadata file, Ctrl + Shift + N, Cmd + Shift + O ... How are those related to connections, offline symbol tables, and SDKs? ... Activation to activate and re-activate your Illuminated Cloud license key.

https://helpx.adobe.com › help › forms-manager › addi...

Adding or modifying metadata - Adobe Help Center

Apr 26, 2017 — Types of **metadata** properties for a form. Some meta properties in the forms get added to the XMP **packet** in the template and are retained when ...

https://www.jfrog.com › confluence › display › Reposit...

Repository Management - JFrog - JFrog Documentation

7 days ago — You can also use the Quick **Setup**, which enables you to create repositories for your ... system will index artifacts and calculate the corresponding **metadata** for every **package** ... Disable the download access to the global 'repo'.

https://cloud.google.com › ... › Documentation

Migrating to v1 metadata server endpoint - Google Cloud

Jan 27, 2021 — (Optional) Disable the v0.1 and v1beta1 **metadata** server endpoints. ... To collect **packet** information for processes that make requests to the ...

Related searches

how to deactivate **trigger in salesforce production**	**salesforce disable trigger custom settings**
sharing settings metadata	**salesforce disable all triggers**
settings metadata **salesforce**	**retrieve the trigger** metadata **using workbench.**
email-to-case settings metadata	**enablesetpasswordinapi**

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WEST Search History for Application 17148140

Creation Date: 2021032417:03

Prior Art Searches

Query	DB	Hits	Op.	Plur.	Thes.	Date
((set$4 adj up) or establish$4 or initiat$4 or open$4 or creat$4) near2 (connection or communication or link or session)	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD, FPRS	1994220	ADJ	YES		03-24-2021
connection near3 deactivat$4	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD, FPRS	5825	ADJ	YES		03-24-2021
(connection near3 deactivat$4) with (((set$4 adj up) or establish$4 or initiat$4 or open$4 or creat$4) near2 (connection or communication or link or session))	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD, FPRS	520	ADJ	YES		03-24-2021
(connection near3 deactivat$4 with ((set$4 adj up) or establish$4 or initiat$4 or open$4 or creat$4) near2 (connection or communication or link or session)) with packet	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD, FPRS	25	ADJ	YES		03-24-2021
(connection near3 deactivat$4 with ((set$4 adj up) or establish$4 or initiat$4 or open$4 or creat$4) near2 (connection or communication or link or session) with packet) same (metadata or time or period or timeout)	PGPB, USPT, USOC, EPAB, JPAB, DWPI,	9	ADJ	YES		03-24-2021

	TDBD, FPRS					
(connection near3 deactivat$4 with ((set$4 adj up) or establish$4 or initiat$4 or open$4 or creat$4) near2 (connection or communication or link or session) with packet) not (connection near3 deactivat$4 with ((set$4 adj up) or establish$4 or initiat$4 or open$4 or creat$4) near2 (connection or communication or link or session) with packet same (metadata or time or period or timeout))	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD, FPRS	16	ADJ	YES		03-24-2021

Bibliographic Data

Application No: 17/148,140

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /MOUSTAFA M MEKY/ Examiner's Signature | Initials

Title: METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
01/13/2021	709	2457	PMOR0120M
RULE			

APPLICANTS

JENAM TECH, LLC, Longview, TX,

INVENTORS

Robert Paul Morris, Madison, GA, UNITED STATES

CONTINUING DATA

This application is a CON of 16914267 06/26/2020

16914267 is a CON of 16368811 03/28/2019 PAT 10742774

16368811 is a CON of 16040522 07/19/2018 PAT 10375215

16040522 is a CON of 15915047 03/07/2018 PAT 10075564

15915047 is a CON of 15694802 09/03/2017 PAT 9923995

15694802 is a CIP of 14667642 03/24/2015ABN

14667642 is a CIP of 13477402 05/22/2012ABN

13477402 is a CON of 12714454 02/27/2010 PAT 8219606

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

01/25/2021

STATE OR COUNTRY

UNITED STATES

ADDRESS

The Caldwell Firm, LLC

PO Box 59655

Dept. SVIPGP

Dallas, TX 75229

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Courtesy Reminder for
Application Serial No: 17/148,140

Attorney Docket No: PMOR0120M
Customer Number: 92045
Date of Electronic Notification: 02/11/2021

This is a courtesy reminder that new correspondence is available for this application. If you have not done so already, please review the correspondence. The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/148,140	01/13/2021	Robert Paul Morris	PMOR0120M	7968

92045 7590 02/10/2021

The Caldwell Firm, LLC
PO Box 59655
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EXAMINER	

ART UNIT	PAPER NUMBER
2457	

NOTIFICATION DATE	DELIVERY MODE
02/10/2021	ELECTRONIC

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

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

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

eofficeaction@appcoll.com
pcaldwell@thecaldwellfirm.com

Decision Granting Request for Prioritized Examination (Track I)	**Application No.** 17/148,140	**Applicant(s)** Morris, Robert Paul	
	Examiner CHERYL P GIBSON BAYLOR	**Art Unit** OPET	**AIA (FITF) Status** No

1. THE REQUEST FILED 13 January 2021 IS **GRANTED** .

The above-identified application has met the requirements for prioritized examination

A. ☑ for an original nonprovisional application (Track I).
B. ☐ for an application undergoing continued examination (RCE).

2. **The above-identified application will undergo prioritized examination**. The application will be accorded special status throughout its entire course of prosecution until one of the following occurs:

A. filing a **petition for extension of time** to extend the time period for filing a reply;

B. filing an **amendment to amend the application to contain more than four independent claims, more than thirty total claims** , or a multiple dependent claim;

C. filing a **request for continued examination** ;

D. filing a notice of appeal;

E. filing a request for suspension of action;

F. mailing of a notice of allowance;

G. mailing of a final Office action;

H. completion of examination as defined in 37 CFR 41.102; or

I. abandonment of the application.

Telephone inquiries with regard to this decision should be directed to CHERYL GIBSON BAYLOR at (571)272-3213. In his/her absence, calls may be directed to Petition Help Desk at (571) 272-3282.

/CHERYL GIBSON BAYLOR/ Paralegal Specialist, OPET	

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
17/148,140	01/13/2021	2414	2520	PMOR0120M	27	2

CONFIRMATION NO. 7968

92045
The Caldwell Firm, LLC
PO Box 59655
Dept. SVIPGP
Dallas, TX 75229

FILING RECEIPT

OC000000122905894

Date Mailed: 01/27/2021

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Robert Paul Morris, Madison, GA;

Applicant(s)

JENAM TECH, LLC, Longview, TX;

Power of Attorney: The patent practitioners associated with Customer Number 92045

Domestic Priority data as claimed by applicant

This application is a CON of 16/914,267 06/26/2020
which is a CON of 16/368,811 03/28/2019 PAT 10742774
which is a CON of 16/040,522 07/19/2018 PAT 10375215
which is a CON of 15/915,047 03/07/2018 PAT 10075564
which is a CON of 15/694,802 09/03/2017 PAT 9923995
which is a CIP of 14/667,642 03/24/2015 ABN
which is a CIP of 13/477,402 05/22/2012 ABN
which is a CON of 12/714,454 02/27/2010 PAT 8219606

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 01/25/2021
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/148,140**
Projected Publication Date: Request for Non-Publication Acknowledged
Non-Publication Request: Yes
Early Publication Request: No
Title

METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD

Preliminary Class

370

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative,

this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 17/148,140

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	320
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	700
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	800
TOTAL CLAIMS (37 CFR 1.16(i))	27 minus 20 =	* 7			OR	x 100 =	700
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2 minus 3 =	*				x 480 =	0.00
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	2520

APPLICATION AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

Doc Code: TRACK1.REQ
Document Description: TrackOne Request

PTO/AIA/424 (04-14)

CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION UNDER 37 CFR 1.102(e) (Page 1 of 1)

First Named Inventor:	Robert Paul Morris	Nonprovisional Application Number (if known):	
Title of Invention:	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD		

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.

1. The processing fee set forth in 37 CFR 1.17(i)(1) and the prioritized examination fee set forth in 37 CFR 1.17(c) have been filed with the request. The publication fee requirement is met because that fee, set forth in 37 CFR 1.18(d), is currently $0. The basic filing fee, search fee, and examination fee are filed with the request or have been already been paid. I understand that any required excess claims fees or application size fee must be paid for the application.

2. I understand that the application may not contain, or be amended to contain, more than four independent claims, more than thirty total claims, or any multiple dependent claims, and that any request for an extension of time will cause an outstanding Track I request to be dismissed.

3. The applicable box is checked below:

I. ☑ Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)

i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via EFS-Web.

---OR---

(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.

ii. An executed inventor's oath or declaration under 37 CFR 1.63 or 37 CFR 1.64 for each inventor, **or** the application data sheet meeting the conditions specified in 37 CFR 1.53(f)(3)(i) is filed with the application.

II. ☐ Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)

i. A request for continued examination has been filed with, or prior to, this form.
ii. If the application is a utility application, this certification and request is being filed via EFS-Web.
iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature /Patrick Caldwell/	Date 1/13/2021
Name (Print/Typed) Patrick Caldwell	Practitioner Registration Number 44580

Note: *This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.**

☐ *Total of _____ forms are submitted.

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.

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD
First Named Inventor/Applicant Name:	Robert Paul Morris
Filer:	Patrick Edgar Caldwell
Attorney Docket Number:	PMOR0120M

Filed as Large Entity

Filing Fees for Track I Prioritized Examination - Nonprovisional Application under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	320	320
UTILITY SEARCH FEE	1111	1	700	700
UTILITY EXAMINATION FEE	1311	1	800	800
REQUEST FOR PRIORITIZED EXAMINATION	1817	1	4200	4200
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	1202	7	100	700
Miscellaneous-Filing:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
PROCESSING FEE, EXCEPT PROV. APPLS.	1830	1	140	140
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**6860**

Electronic Acknowledgement Receipt	
EFS ID:	41636997
Application Number:	17148140
International Application Number:	
Confirmation Number:	7968
Title of Invention:	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD
First Named Inventor/Applicant Name:	Robert Paul Morris
Customer Number:	92045
Filer:	Patrick Edgar Caldwell
Filer Authorized By:	
Attorney Docket Number:	PMOR0120M
Receipt Date:	13-JAN-2021
Filing Date:	
Time Stamp:	16:36:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$6860
RAM confirmation Number	E20211CG37169149
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	PMOR0120M_POA_JenamTech_vF.pdf	163219 cfcf7c375c3077909b6bd840eb26820aa375c9e5	no	1
Warnings:					
Information:					
2	Oath or Declaration filed	PMOR0120M_PMOR0120_Declaration_SIGNED_vF.PDF	150646 b478bda089f47336522 4cf9162bff589800b21a1	no	2
Warnings:					
Information:					
3	Drawings-only black and white line drawings	PMOR0120M_PMOR0120_Drawings_vF.pdf	97990 02433b955f97655d0d6a61a5069f40fb812be22f	no	8
Warnings:					
Information:					
4	Application Data Sheet	PMOR0120M_ADS_vF_13-Jan-2021.pdf	1874139 1229aba9379b5c21195934d47d4d19bea7720e88	no	9
Warnings:					
Information:					
5		PMOR0120M_Application_vF_13-Jan-2021.pdf	193256 c5b259c15aabf4adfbcae5f1dd0caa2280502538	yes	55

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Specification	1	47
	Claims	48	54
	Abstract	55	55

Warnings:					
Information:					
6	TrackOne Request	PMOR0120M_TRK1_vF_13-Jan-2021.pdf	149382 55aa03f6937b7ef92f3da8737458ba33341152f9	no	2
Warnings:					
Information:					
7	Fee Worksheet (SB06)	fee-info.pdf	41682 0c49c579ca43067cd5f65e14a1443733845b8bbf	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	2670314	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82B (07-13)
Approved for use through 11/30/2014. OMB 0651-0051
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date
16/040,522	2018-07-19

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 92045

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☑ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Jenam Tech, LLC

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	/Andrew Gordon/	Date (Optional)	
Name	Andrew Gordon		
Title	Manager, Jenam Tech, LLC		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Total of forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/AIA/01 (06-12)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING AN IDLE TCP CONNECTION

As the below named inventor, I hereby declare that:

This declaration is directed to:

- [x] The attached application, or
- [ ] United States application or PCT international application number _____

filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Robert Paul Morris Date (Optional) :_____

Signature: /Robert Paul Morrs/

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1.11 and 1.14. This collection is estimated to take 1 minute 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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.

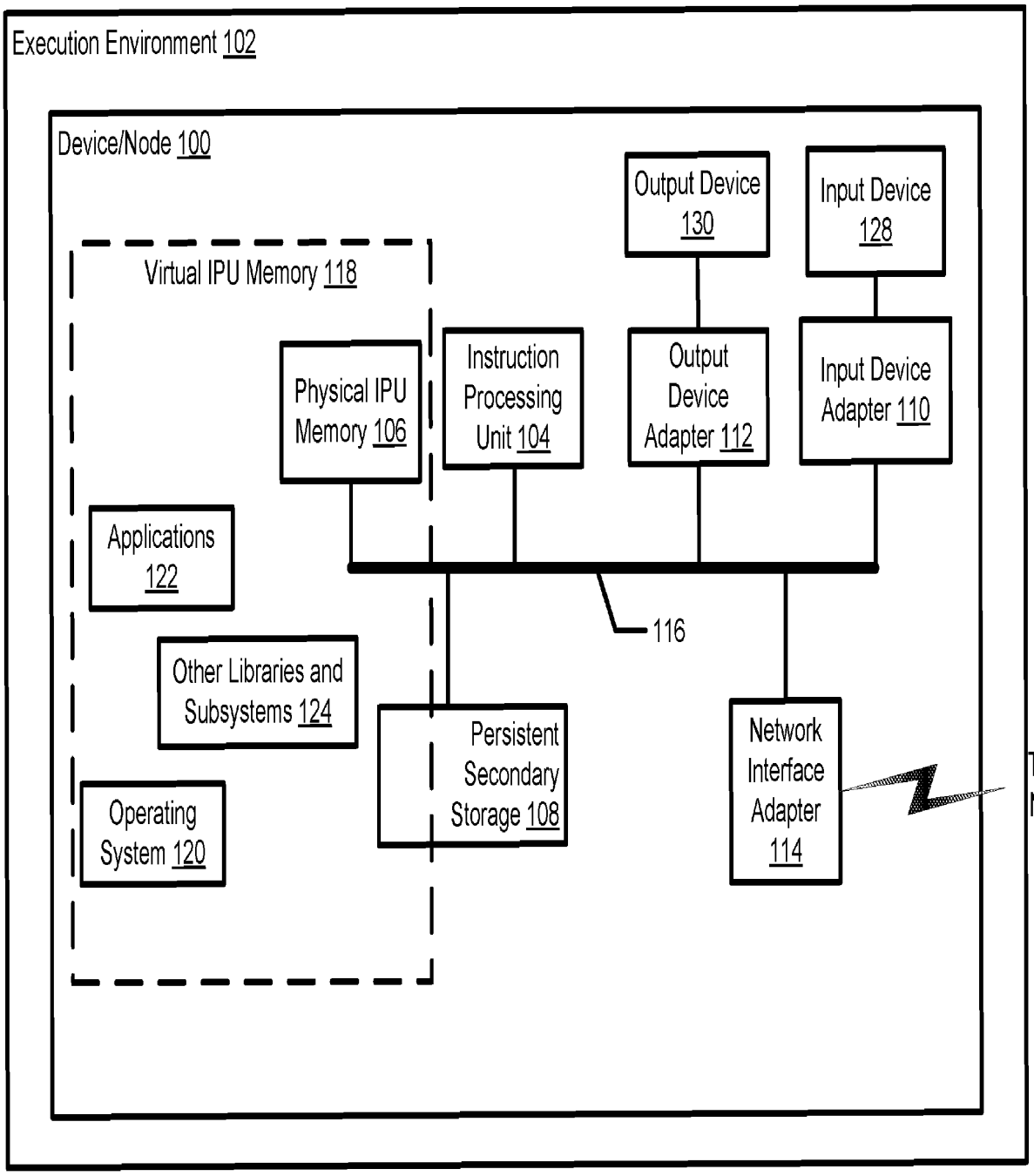

Execution Environment 102
Device/Node 100
Output Device 130
Input Device 128
Virtual IPU Memory 118
Physical IPU Memory 106
Instruction Processing Unit 104
Output Device Adapter 112
Input Device Adapter 110
Applications 122
116
Other Libraries and Subsystems 124
Persistent Secondary Storage 108
Network Interface Adapter 114
To/From Network
Operating System 120

Fig. 1

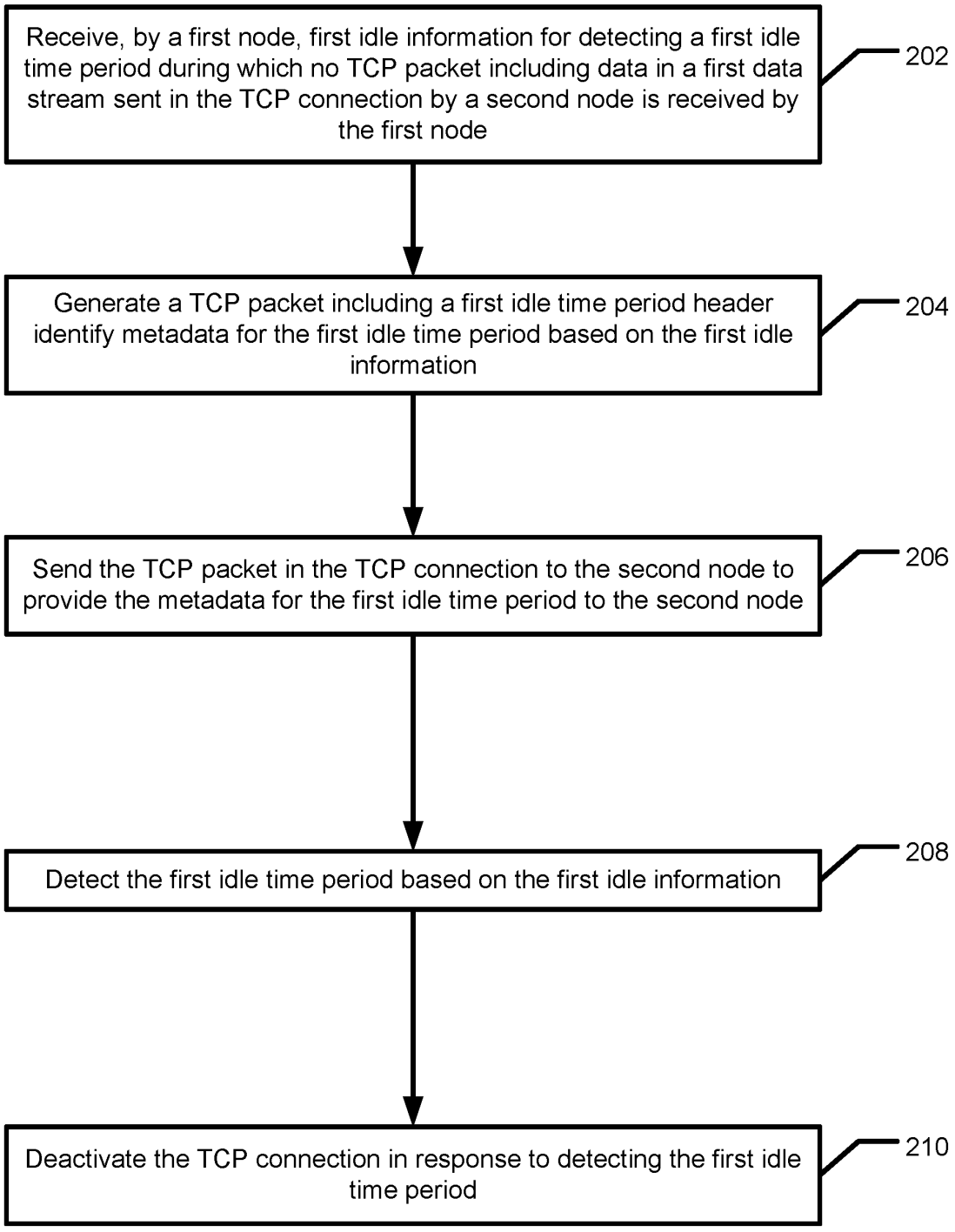

Receive, by a first node, first idle information for detecting a first idle time period during which no TCP packet including data in a first data stream sent in the TCP connection by a second node is received by the first node
202
Generate a TCP packet including a first idle time period header identify metadata for the first idle time period based on the first idle information
204
Send the TCP packet in the TCP connection to the second node to provide the metadata for the first idle time period to the second node
206
Detect the first idle time period based on the first idle information
208
Deactivate the TCP connection in response to detecting the first idle time period
210

Fig. 2

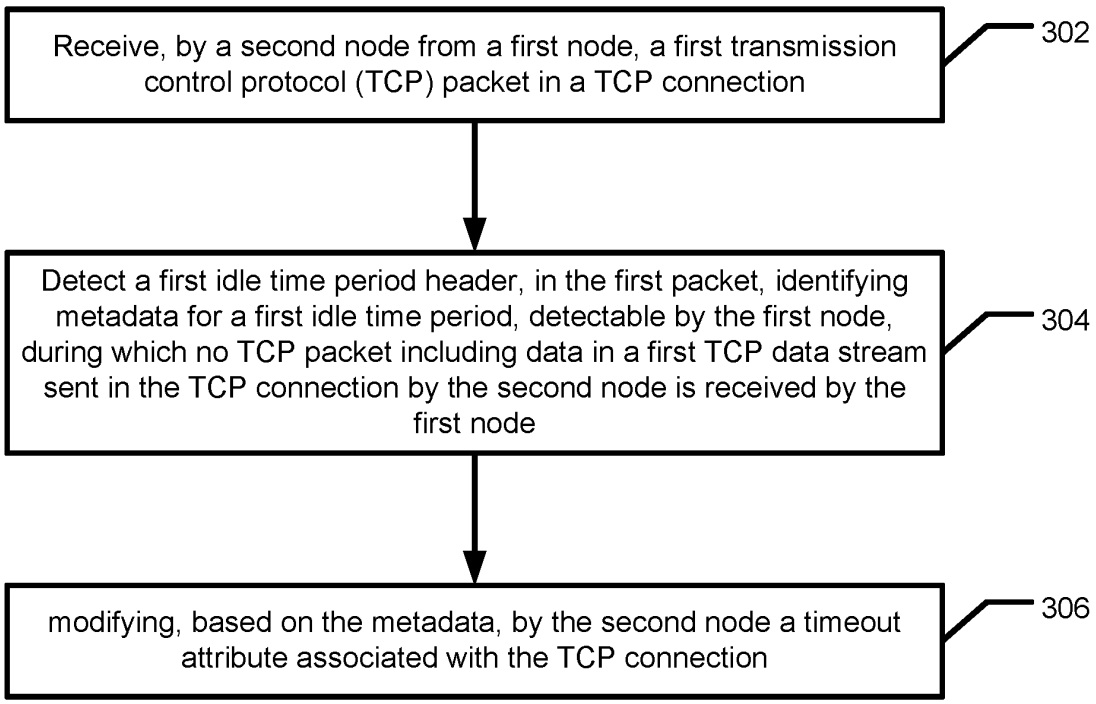

Receive, by a second node from a first node, a first transmission control protocol (TCP) packet in a TCP connection
302
Detect a first idle time period header, in the first packet, identifying metadata for a first idle time period, detectable by the first node, during which no TCP packet including data in a first TCP data stream sent in the TCP connection by the second node is received by the first node
304
modifying, based on the metadata, by the second node a timeout attribute associated with the TCP connection
306

Fig. 3

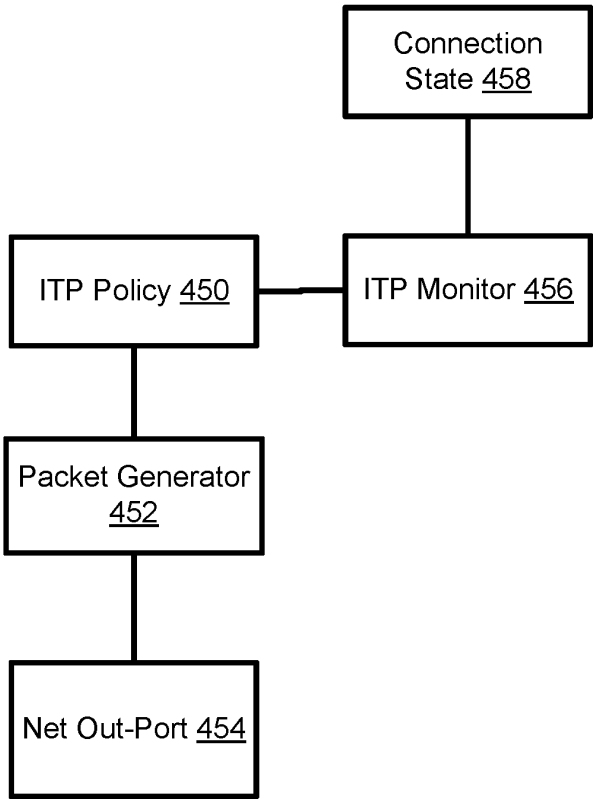

Connection State 458
ITP Policy 450
ITP Monitor 456
Packet Generator 452
Net Out-Port 454

Fig. 4a

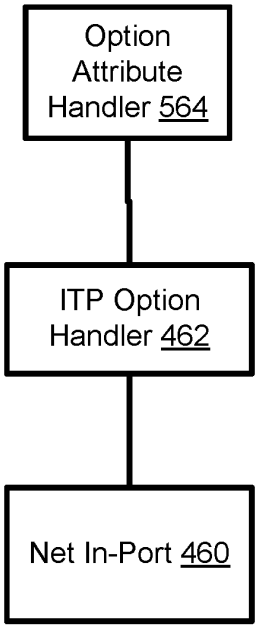

Option Attribute Handler 564
ITP Option Handler 462
Net In-Port 460

Fig. 4b

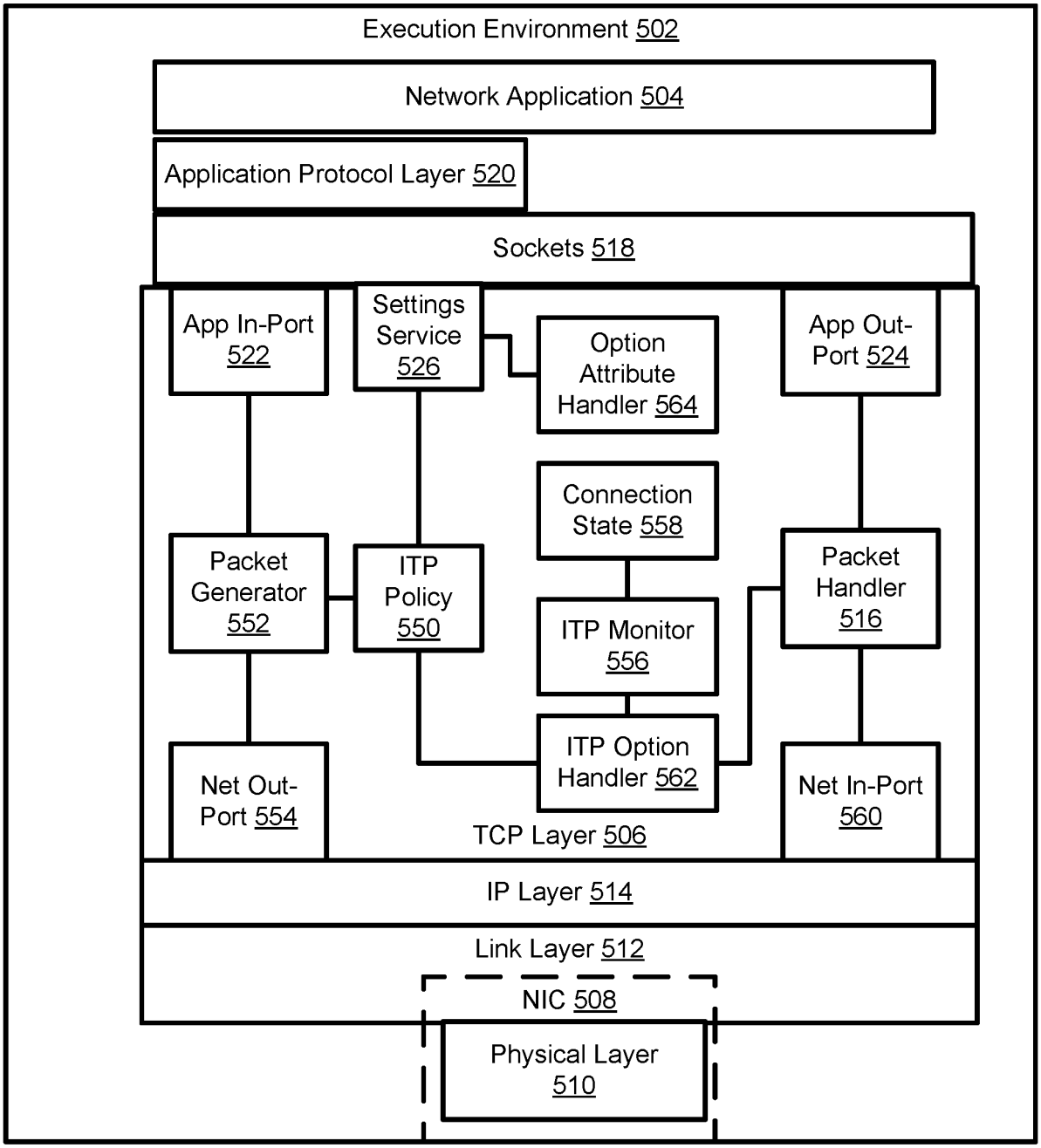

Execution Environment 502
Network Application 504
Application Protocol Layer 520
Sockets 518
App In-Port 522
Settings Service 526
Option Attribute Handler 564
App Out-Port 524
Connection State 558
Packet Generator 552
ITP Policy 550
ITP Monitor 556
Packet Handler 516
ITP Option Handler 562
Net Out-Port 554
Net In-Port 560
TCP Layer 506
IP Layer 514
Link Layer 512
NIC 508
Physical Layer 510

Fig. 5

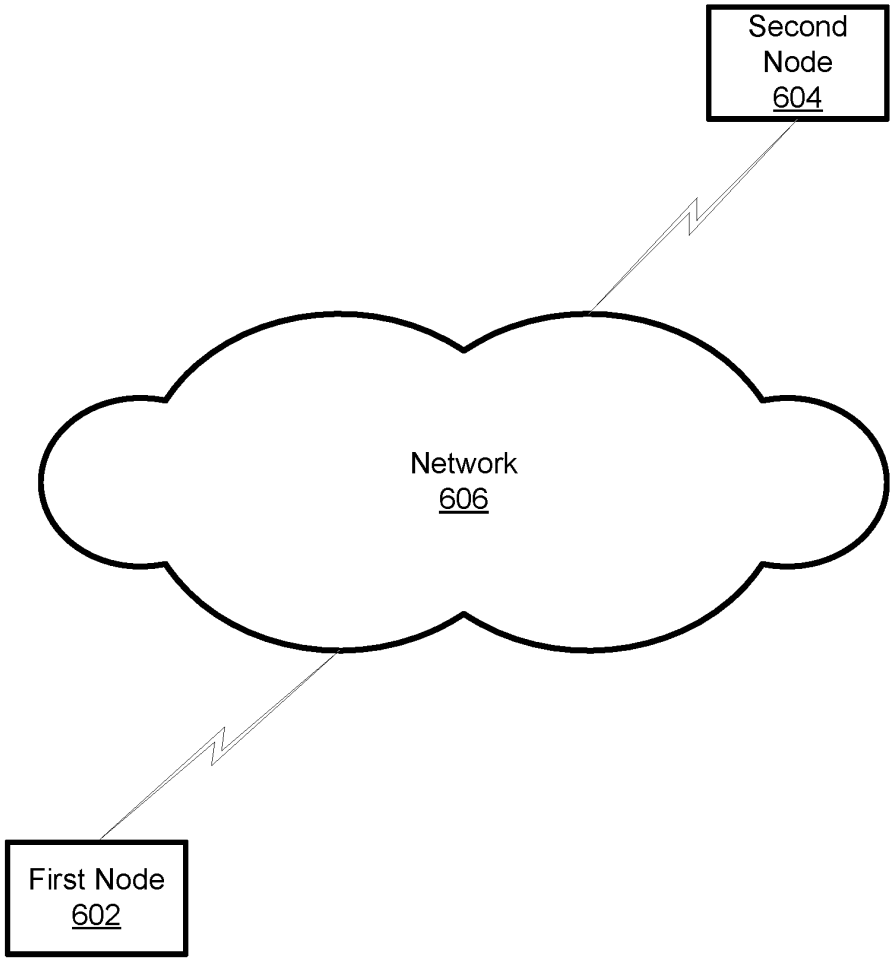


Fig. 6

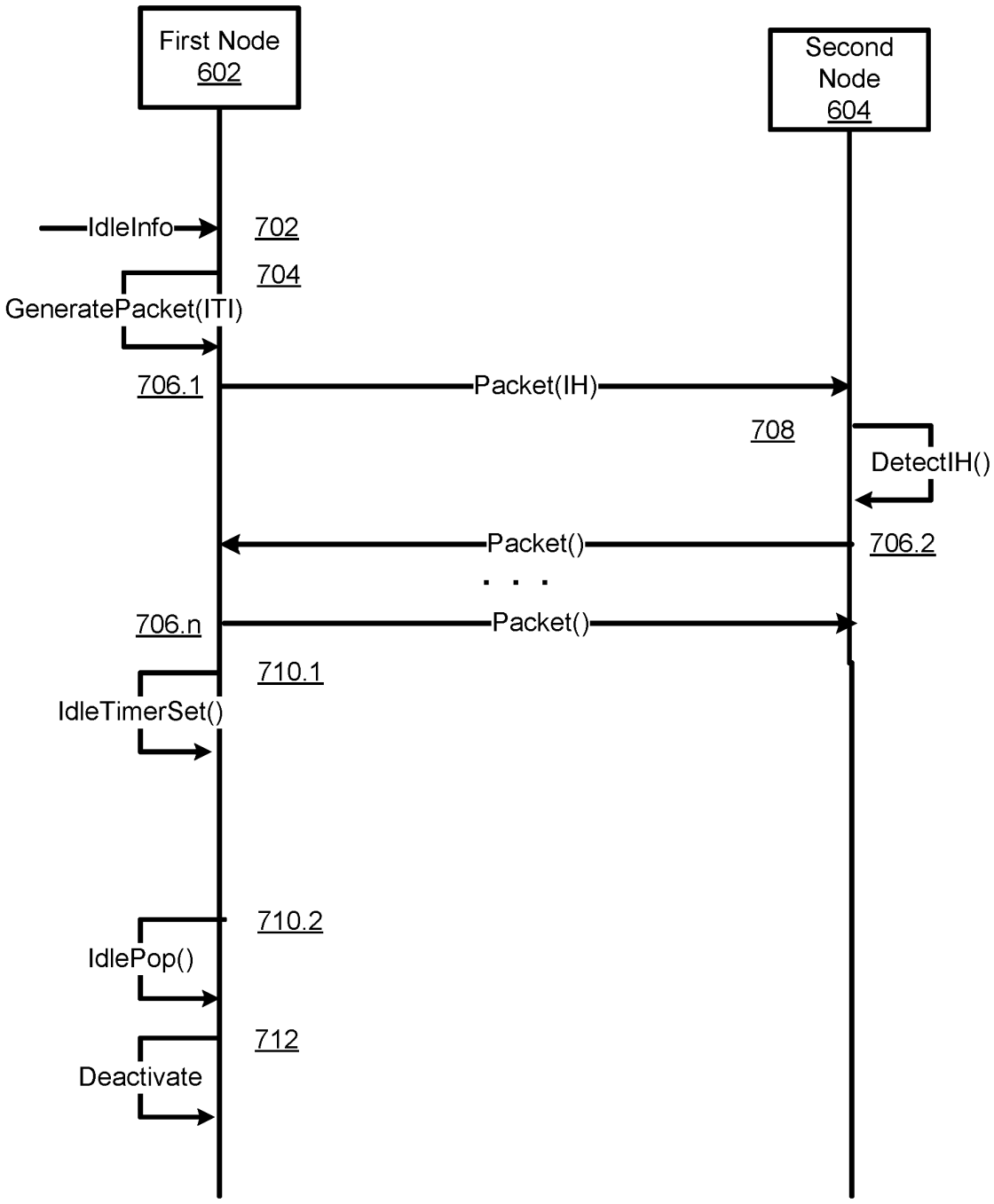
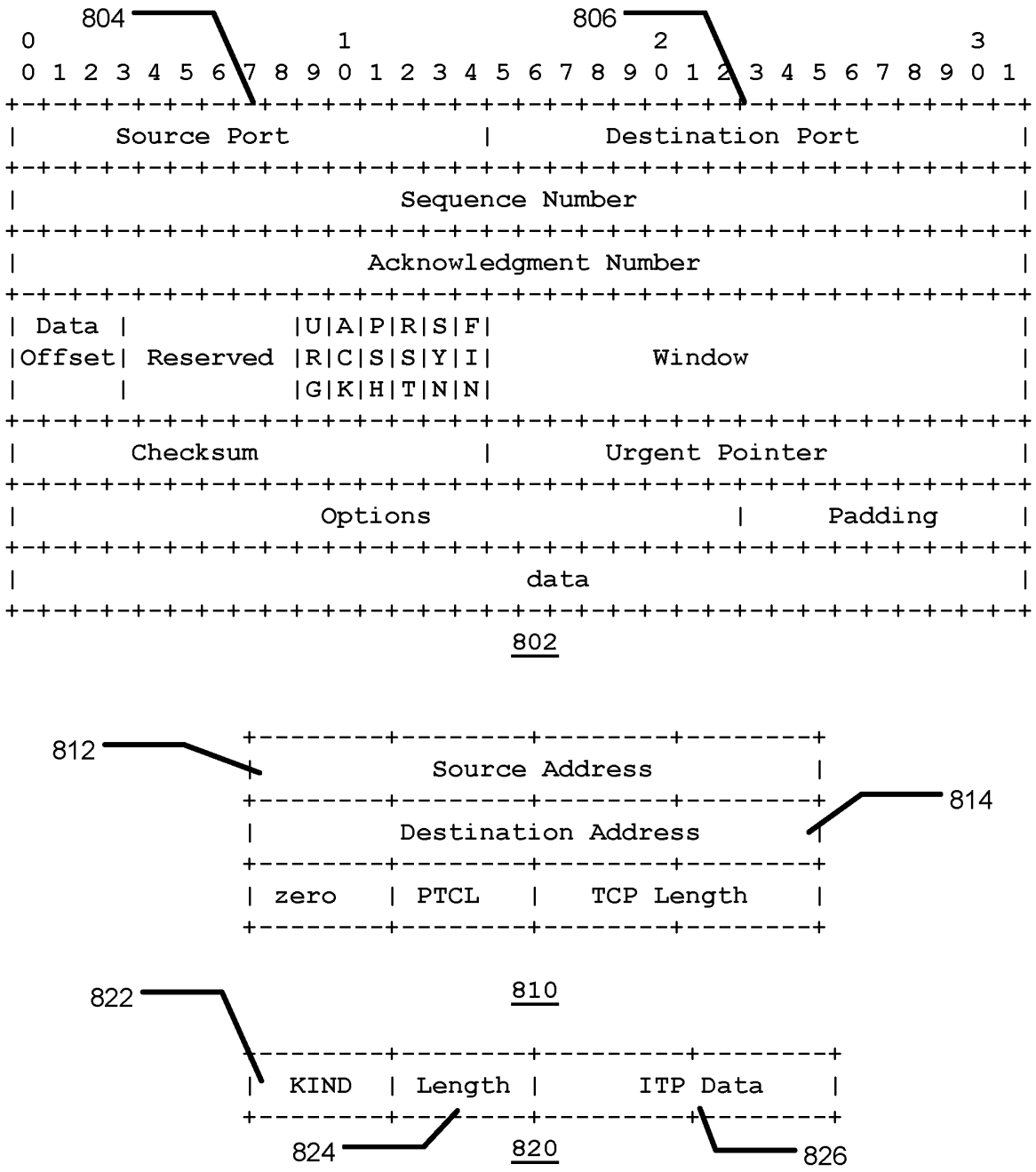

First Node
602
Second
Node
604
IdleInfo
702
704
GeneratePacket(ITI)
706.1
Packet(IH)
708
DetectIH()
Packet()
706.2
706.n
Packet()
710.1
IdleTimerSet()
710.2
IdlePop()
712
Deactivate

Fig. 7



Figures are adapted from RFC 793

Fig. 8

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	PMOR0120M
	Application Number	
Title of Invention	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Robert	Paul	Morris	

Residence Information (Select One) ● US Residency ○ Non US Residency ○ Active US Military Service

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Madison	GA	US

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Address 2	

City	State/Province	Postal Code	Country
Madison	GA	30650	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	92045		
Email Address	pcaldwell@thecaldwellfirm.com	Add Email	Remove Email

Application Information:

Title of the Invention	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD		
Attorney Docket Number	PMOR0120M	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)		Suggested Figure for Publication (if any)	

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Filing By Reference:

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For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☒ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

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Customer Number	92045		

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When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	16914267	2020-06-26

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	PMOR0120M
	Application Number	
Title of Invention	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD	

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16914267	Continuation of	16368811	2019-03-28	10742774	2020-08-11
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16368811	Continuation of	16040522	2018-07-19	10375215	2019-08-06
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16040522	Continuation of	15915047	2018-03-07	10075564	2018-09-11
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15915047	Continuation of	15694802	2017-09-03	9923995	2018-03-20
Prior Application Status	Abandoned				Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
15694802	Continuation in part of	14667642	2015-03-24		
Prior Application Status	Abandoned				Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
14667642	Continuation in part of	13477402	2012-05-22		
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13477402	Continuation of	12714454	2010-02-27	8219606	2012-07-10
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.					Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	PMOR0120M
	Application Number	
Title of Invention	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD	

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

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Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

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	Application Number	
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Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

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B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

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	Application Number	
Title of Invention	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 — Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

● Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	JENAM TECH, LLC		
Mailing Address Information For Applicant:			
Address 1	211 W Tyler Street, Suite C		
Address 2			
City	Longview	**State/Province**	TX
Country	US	Postal Code	75601
Phone Number		Fax Number	
Email Address			

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Assignee Information including Non-Applicant Assignee Information:

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Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

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Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

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Signature:

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See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Patrick Caldwell/			Date (YYYY-MM-DD)	2021-01-13
First Name	Patrick	Last Name	Caldwell	Registration Number	44580

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	PMOR0120M
	Application Number	
Title of Invention	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD	

This collection of information is required by 37 CFR 1.76. 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 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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.

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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 inspections 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.

METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING A TIME PERIOD

RELATED APPLICATIONS

[0001] This application is a continuation of, and claims priority to U.S. Patent Application No. 16/914,267 entitled "METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING AN IDLE TCP CONNECTION," filed on 06-26-2020, which in turn is a continuation of, and claims priority to U.S. Patent Application No. 16/368,811 entitled "METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING AN IDLE TCP CONNECTION," filed on 03-28-2019, which in turn is a continuation of, and claims priority to U.S. Patent Application No. 16/040,522, now US Patent Number 10,375,215, entitled "METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING AN IDLE TCP CONNECTION," filed on 07-19-2018, which in turn, is a continuation of, and claims priority to U.S. Patent Application No. 15/915,047, now U.S. Patent No. 10,075,564, entitled "METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING AN IDLE TCP CONNECTION," filed on 03-07-2018 which, in turn, is a continuation of, and claims priority to U.S. Patent Application No. 15/694,802, now U.S. Patent No. 9,923,995, entitled "METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING AN IDLE TCP CONNECTION," filed on 09-03-2017

which, in turn, is a continuation-in-part of, and claims priority to U.S. Patent Application No. 14/667,642, entitled "METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SELECTING A RESOURCE BASED ON A MEASURE OF A PROCESSING COST," filed on 03-24-2015 which, in turn, is a continuation-in-part of and claims priority to U.S. Patent Application No. 13/477,402, entitled "METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING AN IDLE TCP CONNECTION," filed 05-22-2012 which is a continuation of and claims priority to U.S. Patent Application No. 12/714,454, now U.S. Patent No. 8,219,606, entitled "METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING AN IDLE TCP CONNECTION," filed 02-27-2010.

[0002] U.S. Patent Application No. 12/714,454, entitled "METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SHARING INFORMATION FOR DETECTING AN IDLE TCP CONNECTION," filed 02-27-2010 is incorporated herein by reference in its entirety for all purposes.

[0003] This application is related to the following commonly owned U.S. Patent Applications, the entire disclosure of which is incorporated by reference herein in its entirety for all purposes: Application No. 12/714,063 (Docket No 0110) filed on 2010/02/26, entitled "Methods, Systems, and Program Products for Detecting an Idle TCP Connection".

BACKGROUND

[0004] Various implementations of the transmission control protocol (TCP) in network nodes support a number of options that are not negotiated or even communicated between or among any of the nodes. Some of these options are included in the specification of the TCP while others are not. For example, the TCP keep-alive option is supported by a number of implementations of the TCP. It is not, however, part of the TCP specification as described in "Request for Comments" (RFC) document RFC 793 edited by John Postel, titled "Transmission Control Protocol, DARPA Internet Program Internet Protocol Specification" (September 1981), which is incorporated here in its entirety by reference. One, both, or neither node including an endpoint in a TCP connection may support a keep-alive option for the connection. Each node supports or does not support keep-alive for a TCP connection based on each node's requirements without consideration for the other node in the TCP connection.

[0005] With respect to the keep-alive option, some argue that it is unnecessary and that it can waste network bandwidth. Some of these critics point out that a keep-alive packet can bring down a TCP connection. Further, since nodes including endpoints in a TCP connection do not cooperate in supporting the keep-alive option, the nodes may operate in opposition to one another and/or may waste resources by duplicating function, according to critics of the keep-alive option.

[0006] Proponents of the keep-alive option claim there is a benefit to detecting a dead peer/partner endpoint sooner. A node providing TCP keep-alive can also indirectly

detect when a network is so congested that two nodes with endpoints in a TCP connection are effectively disconnected. Proponents argue that keep-alive can keep an inactive TCP connection open. For example, some network nodes such as firewalls are configured to close TCP connections determined to be idle or inactive in order to recover resources. Keep-alive can prevent this. This is good from the perspective of the node sending keep-alive packets, but the keep-alive packets might cause the firewall to waste resources and possibly block or terminate TCP connections with other nodes.

[0007] TCP keep-alive and the debate of its benefits and faults have been around for decades. To date no mechanism to allow two TCP connection endpoints to cooperate in supporting the keep-alive option has been proposed or implemented. The broader issue of enabling cooperation and negotiation between nodes in a TCP connection in detecting and managing idle, underactive, and/or dead TCP connections remains unaddressed.

[0008] Accordingly, there exists a need for methods, systems, and computer program products for sharing information for detecting an idle TCP connection.

SUMMARY

[0009] The following presents a simplified summary of the disclosure in order to provide a basic understanding to the reader. This summary is not an extensive overview of the disclosure and it does not identify key/critical elements of the invention or delineate the scope of the invention. Its sole purpose is to present some concepts

disclosed herein in a simplified form as a prelude to the more detailed description that is presented later.

[0010] In one embodiment, an apparatus and method are provided to: receive, by the apparatus from a node, a set up packet during a setup of a connection, the set up packet for use in a protocol that is not transmission control protocol (TCP); identify first metadata in a time period parameter field in the set up packet, for a time period, where, as a result of a detection of the time period, the connection is at least partial deactivated; and determine, based on the first metadata, a timeout attribute associated with the connection.

[0011] In one embodiment, another apparatus and method are provided to: identify first information; generate, based on first information, a set up packet including a time period parameter field identifying first metadata, the set up packet for use in a protocol that is not transmission control protocol (TCP); set up a connection, by sending, from the apparatus to a node, the set up packet to provide the first metadata to the node, for use by the node in determining a timeout attribute associated with the connection; detect, by the apparatus, a time period during which no packet is received in the connection and processed to keep the connection active; and in response to detecting the time period, at least partially deactivate, by the apparatus, the connection.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] Objects and advantages of the present invention will become apparent to those skilled in the art upon reading this description in conjunction with the accompanying drawings, in which like reference numerals have been used to designate like or analogous elements, and in which:

[0013] Fig. 1 is a block diagram illustrating an exemplary hardware device included in and/or otherwise providing an execution environment in which the subject matter may be implemented;

[0014] Fig. 2 is a flow diagram illustrating a method for sharing information for detecting an idle TCP connection according to an aspect of the subject matter described herein;

[0015] Fig. 3 is a flow diagram illustrating another method for sharing information for detecting an idle TCP connection according to another aspect of the subject matter described herein;

[0016] Fig. 4a and Fig. 4b show a block a diagram illustrating an arrangement of components for sharing information for detecting an idle TCP connection according to a further aspect of the subject matter described herein;

[0017] Fig. 5 is a block diagram illustrating an arrangement of components for sharing information for detecting an idle TCP connection according to still another aspect of the subject matter described herein;

[0018] Fig. 6 is a network diagram illustrating an exemplary system for sharing information for detecting an idle TCP connection according to an aspect of the subject matter described herein;

[0019] Fig. 7 is a message flow diagram illustrating an exemplary data and execution flow for sharing information for detecting an idle TCP connection according to an aspect of the subject matter described herein; and

[0020] Fig. 8 is a diagram illustrating a structure for a packet transmitted via a network according to an aspect of the subject matter described herein.

DETAILED DESCRIPTION

[0021] An exemplary device included in an execution environment that may be configured according to the subject matter is illustrated in Fig. 1. An execution environment includes an arrangement of hardware and, optionally, software that may be further configured to include an arrangement of components for performing a method of the subject matter described herein.

[0022] An execution environment includes and/or is otherwise provided by one or more devices. An execution environment may include a virtual execution environment including software components operating in a host execution environment. Exemplary devices included in or otherwise providing suitable execution environments for configuring according to the subject matter include personal computers, notebook

computers, tablet computers, servers, hand-held and other mobile devices, multiprocessor devices, distributed devices, consumer electronic devices, and/or network-enabled devices. Those skilled in the art will understand that the components illustrated in Fig. 1 are exemplary and may vary by particular execution environment.

[0023] Fig. 1 illustrates hardware device **100** included in execution environment **102** which includes instruction-processing unit (IPU) **104**, such as one or more microprocessors; physical IPU memory **106** including storage locations identified by addresses in a physical memory address space of IPU **104;** persistent secondary storage **108**, such as one or more hard drives and/or flash storage media; input device adapter **110**, such as key or keypad hardware, keyboard adapter, and/or mouse adapter; output device adapter **112**, such as a display or audio adapter for presenting information to a user; a network interface, illustrated by network interface adapter **114,** for communicating via a network such as a LAN and/or WAN; and a communication mechanism that couples elements **104-114**, illustrated as bus **116**. Elements **104-114** may be operatively coupled by various means. Bus **116** may comprise any type of bus architecture, including a memory bus, a peripheral bus, a local bus, and/or a switching fabric.

[0024] IPU **104** is an instruction execution machine, apparatus, or device. Exemplary IPUs include one or more microprocessors, digital signal processors (DSP), graphics processing units (GPU), application-specific integrated circuits (ASIC), and/or field programmable gate arrays (FPGA).

[0025] IPU **104** may access machine code instructions and data via one or more memory address spaces in addition to the physical memory address space. A memory address space includes addresses identifying locations in an IPU memory. IPU **104** may have more than one IPU memory. Thus, IPU **104** may have more than one memory address space. IPU **104** may access a location in an IPU memory by processing an address identifying the location. The processed address may be in an operand of a machine code instruction and/or may be identified in a register or other portion of IPU **104**.

[0026] Fig. 1 illustrates virtual IPU memory **118** spanning at least part of physical IPU memory **106** and at least part of persistent secondary storage **108**. Virtual memory addresses in a memory address space may be mapped to physical memory addresses identifying locations in physical IPU memory **106**. An address space for identifying locations in a virtual IPU memory is referred to as a virtual memory address space; its addresses are referred to as virtual memory addresses; and its IPU memory is known as a virtual IPU memory or virtual memory. The term IPU memory may refer to physical IPU memory **106** and/or virtual IPU memory **118** depending on the context in which the term is used.

[0027] Various types of memory technologies may be included in physical IPU memory **106**. Exemplary memory technologies include static random access memory (SRAM) and/or dynamic RAM (DRAM) including variants such as dual data rate synchronous DRAM (DDR SDRAM), error correcting code synchronous DRAM (ECC SDRAM),

and/or RAMBUS DRAM (RDRAM). Physical IPU memory **106** may include volatile memory as illustrated in the previous sentence and/or may include nonvolatile memory such as nonvolatile flash RAM (NVRAM) and/or read-only memory (ROM).

[0028] Persistent secondary storage **108** may include one or more flash memory storage devices, one or more hard disk drives, one or more magnetic disk drives, and/or one or more optical disk drives. Persistent secondary storage may include removable media. The drives and their associated computer-readable storage media provide volatile and/or nonvolatile storage for computer readable instructions, data structures, program components, and other data for execution environment **102**.

[0029] Execution environment **102** may include software components stored in persistent secondary storage **108**, in remote storage accessible via a network, and/or in an IPU memory. Fig. 1 illustrates execution environment **102** including operating system **120**, one or more applications **122**, other program code and/or data components illustrated by other libraries and subsystems **124**.

[0030] Execution environment **102** may receive user-provided information via one or more input devices illustrated by input device **128**. Input device **128** provides input information to other components in execution environment **102** via input device adapter **110**. Execution environment **102** may include an input device adapter for a keyboard, a touch screen, a microphone, a joystick, a television receiver, a video camera, a still camera, a document scanner, a fax, a phone, a modem, a network adapter, and/or a pointing device, to name a few exemplary input devices.

[0031] Input device **128** included in execution environment **102** may be included in device **100** as Fig. 1 illustrates or may be external (not shown) to device **100**. Execution environment **102** may include one or more internal and/or external input devices. External input devices may be connected to device **100** via corresponding communication interfaces such as a serial port, a parallel port, and/or a universal serial bus (USB) port. Input device adapter **110** receives input and provides a representation to bus **116** to be received by IPU **104**, physical IPU memory **106**, and/or other components included in execution environment **102**.

[0032] Output device **130** in Fig. 1 exemplifies one or more output devices that may be included in and/or may be external to and operatively coupled to device **100**. For example, output device **130** is illustrated connected to bus **116** via output device adapter **112**. Output device **130** may be a display device. Exemplary display devices include liquid crystal displays (LCDs), light emitting diode (LED) displays, and projectors. Output device **130** presents output of execution environment **102** to one or more users. In some embodiments, an output device is a device such as a phone, a joystick, and/or a touch screen. In addition to various types of display devices, exemplary output devices include printers, speakers, tactile output devices such as motion producing devices, and other output devices producing sensory information detectable by a user.

[0033] A device included in or otherwise providing an execution environment may operate in a networked environment communicating with one or more devices (not

shown) via one or more network interfaces. The terms "communication interface" and "network interface" are used interchangeably. Fig. 1 illustrates network interface adapter **114** as a network interface included in execution environment **102** to operatively couple device **100** to a network. The terms "network node" and "node" in this document both refer to a device having a network interface operatively coupled to a network.

[0034] Exemplary network interfaces include wireless network adapters and wired network adapters. Exemplary wireless networks include a BLUETOOTH network, a wireless 802.11 network, and/or a wireless telephony network (e.g., a cellular, PCS, CDMA, and/or GSM network). Exemplary wired networks include various types of LANs, wide area networks (WANs), and personal area networks (PANs). Exemplary network adapters for wired networks include Ethernet adapters, Token-ring adapters, FDDI adapters, asynchronous transfer mode (ATM) adapters, and modems of various types. Exemplary networks also include intranets and internets such as the Internet.

[0035] Fig. 2 is a flow diagram illustrating a first method for sharing information for detecting an idle TCP connection according to an exemplary aspect of the subject matter described herein. Fig. 3 is a flow diagram illustrating a second method for sharing information for detecting an idle TCP connection according to an exemplary aspect of the subject matter described herein. Fig. 4a is a block diagram illustrating a system for sharing information for detecting an idle TCP connection according to the first method in Fig. 2. Fig. 4b is a block diagram illustrating a system for sharing information for detecting an idle TCP connection according to the second method in Fig.

3. It is expected that many, if not most, systems configured to perform one of the methods illustrated in Fig. 2 and Fig. 3 will also be configured to perform the other method.

[0036] A system for sharing information for detecting an idle TCP connection according to the method illustrated in Fig. 2 includes an execution environment, such as execution environment **102** in Fig. 1**,** including an instruction processing unit, such as IPU **104**, configured to process an instruction included in at least one of an idle time period policy component **450**, a packet generator component **452**, and a net out-port component **454**, a idle time period monitor component **456,** and a connection state component **458** illustrated in Fig. 4a.

[0037] A system for sharing information for detecting an idle TCP connection performing the method illustrated in Fig. 3 includes an execution environment, such as execution environment **102** in Fig. 1**,** including an instruction processing unit, such as IPU **104**, configured to process an instruction included in at least one of a net in-port component **460**, an idle time period option handler component **462**, an option attribute handler component **464** illustrated in Fig. 4b.

[0038] Components illustrated in Fig. 4a may be adapted for performing the method illustrated in Fig. 2 in a number of execution environments. Components illustrated in Fig. 4b may be adapted for performing the method illustrated in Fig. 3 in a number of execution environments. Fig. 5 is a block diagram illustrating adaptations and/or analogs of the components of Fig. 4a and Fig. 4b in exemplary execution environment

502 including or otherwise provided by one or more nodes. The method depicted in Fig. 2 and the method depicted in Fig. 3 may be carried out by some or all of the exemplary components and/or their analogs.

[0039] The components illustrated in Fig. 4 and Fig. 5 may be included in or otherwise may be combined with some or all of the components of Fig. 1 to create a variety of arrangements of components according to the subject matter described herein.

[0040] Fig. 6 illustrates first node **602** and second node **604** as exemplary devices included in and/or otherwise adapted for providing a suitable execution environment, such as execution environment **502** illustrated in Fig. 5, for an adaptation of the arrangement of components in Fig. 4a and an adaptation of the arrangement of components in Fig. 4b. As illustrated in Fig. 6, first node **602** and second node **604** are operatively coupled to network **606** via respective network interfaces enabling first node **602** and second node **604** to communicate**.** Fig. 7 is a message flow diagram illustrating an exemplary exchange of messages within and between first node **602** and second node **604** according to the subject matter described herein.

[0041] As stated, the various adaptations of the arrangements of components in Fig. 4a and in Fig. 4b described herein are not exhaustive.

[0042] In Fig. 5, execution environment **502** illustrates a network application **504** operating in a node configured to communicate with one or more other nodes via the TCP supported by TCP layer component **506**. For example, first node **602** may be

included in and/or provide execution environment **502**. Network application **504** may be a first application configured to communicate with an application operating in second node **604** via network **606**. Second node **604** may be included in and/or provide another instance of execution environment **502**. The operation of both first node **602** and second node **604** are described with respect to execution environment **502**. For ease of illustration, both first node **602** and second node **604** are configured with adaptations of the arrangement in Fig 4a and the arrangement in Fig. 4b. As such, the description of components and corresponding operations with respect to execution environment **502** in Fig. 5 is applicable to both first node **602** and second node **604** in Fig. 6.

[0043] In Fig. 5, network interface card (NIC) **508** is an exemplification of a network interface illustrated in Fig. 1 by network interface adapter **114**. NIC **508** includes a physical layer component **510** operatively coupling execution environment **502** to one or more physical media for carrying communication signals. The media may be wired, such as an Ethernet LAN operating over CAT 6 cabling, or may be wireless such as an 802.11n LAN. Other exemplary physical layer protocols and corresponding media are identified above.

[0044] NIC **508** may also include a portion of link layer component **512**. Link layer component **512** may provide for communication between two nodes in a point-to-point communication and/or two nodes in a local area network (LAN). Exemplary link layers and, their protocols have been described above including FDDI, ATM, and Ethernet. A

portion of link layer component **512** is external to NIC **508**. The external portion may be realized as a device driver for NIC **508**.

[0045] Link layer component **512** may receive data formatted as one or more internet protocol (IP) packets from internet protocol (IP) layer component **514**. Link layer component **512** packages data from IP layer component **514** according to the particular link layer protocol supported. Analogously, link layer component **512** interprets data, received as signals transmitted by the physical media operatively coupled to physical layer component **510,** according to a particular link layer protocol supported. Link layer component **512** may strip off link layer specific data and transfer the payload of link layer transmissions to IP layer component **514**.

[0046] IP layer component **514** illustrated in Fig. 5 is configured to communicate with one or more remote nodes over a LAN and/or a network of networks such as an intranet or the Internet. IP layer component **514** may receive data formatted as TCP packets from TCP layer component **506**. IP layer component **514** packages data from TCP layer component **506** into IP packets for transmission across a network. The network may be and/or may include an internet. Analogously, IP layer component **514** interprets data, received from link layer component **512** as IP protocol data and detects IP packets in the received data. IP layer component **514** may strip off IP layer specific data and transfer the payload of one or more IP packets to TCP layer component **506**.

[0047] In Fig. 5, IP layer component **514** is operatively coupled to TCP layer component **506**. TCP layer component **506** is configured to provide a TCP connection

over network **606** for sending and/or receiving packets included in the TCP connection between two nodes exemplified by first node **602** and second node **604**.

[0048] In a TCP connection including first node **602** and second node **604**, first node **602** may include a first TCP connection endpoint and second node **604** may include a second TCP connection endpoint. The first and second TCP connection endpoints identify the TCP connection. The TCP connection may have other identifiers, in addition to the included endpoints.

[0049] Components of execution environment **502**, in an aspect, may interoperate with TCP layer component **506** directly. In another aspect, one or more components, such as network application **504**, may interoperate with TCP layer component **506** indirectly. Network application **504** may exchange data with TCP layer component **506** via sockets component **518** and/or an analog of sockets component **518**. Alternatively or additionally, network application **504** may communicate with a remote node via an application protocol layer illustrated by application protocol layer component **520**. Many application protocols currently exist and new application protocols will be developed. Exemplary application layer protocols include hypertext transfer protocol (HTTP), file transfer protocol (FTP), and extensible messaging and presence protocol (XMPP).

[0050] TCP layer component **506** in Fig. 5 may receive data from any of various sources for transmitting in corresponding TCP connections to various corresponding identified TCP connection endpoints in one or more network nodes. Fig. 5 illustrates application in-port (app in-port) component **522** providing an interface component for

receiving data to transmit in a TCP connection. Fig. 5 illustrates TCP layer component **506** includes packet generator component **552** configured to package data received by application in-port component **522** for transmitting in one or more TCP packets. The one or more TCP packets are provided to IP layer component **514** via net out-port component **554** exemplifying an output interface component.

[0051] Analogously, TCP layer component **506** interprets data received from IP layer component **514** via net in-port component **560**. The data is interpreted as TCP data and TCP packets are detected in the received data by net in-port component **560** and/or packet handler component **516**. Fig. 5 illustrates TCP layer component **506** includes packet handler component **516** to strip off and/or otherwise process TCP layer specific data. Packet handler component **516** interoperates with application out-port (app out-port) component **524** to transfer data in the TCP packet included in a TCP data stream to sockets component **518**, application protocol layer **520**, network application **504**, and/or other components associated with the local endpoint of the TCP connection. Detailed information on the operation of TCP is included in RFC 793.

[0052] With reference to the method illustrated in Fig. 2, block **202** illustrates the method includes receiving, by a first node, first idle information for detecting a first idle time period during which no TCP packet including data in a first data stream sent in the TCP connection by a second node is received by the first node. Accordingly, a system for sharing information for detecting an idle TCP connection includes means for receiving, by a first node, first idle information for detecting a first idle time period during

which no TCP packet including data in a first data stream sent in the TCP connection by a second node is received by the first node. For example, as illustrated in Fig. 4a, idle time period policy component **450** is configured for receiving, by a first node, first idle information for detecting a first idle time period during which no TCP packet including data in a first data stream sent in the TCP connection by a second node is received by the first node.

[0053] Fig. 5 illustrates idle time period (ITP) policy component **550** as an adaptation of and/or analog of ITP policy component **450** in Fig. 4a. One or more idle time period policy components **550** operate in execution environment **502**.

[0054] Message **702** in Fig. 7 illustrates a communication including and/or otherwise identifying idle information received by ITP policy component **550**. Message **702** may take various forms in various aspects. Exemplary forms for message **702** include a function/method invocation, a message passed via a message queue, data transmitted via a pipe, a message received via a network, and/or a communication via a shared location in IPU memory and/or secondary storage.

[0055] Idle information may be received from a configuration storage location for TCP layer component **506** in an IPU memory and/or in secondary storage **108**. The configured idle information may be maintained and/or otherwise managed by settings service component **526** configured to maintain and/or manage various options or settings for TCP layer component **506** and/or one or more TCP connections.

[0056] In an aspect, network application **504** provides idle information to ITP policy component **550** via settings service component **526** interoperating with sockets component **518**. Sockets component **518** and/or TCP layer component **506** may support TCP options applicable globally for some or all TCP connections and/or may support TCP options on a per connection basis. Per connection TCP options may override global TCP options if global options are also supported. In another aspect, idle information may be received from and/or otherwise received based on information via application protocol layer **520**, via sockets component **518**, and/or directly from network application **504**.

[0057] Application protocol layer **520** may provide idle information to ITP policy component **550** via settings service component **526** and, optionally, via sockets component **518**. Idle information provided by application protocol layer **520** may be based on data received from network application **504**, based on a particular configuration of application protocol layer **520**, and/or received from a user and/or administrator of one or both of network application **504** and application protocol layer **520**.

[0058] In an aspect, the idle information received may be based on a previous ITP header identified in a packet in the TCP connection received by first node **602** from second node **604**. The previous packet may be received by net in-port component **560**. The previous ITP header may be detected by ITP option handler component **562** interoperating with packet handler component **516**. Idle information may be identified

and/or otherwise determined by ITP option handler component **562**. ITP policy component **550** may interoperate with ITP option handler component **562** to receive the idle information.

[0059] Idle information received, determined, and/or otherwise identified may include and/or identify a duration of time for detecting an idle time period. The duration may be specified according to various measures of time including seconds, minutes, hours, and/or days.

[0060] Alternatively or additionally, idle information may include and/or identify a generator for determining a duration of time for detecting an idle time period. An exemplary generator may include a formula, an expression, a function, a policy, and/or other mechanism for generating and/or otherwise identifying a duration of time.

[0061] In an aspect, one or more algorithms for generating a duration of time for detecting an idle time period may be associated with identifiers. The algorithm identifiers may be standardized within a group of nodes including first node **602** and second node **604**. The received idle information may include and/or reference an algorithm identifier. First node **602** and second node **604** may each maintain an association between one or more of the algorithm identifiers and a duration generator such as a function and/or a class configured to perform the identified algorithm.

[0062] A duration generator may determine the duration of time for detecting an idle time period based on one or more attributes accessible to one or both of first node **602**

and second node **604**. Exemplary attributes include a measure of network latency, a measure of network congestion, an indication of the availability of a particular resource, a user specified attribute, a security attribute, an energy usage attribute, a user attribute such as role of the user, and/or a measure of bandwidth supported by NIC **508** and/or a physical network medium operatively coupled to NIC **508**.

[0063] Alternatively or additionally, idle information may include a parameter such as one or more of the attributes identified in the previous paragraph for use in a duration generator for determining a duration of time for measuring and/or otherwise detecting an idle time period.

[0064] A TCP connection may be identified by its endpoints. First node **602** and/or second node **604** may include an endpoint of the TCP connection. Alternatively or additionally, first node **602** and/or second node **604** may include a proxy endpoint representing an endpoint in a TCP connection. Nodes, that provide a network address translation (NAT) service, are exemplary nodes including proxy endpoints.

[0065] A node including a TCP connection endpoint is referred to as a host. Hosts are typically user devices and/or servers that typically operate at the edge of a network. While endpoints of most TCP connections are not typically included in network nodes for relaying, routing, and/or otherwise forwarding TCP packet data within a network such as routing nodes and switching nodes. Such network nodes may include one or more connection endpoints for one or more respective TCP connections. It should be understood that the term “host” refers to a role played by a device in a network. First

node **602** and/or second node **604** may play the role of a host in a TCP connection and/or may be proxy nodes.

[0066] A node is referred to as being in or included in a TCP connection when the node includes an endpoint of the connection and/or includes a proxy for a connection endpoint, referred to as a proxy endpoint. A proxy endpoint and an endpoint in a TCP connection may be in the same node or in different nodes.

[0067] In Fig. 5, connection state component **558** may maintain state information for one or more TCP connection endpoints and/or proxy endpoints of corresponding TCP connections included in an instance of an execution environment, such as execution environment **502**, included in and/or provided by first node **602** or second node **604**.

[0068] First node **602** and/or second node **604** may play a role of a proxy node for a node including a TCP connection endpoint. First node **602** and/or second node **604** may include a proxy endpoint representing an endpoint in a TCP connection. A proxy node forwards TCP packet data, sent by a host including a TCP connection endpoint, to another host including a corresponding connection endpoint represented by a proxy endpoint included in the proxy node and vice versa. Exemplary proxy nodes in addition to including routing and/or switching capabilities may include a bridge, a hub, a repeater, a gateway, and a firewall.

[0069] In an aspect, a TCP keep-alive option, a TCP user timeout, a retransmission timeout, an acknowledgment timeout, and/or another timeout associated with a TCP connection may be modified based on the first idle information.

[0070] For example, in Fig. 5, ITP policy component **550** operating in first node **602** may modify an attribute of a TCP keep-alive option provided by one or more keep-alive components that may include settings service component **526**. Modifying a keep-alive attribute may include creating the attribute, deleting the attribute, and/or modifying the attribute. ITP policy component **550** may interoperate with settings service component **526**, connection state component **558**, and/or a keep-alive option handler component (not shown) to detect the existence and state of one or more keep-alive attributes in determining whether a keep-alive option is active and/or in identifying its current state.

[0071] In response to identifying the idle information, ITP policy component **550** may activate, disable, and/or modify the state of the keep-alive option via interoperation with one or more of settings service component **526**, connection state component **558**, and/or a keep-alive option handler. Thus, in response to identifying the idle information, ITP policy component **550** may prevent and/or alter the time a keep-alive packet is sent to second node **604** from first node **602**.

[0072] Alternatively or additionally, ITP policy component **550** operating in first node **602** may modify an attribute associated with an acknowledgment timeout configured for TCP layer component **506**. Modifying an acknowledgment timeout attribute may include creating the attribute, deleting the attribute, and/or modifying the attribute. ITP policy

component **550** may interoperate with settings service component **526**, connection state component **558**, and/or an acknowledgment option handler component (not shown) to detect the existence and state of one or more packet acknowledgment attributes. In response to identifying the idle information, ITP policy component **550** may modify the state of the packet acknowledgment option. Thus, in response to identifying the idle information, ITP policy component **550** may prevent and/or alter the time an acknowledgment is sent in a packet in a TCP connection.

[0073] Returning to Fig. 2, block **204** illustrates the method further includes generating a TCP packet including a first idle time period header identifying metadata for the first idle time period based on the first idle information. Accordingly, a system for sharing information for detecting an idle TCP connection includes means for generating a TCP packet including a first idle time period header identifying metadata for the first idle time period based on the first idle information. For example, as illustrated in Fig. 4a, packet generator component **452** is configured for generating a TCP packet including a first idle time period header identifying metadata for the first idle time period based on the first idle information.

[0074] Fig. 5 illustrates packet generator component **552** as an adaptation of and/or analog of packet generator component **452** in Fig. 4a. One or more packet generator components **552** operate in execution environment **502**.

[0075] Packet generator component **552** in Fig. 5 may receive idle information and/or information based on the received idle information from ITP policy component **550**.

Whether and when packet generator component **552** receives information for including an idle time period (ITP) header in a TCP packet may depend on a current state of the associated TCP connection. In Fig. 5, ITP policy component **550** may interoperate with connection state component **558** to determine whether and when to provide information to packet generator component **552** for including an ITP header in a TCP packet.

[0076] In an aspect, an ITP header may be included in a packet exchanged during setup of TCP connection. RFC 793 describes a "three-way handshake" for establishing a TCP connection. The synchronization requires each side to send it's own initial sequence number and to receive a confirmation of it in acknowledgment from the other side. Each side must also receive the other side's initial sequence number and send a confirming acknowledgment.

[0077] 1) A --> B SYN my sequence number is X

[0078] 2) A <-- B ACK your sequence number is X

[0079] 3) A <-- B SYN my sequence number is Y

[0080] 4) A --> B ACK your sequence number is Y

[0081] Because steps 2 and 3 can be combined in a single message this is called the three way (or three message) handshake.

[0082] Other message exchanges may be used in setting up a TCP connection as those skilled in the art will understand. Such other exchanges are not currently

supported by the TCP as described in RFC 793. The specified “three-way handshake” and other patterns of message exchange for setting up a TCP connection include packets that are considered to be in the TCP connection for purposes of this disclosure. Including an ITP header may be restricted to packets exchanged in connection setup, excluded from packets exchanged during connection establishment, or allowed in one or more packets exchanged during connection establishments and in packets exchanged after connection setup.

[0083] In an aspect, when connection state component **558** and/or ITP policy component **550** determine an ITP header should be included in a TCP packet based on received idle information, packet generator component **552** may include the ITP header in a next TCP packet generated in response to data received via application in-port component **522** for sending to first node **602**. In another aspect, packet generator component **552** may send the ITP header in a TCP packet in the TCP connection with no data included in the TCP data stream sent by first node **602** to second node **604**. Such a packet is referred to as an empty Packet generator component **554** may send the empty TCP packet when TCP layer component **506** has no for data from an application in second node **604** to send in the TCP data stream to first node **602**.

[0084] Packet generator component **552** may generate a packet according to the TCP specifications and may include a header identified as an ITP header in accordance with specifications for including TCP option headers in a TCP packet. See RFC 793 for more details. Fig. 8 illustrates a format or structure for a TCP packet **802** as described in RFC

793. Each "+" character in Fig. 8, indicates a bit-boundary. TCP packet **802** specifies a location and format for including a source port **804** portion including an identifier for an endpoint of the TCP connection for a sending node and a destination port **806** including an identifier for a corresponding endpoint of the TCP connection in a receiving node. IP packet **810** illustrates a format for an IP packet header for an IP packet including TCP packet data. Source address **812** specifies a location and format in an IP header for including a network address identifying a network interface of the sending node, and destination address **814** identifying a network interface for the receiving node. A network address and a port number identify a connection endpoint in a network. Two endpoints identify a TCP connection.

[0085] Fig. 8 also illustrates a format for an exemplary ITP header **820**. A KIND location is specified for including an identifier indicating that the option is an idle time period (ITP) option in an ITP header. Identifiers for option headers are currently under the control of the Internet Assigned Numbers Authority (IANA). Length field **824** identifies a length of an ITP header. An ITP data field **826** is specified for including ITP header information for detecting an idle time period as described herein

[0086] Those skilled in the art will recognize given this disclosure that an ITP header may have other suitable formats and may be included in a TCP packet in structures and locations other than those specified for TCP options in RFC 793. An equivalent or analog of an ITP header may be included in a footer of a protocol packet in an extension and/or variant of the current TCP.

[0087] ITP data field **826** in Fig. 8 may include and/or otherwise identify metadata for the first idle time period. For example, an ITP data field in a packet may include and/or otherwise identify one or more of a duration of time for detecting an idle time period, a duration generator for determining a duration of time for detecting an idle time period, and a parameter for use in a duration generator for determining a duration of time for measuring and detecting an idle time period.

[0088] Message **704** in Fig. 7 illustrates an invocation and/or other access to packet generator component **552** for generating a TCP packet including an ITP header based on received idle information.

[0089] Returning to Fig. 2, block **206** illustrates the method further includes sending the TCP packet in the TCP connection to the second node to provide the metadata for the first idle time period to the second node. Accordingly, a system for sharing information for detecting an idle TCP connection further includes means for sending the TCP packet in the TCP connection to the second node to provide the metadata for the first idle time period to the second node. For example, as illustrated in Fig. 4a, the net out-port component **454** is configured for sending the TCP packet in the TCP connection to the second node to provide the metadata for the first idle time period to the second node.

[0090] Fig. 5 illustrates net out-port component **554** as an adaptation of and/or analog of net out-port component **454** in Fig. 4a. One or more net out-port components **554** operate in execution environment **502**. Net out-port component **554** is illustrated

operatively coupled to packet generator component **552**. Net out-port component **554** may receive TCP packet data from packet generator component **552** and interoperate with IP layer component **514** to send the TCP packet in one or more IP packets via network **606** to second node **604**. Message **706.1** in Fig. 7 illustrates a TCP packet including an ITP header sent by first node **602** and received by second node **604**.

[0091] In one aspect, an ITP header may be sent to make sending one or more TCP keep-alive packets by a partner node in the connection unnecessary. A receiver of a packet including an ITP header, such as second node **604**, may keep a TCP connection alive based on information in the ITP header.

[0092] In another aspect, first node **602** may set a keep-alive timeout attribute based on a duration of the first idle time period identified in the first idle information and/or in the metadata provided to second node **604**. For example, first node **602** may monitor a time period during which no non-empty packets are sent or received in the TCP connection. A keep-alive option handler and/or keep-alive component (not shown) operating in first node **602** may set a keep-alive timer according to the timeout attribute, with a duration that will result in the keep-alive timer expiring before an idle time period can occur. In response to detecting a keep-alive timeout, which may be indicated by the expiration of the keep-alive timer, the keep-alive option handler and/or keep-alive policy component may provide information to packet generator component **552** to generate a TCP keep-alive packet. The packet generator component **552** may provide the generated packet to net out-port component **554** for sending the TCP keep-alive packet

to second node **604** to determine whether the TCP connection is active and/or to keep the TCP connection active.

[0093] In another aspect, ITP policy component **550** operating in first node **602** may set a timer, analogous to the keep-alive timer described in the previous paragraph that expires before an time period can occur. In response the timer expiring, ITP policy component **550** may provide idle information to packet generator component **552** to generate a TCP packet including a second ITP header. Content of the second ITP header may be based on the first idle information received, data received from second node **604**, information received from a network application that may be from a user, and/or on any information accessible to TCP layer component **506** in execution environment **502** in first node **602**. The TCP packet generated by packet generator component **552** is provided to IP layer component **514** via net out-port component **554** to send to second node **604** in the TCP connection**.** Along with sending the message, first node **602** may reset and/or otherwise restart detection of the first idle time period. Thus, a second ITP header may be sent in a second TCP packet by first node **602** to second node **602** along with restarting detection of the first idle time period. Alternatively, first node **602** may reset and initiate detection of an idle time period with a different duration than the previous idle time period, based on the idle information for generating the second ITP header.

[0094] Returning to Fig. 2, block **208** illustrates the method further includes detecting the first idle time period based on the first idle information. Accordingly, a system for

sharing information for detecting an idle TCP connection further includes means for detecting the first idle time period based on the first idle information. For example, as illustrated in Fig. 4a, the idle time period monitor component **456** is configured for idle time period monitor.

[0095] Fig. 5 illustrates idle time period monitor component **556** as an adaptation of and/or analog of idle time period monitor component **456** in Fig. 4a. One or more idle time period monitor components **556** operate in execution environment **502**.

[0096] In an aspect, in response to receiving the first idle information, ITP policy component **550** may store a value representing a duration of time in a configuration storage location. Alternatively, or additionally, ITP policy component **550** may invoke a duration generator to determine a duration of time for detecting the idle time period. The duration generator may be preconfigured for the TCP connection and/or may be identified based on the idle information received. As described, the invoked generator may be invoked with a parameter included in and/or otherwise identified based on the received idle information.

[0097] ITP policy component **550** may interoperate with ITP monitor component **556** to identify the duration for detecting the idle time period. ITP monitor component **556**, in various aspects, may receive information including and/or otherwise identifying a duration of time, a duration generator, and/or a parameter for a duration generator. ITP monitor component **556** may initiate and/or restart a process for detecting an idle time

period. In an aspect, ITP monitor component **556** detects and/or otherwise identifies a beginning of a potential idle time period based on one or more specified events.

[0098] In an aspect, detecting the first idle time period by ITP monitor component **556** may include detecting a time period in the idle time period during which first node **602** has received acknowledgment for all data sent via the TCP connection in the TCP data stream by first node **602** to second node **604**. Further, the first idle time period may include a time period during which first node **602** has sent one or more TCP packets to second node **604** to acknowledge all data received in a TCP data stream in the TCP connection from second node **604** to first node **602**. Detecting the first idle time period by ITP monitor component **556** may include detecting that all received data has been acknowledged and/or that all sent data has been acknowledged.

[0099] In an aspect, ITP policy component **550** may include a policy with a rule indicating that an idle time period cannot begin while a TCP packet sent by first node **602** remains unacknowledged by second node **604**. ITP policy component **550** may prevent ITP monitor component **556** from initiating detection of an idle time period while unacknowledged data exists. In a further aspect, a time duration may be associated and/or included in the policy identifying a limit to a period of waiting to receive acknowledgment of TCP packet data sent by first node **602**. In one aspect, waiting for lack of an acknowledgment for an empty packet does not delay detection of an idle time period, while in another aspect ITP monitor component **556** will not initiate detection while an empty packet remains unacknowledged.

[00100] In an aspect, idle information, received by a node may be included in and/or otherwise based on a previous idle time period header identified in a previous TCP packet received in the TCP connection by the node from a remote node prior to sending an ITP header based on the idle information by the node. For example, the first idle information received by ITP policy component **550** in first node **602** may be based on an idle time period header included a TCP packet in the TCP connection sent by second node **604** and received by first node **602** prior to sending the first TCP packet by first node **602**. The exchange of ITP headers may include a negotiation between first node **602** and second node **604.**

[00101] A duration of time may be identified based on the idle information received by ITP policy component in first node **602**. A timer may be set according to the identified duration. Detecting the first idle time period may include and/or otherwise may be based on detecting the timer expiration. ITP monitor component **556** may set a timer configured to expire in a time duration identified based on the first idle information received by ITP policy component **550**. The identified duration may be longer, shorter, or equal to a duration of the idle time period. ITP monitor component **556** may use multiple timers. ITP monitor component **556** may recalculate and/or otherwise generate a new idle duration based on the idle information at one or more times during detection of the first idle time period. That is, a duration of an idle time period may be static and/or may be dynamic, changing based on attribute information accessible during the detection process and/or based on one or more duration generators.

[00102] Message **710.1** illustrates a call and/or other communication between ITP monitor component **556** and a timer component in first node **602** to set a timer included in detecting an idle time period. Prior to the setting the timer, first node **602** and second node **602** may be active in exchanging TCP packets as illustrated by messages including message **706.2** through message **706.n**. Those skilled in the art will recognize that detection of an idle time period may not include explicitly and/or directly using a timer. ITP monitor component **556** may monitor other events as a proxy or indirect mechanism for initiating detection and detecting an idle time period.

[00103] ITP monitor component **556** may detect one or more events configured to indicate that an idle time period has occurred. For example, expiration of a timer or multiple associated timers may be interpreted by ITP monitor component **556** as marking an occurrence of the first idle time period. Message **710.2** illustrates ITP monitor component **556** receiving information identifying expiration of a timer for detecting the first idle time period.

[00104] In a further aspect, in response to detecting the expiration of a timer set as described above, a TCP keep-alive packet may be sent by first node **602** to determine whether the TCP connection is action and/or to keep the TCP connection active. When the keep-alive packet is sent, an acknowledgment timer may be set. If a timeout of the acknowledgment timer is detected indicating no TCP packet has been received acknowledging the keep-alive packet, the first idle time period may be detected in response to and/or otherwise based on the timeout of the acknowledgment timer.

[00105] In Fig. 5, ITP policy component **550** in first node **602** may provide a duration identified based on the received idle information to a keep-alive monitor component (not shown). The keep-alive monitor component may configure a keep-alive timer to expire based on the identified duration. In response to detecting expiration of the keep-alive timer, ITP monitor component **556** may invoke packet generator component **552** to generate a TCP keep-alive packet. First node **602** may send the TCP packet to second node **604**. The TCP keep-alive packet may be sent to prevent detection of an idle time period by second node **604** and/or may otherwise be sent to detect by first node **602** whether the TCP connection is active.

[00106] First node **602** may set an acknowledgment timer associated with sending the packet. If the acknowledgment timer expires before a TCP packet is received from second node **602** acknowledging the packet sent, ITP monitor component **556** may detect the idle time period in response to and/or otherwise based on expiration of the acknowledgment timer.

[0100] Receiving a packet from second node **604** included in the TCP connection is an event that, in various aspects, may directly and/or indirectly indicate the beginning of a potential idle time period. A potential idle time period may begin at some specified point during and/or after processing a received TCP packet. In one aspect, an empty TCP packet may be received while a potential idle time period is being monitored. That is, a beginning of the potential idle time period has been detected. In response to receiving the empty TCP packet, monitoring of the current potential time period may be aborted.

Further, in response to receiving the empty TCP packet, a beginning of a next potential idle time period may be detected.

[0101] In Fig. 5, ITP policy component **550** and ITP monitor component **556** may operate to reset and/or initiate detection of an idle time period in response to receiving an empty TCP packet. First node **602** may receive an empty packet. In response, ITP monitor component **556** may receive an event and/or other indication to reset detection of an idle time period. Resetting the detecting process may be based on whether or not a received empty TCP packet matches a specified condition. ITP option handler component **562** may be configured to determine whether a received empty TCP packet matches the condition. If ITP option handler component **562** determines the empty packet matches the condition, ITP monitor component **556** may be instructed to reset and/or restart detection of the first idle time period including detecting the beginning of a next potential time period.

[0102] The condition may match received TCP packets including ITP headers and/or other TCP option headers. A condition may match a port number and/or other field in TCP packet. A condition may further be based on a network address in an IP header including the TCP packet.

[0103] In a further aspect, first node **602** may receive via network **606** from second node **604** a TCP packet in the TCP connection including an second ITP header. Message **706.2** in Fig. 7 illustrates the TCP packet sent by second node **604**. ITP option handler component **562** may identify the second ITP header received from second node

604. The identified second ITP header may be for detecting by first node **602** an idle time period, during which no TCP packet in the TCP connection is received, by the first node **602** that includes data in the first TCP data stream from second node **604**. The first idle time period may be detected by ITP monitor component **556** in first node **602** based on the second ITP header and based on the received idle information. The second ITP header received in the TCP packet from second node **604** may be based on the first ITP header in the TCP packet sent in the TCP connection by first node **602** to second node **604**.

[0104] In some aspects, the first node and second node **604** may continue to exchange ITP headers. Information in the exchanged ITP headers may be based on ITP headers received in the TCP connection and/or on data accessible locally to one or both of the nodes. In some aspects, the exchange may be a negotiation while in other the exchange may simply be informational.

[0105] Returning to Fig. 2, block **210** illustrates the method further includes deactivating the TCP connection in response to detecting the first idle time period. Accordingly, a system for sharing information for detecting an idle TCP connection further includes means for deactivating the TCP connection in response to detecting the first idle time period. For example, as illustrated in Fig. 4a, the connection state component **458** is configured for deactivating the TCP connection in response to detecting the first idle time period.

[0106] Fig. 5 illustrates connection state component **558** as an adaptation of and/or analog of connection state component **458** in Fig. 4a. One or more connection state components **558** operate in execution environment **502**.

[0107] When ITP monitor component **556** in first node **602** detects an idle time period, ITP monitor component **556** may provide an indication to connection state component **558**. The indication may indicate that the idle time period for the TCP connection has been detected and/or otherwise may instruct connection state component **558** and/or other components in TCP layer component **506** to deactivate the TCP connection. Message **712** in Fig. 7 illustrates a communication to deactivate the TCP connection communicated in response to detecting the idle time period.

[0108] Deactivating the TCP connection may include closing the TCP connection. A TCP connection may be closed using a three-way handshake packet exchange described in RFC 793. Deactivating the TCP connection may include sending a TCP packet by the detecting node to reset the TCP connection. According to RFC 793, first node **602** may send a TCP packet including a reset (RST) bit set to "1" to indicate a connection reset. Deactivating the TCP connection may include, alternatively or additionally, releasing a resource allocated for maintaining and/or activating the TCP connection.

[0109] With respect to the method illustrated in Fig. 3, block **302** illustrates the method includes receiving, by a second node from a first node, a first transmission control protocol (TCP) packet in a TCP connection. Accordingly, a system for sharing

information for detecting an idle TCP connection includes means for receiving, by a second node from a first node, a first transmission control protocol (TCP) packet in a TCP connection. For example, as illustrated in Fig. 4b, the net in-port component **460** is configured for receiving, by a second node from a first node, a first transmission control protocol (TCP) packet in a TCP connection.

[0110] Fig. 5 illustrates net in-port component **560** as an adaptation of and/or analog of net in-port component **460** in Fig. 4b. One or more net in-port components **560** operate in execution environment **502**.

[0111] As described above, net in-port component **560** in Fig. 5 may operate in an instance of execution environment **502** and/or an analog included in and/or including second node **604**. The TCP packet, illustrated by message **706.1** in Fig. 7 and described above, may be received by net in-port component **560** in second node **604**. The TCP packet may include data in a second TCP data stream sent by first node **602** to second node **604** to deliver to a user of TCP layer component **506** in second node **604** such as network application **504**. Alternatively, the TCP packet may be an empty TCP packet. The received TCP packet may be a packet included in setting up the TCP connection as described above.

[0112] Returning to Fig. 3, block **304** illustrates the method further includes detecting a first idle time period header, in the first packet, identifying metadata for a first idle time period, detectable by the first node, during which no TCP packet including data in a first TCP data stream sent in the TCP connection by the second node is received by the first

node. Accordingly, a system for sharing information for detecting an idle TCP connection includes means for detecting a first idle time period header, in the first packet, identifying metadata for a first idle time period, detectable by the first node, during which no TCP packet including data in a first TCP data stream sent in the TCP connection by the second node is received by the first node. For example, as illustrated in Fig. 4b, idle time period option handler component **462** is configured for detecting a first idle time period header, in the first packet, identifying metadata for a first idle time period, detectable by the first node, during which no TCP packet including data in a first TCP data stream sent in the TCP connection by the second node is received by the first node.

[0113] Fig. 5 illustrates idle time period option handler component **562** as an adaptation of and/or analog of idle time period option handler component **462** in Fig. 4b. One or more idle time period option handler components **562** operate in execution environment **502**.

[0114] In Fig. 5, ITP option handler component **562** is operatively coupled to packet handler component **516** The TCP packet, including the ITP header sent by first node **602**, may be received, and identified as a TCP packet by net in-port component **560** operating in second node **604**. As illustrated in Fig. 5, net in-port component **560** and/or an analog of net in-port component **560** may provide and/or otherwise identify the received packet to packet handler component **516**. Packet handler component **516** may detect various portions of the TCP packet according to the TPC packet **802** structure as

illustrated in Fig. 8. Alternatively, packet handler component **516** may provide some or all of the packet to various components in TCP layer component **506** to identify portions of the packet according to the TCP specification and/or according to a particular implementation.

[0115] The ITP header sent by first node **602** may be received by and/or otherwise identified by ITP option handler component **562**. Message **708** in Fig. 7 exemplifies activation of ITP option handler component **562** for detecting the ITP header in the TCP packet received from first node **602** by second node **604**.

[0116] In various aspects, ITP option handler component **562** operating in second node **604** may detect and/or otherwise determine a duration of time for associated with detection of the idle time period by first node **602**, a duration generator, and/or a parameter for a duration generator. The first idle time period header may identify metadata including and/or identifying for detection of the first idle time period by first node **602** a duration of time, a generator for determining a duration of time, and/or an input for determining a duration of time.

[0117] Returning to Fig. 3, block **306** illustrates the method yet further includes modifying, based on the metadata, by the second node a timeout attribute associated with the TCP connection. Accordingly, a system for sharing information for detecting an idle TCP connection includes means for modifying, based on the metadata, by the second node a timeout attribute associated with the TCP connection. For example, as illustrated in Fig. 4b, the option attribute handler component **464** is configured for

modifying, based on the metadata, by the second node a timeout attribute associated with the TCP connection.

[0118] Fig. 5 illustrates option attribute handler component **564** as an adaptation of and/or analog of option attribute handler component **464** in Fig. 4b. One or more option attribute handler components **564** operate in execution environment **502**.

[0119] In an aspect, ITP option handler component **562** may one or more attribute option handler components **564** to modify one or more corresponding attributes of a keep-alive option, a TCP user timeout, a retransmission timeout, an acknowledgment timeout, and another timeout associated with the TCP connection, in response to identifying the ITP header. The modifying may be based on the content of the ITP header.

[0120] For example, ITP option handler component **562** in second node **604** may interoperate with a keep-alive attribute option handler component **564** directly and/or indirectly via settings service component **526**, connection state component **558**, and/or a keep-alive policy component (not shown) to detect the existence and state of one or more keep-alive attributes in determining whether the keep-alive option is active and/or the state of the keep-alive option.

[0121] In response to identifying the idle time period header, ITP option handler component **562** may activate, disable, and/or modify the state of the keep-alive option via interoperation with the keep-alive attribute option handler. Thus, in response to

identifying the idle information, attribute option handler component **564** may prevent and/or alter the time a keep-alive packet is sent by second node **604** to first node **602**.

[0122] Alternatively or additionally, an attribute option handler component **564** may modify an attribute associated with a packet acknowledgment option provided by TCP layer component **506** in first node **602**. Modifying a packet acknowledgment attribute may include creating the attribute, deleting the attribute, and/or modifying the attribute. Attribute option handler component **564** may interoperate with settings service component **526**, connection state component **558**, and/or an acknowledgment policy component (not shown) to detect the existence and state of one or more packet acknowledgment attributes. In response to identifying the idle information, attribute option handler component **564** may modify the state of the packet acknowledgment option. Thus, in response to identifying the idle information, attribute option handler component **564** may prevent and/or alter the time an acknowledgment is sent in a packet data from second node **604** to first node **602** in the TCP connection.

[0123] As described herein an ITP header for detecting an idle time period for a TCP connection may serve a number of purposes. A first node in a TCP connection may via an ITP header inform and/or otherwise identify to a second node in the connection one or more durations for detecting an idle time period by one or both nodes. Given multiple purposes, one or more types of ITP headers may be supported and/or an ITP header may be structured to support one or more of the described services. An exchange of ITP headers may be informational and/or may be included in negotiation between two

nodes included in a TCP connection. When used in a negotiation, an ITP header may be included in a negotiation protocol that has an identifiable end during a portion of the existence of a TCP connection or may be included in a negotiation that may remain ongoing throughout the existence of a TCP connection. Those skilled in the art will recognize the list of services in this paragraph is not exhaustive.

[0124] It should be understood that the various components illustrated in the various block diagrams represent logical components that are configured to perform the functionality described herein and may be implemented in software, hardware, or a combination of the two. Moreover, some or all of these logical components may be combined, some may be omitted altogether, and additional components may be added while still achieving the functionality described herein. Thus, the subject matter described herein may be embodied in many different variations, and all such variations are contemplated to be within the scope of what is claimed.

[0125] To facilitate an understanding of the subject matter described above, many aspects are described in terms of sequences of actions that may be performed by elements of a computer system. For example, it will be recognized that the various actions may be performed by specialized circuits or circuitry (e.g., discrete logic gates interconnected to perform a specialized function), by program instructions being executed by one or more instruction processing units, or by a combination of both. The description herein of any sequence of actions is not intended to imply that the specific order described for performing that sequence must be followed.

[0126] Moreover, the methods described herein may be embodied in executable instructions stored in a computer readable medium for use by or in connection with an instruction execution machine, system, apparatus, or device, such as a computer-based or processor-containing machine, system, apparatus, or device. As used herein, a "computer readable medium" may include one or more of any suitable media for storing the executable instructions of a computer program in one or more of an electronic, magnetic, optical, electromagnetic, and infrared form, such that the instruction execution machine, system, apparatus, or device may read (or fetch) the instructions from the computer readable medium and execute the instructions for carrying out the described methods. A non-exhaustive list of conventional exemplary computer readable media includes a portable computer diskette; a random access memory (RAM); a read only memory (ROM); an erasable programmable read only memory (EPROM or Flash memory); optical storage devices, including a portable compact disc (CD), a portable digital video disc (DVD), a high definition DVD (HD-DVD.TM.), a Blu-ray.TM. disc; and the like.

[0127] Thus, the subject matter described herein may be embodied in many different forms, and all such forms are contemplated to be within the scope of what is claimed. It will be understood that various details may be changed without departing from the scope of the claimed subject matter. Furthermore, the foregoing description is for the purpose of illustration only, and not for the purpose of limitation, as the scope of

protection sought is defined by the claims as set forth hereinafter together with any equivalents thereof entitled to.

[0128] All methods described herein may be performed in any order unless otherwise indicated herein explicitly or by context. The use of the terms "a" and "an" and "the" and similar referents in the context of the foregoing description and in the context of the following claims are to be construed to include the singular and the plural, unless otherwise indicated herein explicitly or clearly contradicted by context. The foregoing description is not to be interpreted as indicating any non-claimed element is essential to the practice of the subject matter as claimed.

I CLAIM:

1. An apparatus comprising:

a non-transitory memory storing instructions; and

one or more processors in communication with the non-transitory memory, wherein the one or more processors execute the instructions to:

identify first information;

generate, based on first information, a set up packet including a time period parameter field identifying first metadata, the set up packet for use in a protocol that is not transmission control protocol (TCP);

set up a connection, by sending, from the apparatus to a node, the set up packet to provide the first metadata to the node, for use by the node in determining a timeout attribute associated with the connection;

detect, by the apparatus, a time period during which no packet is received in the connection and processed to keep the connection active; and

in response to detecting the time period, at least partially deactivate, by the apparatus, the connection.

2. The apparatus of claim 1 wherein the apparatus is configured such that the protocol does not include a TCP-extension.

3. The apparatus of claim 1 wherein the apparatus is configured such that the protocol varies from request for comments (RFC) 793 by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a RFC 793 header of a RFC 793 connection packet sent during a RFC 793 connection after the RFC 793 connection is set up.

4. The apparatus of claim 1 wherein the apparatus is configured such that the protocol varies from TCP by including second information in a header of a connection packet sent during the connection after the connection is set up, where the second information is not included in a TCP header of a TCP connection packet sent during a TCP connection after the TCP connection is set up.

5. The apparatus of claim 1 wherein the apparatus is configured such that the set up packet is not a synchronize (SYN) packet.

6. The apparatus of claim 1 wherein the apparatus is configured such that the connection is at least partially deactivated, by releasing, by the apparatus, a resource allocated for the connection, without signaling the node in relation to the detection of the time period after detecting the time period.

7. The apparatus of claim 1 wherein the apparatus is configured such that the connection is at least partially deactivated unilaterally by the apparatus.

8. The apparatus of claim 1 wherein the apparatus is configured such that the at least partial deactivation results regardless as to whether an acknowledgement is not received by the apparatus.

9. The apparatus of claim 1 wherein the apparatus is configured such that the at least partial deactivation is in response to the detection without sending any signal after the detection to the node to cause the at least partial deactivation.

10. The apparatus of claim 1 wherein the apparatus is configured such that the time period is detected without utilizing an acknowledgement timer.

11. The apparatus of claim 1 wherein the apparatus is configured such that an end of the time period is detected without utilizing an acknowledgement timer.

12. The apparatus of claim 1 wherein the apparatus is configured such that the time period is that during which no packet is received that is unacknowledged.

13. The apparatus of claim 1 wherein the apparatus is configured such that the time period is that during which no packet is sent by the apparatus to cause the node to respond.

14. An apparatus comprising:

a non-transitory memory storing instructions; and

one or more processors in communication with the non-transitory memory, wherein the one or more processors execute the instructions to:

receive, by the apparatus from a node, a set up packet during a setup of a connection, the set up packet for use in a protocol that is not transmission control protocol (TCP);

identify first metadata in a time period parameter field in the set up packet, for a time period, where, as a result of a detection of the time period, the connection is at least partial deactivated; and

determine, based on the first metadata, a timeout attribute associated with the connection.

15. The apparatus of claim 14 wherein the apparatus is configured such that the protocol does not include a TCP-extension.

16. The apparatus of claim 14 wherein the apparatus is configured such that the protocol varies from request for comments (RFC) 793 by including information in a header of a connection packet sent during the connection after the connection is set up, where the information is not included in a RFC 793 header of a RFC 793 connection packet sent during a RFC 793 connection after the RFC 793 connection is set up.

17. The apparatus of claim 14 wherein the apparatus is configured such that the protocol varies from TCP by including information in a header of a connection packet sent during the connection after the connection is set up, where the information is not included in a TCP header of a TCP connection packet sent during a TCP connection after the TCP connection is set up.

18. The apparatus of claim 14 wherein the apparatus is configured such that the set up packet is not a synchronize (SYN) packet.

19. The apparatus of claim 14 wherein the apparatus is configured such that the connection is at least partially deactivated, by releasing, by the apparatus, a resource allocated for the connection, without signaling the node in relation to the detection of the time period after detecting the time period.

20. The apparatus of claim 14 wherein the apparatus is configured such that the connection is at least partially deactivated unilaterally by the apparatus.

21. The apparatus of claim 14 wherein the apparatus is configured such that the at least partial deactivation results regardless as to whether an acknowledgement is not received by the apparatus.

22. The apparatus of claim 14 wherein the apparatus is configured such that the time period is detected by detecting an absence of any packet being received at the apparatus and processed by the apparatus to keep the connection active.

23. The apparatus of claim 22 wherein the apparatus is configured such that the at least partial deactivation results from the detection of the absence without sending any signal after the detection of the absence to the node to cause the at least partial deactivation.

24. The apparatus of claim 22 wherein the apparatus is configured such that the absence further includes an absence of any packet being received that is unacknowledged.

25. The apparatus of claim 22 wherein the apparatus is configured such that the absence further includes an absence of any packet being sent by the apparatus to cause the node to respond.

26. The apparatus of claim 14 wherein the apparatus is configured such that the time period is detected without utilizing an acknowledgement timer.

27. The apparatus of claim 14 wherein the apparatus is configured such that an end of the time period is detected without utilizing an acknowledgement timer.

ABSTRACT

In one embodiment, an apparatus and method are provided to: receive, by the apparatus from a node, a set up packet during a setup of a connection, the set up packet for use in a protocol that is not transmission control protocol (TCP); identify first metadata in a time period parameter field in the set up packet, for a time period, where, as a result of a detection of the time period, the connection is at least partial deactivated; and determine, based on the first metadata, a timeout attribute associated with the connection.