

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2011/049000

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Box No. V

1.2 Regarding independent claim 18, document D1, which is considered to represent the most relevant state of the art, discloses (see the underlined):

a method for joining, by a first endpoint, an ongoing peer-to-peer communication session between a second endpoint and a third endpoint in a hybrid peer-to-peer network comprising (fig. 4):
- identifying, by the first endpoint, the ongoing communication session from a plurality of communication sessions (lines 1-6 in para. [0049]);
- obtaining from a server, by the first endpoint, first communications occurring between the second and third endpoints that correspond to the ongoing communication session, wherein the server is configured to receive the first communications from the first and second endpoints for recording (lines 1-12 in para. [0050]);
- establishing, by the first endpoint, a communication leg directly with the second endpoint, wherein the communication leg is capable of carrying second communications from the first endpoint to the second endpoint; and
- sending, by the first endpoint, the second communications to the second endpoint.

None of the prior art documents D1 to D4 teach or fairly suggest the feature of 'establishing, by the first endpoint, a communication leg directly with the second endpoint and sending the second communications to the second endpoint'. Accordingly, this feature is not obvious, nor can it be easily derived from each prior art document or any combination of said prior art documents by one skilled in the art. Hence, the subject matter of claim 18 is considered to be novel and to involve an inventive step in the sense of PCT Article 33(2) and 33(3).

1.3 Claim 2-17 are dependent on claim 1 and therefore meet the requirements of PCT Article 33(2) and 33(3).

1.4 Claim 19-22 are dependent on claim 18 and therefore meet the requirements of PCT Article 33(2) and 33(3).

2. Industrial Applicability

Claims 1-22 have industrial applicability and meet the requirement of PCT Article 33(4).

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference DAMA-30,937	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2011/051877	International filing date (<i>day/month/year</i>) 15 SEPTEMBER 2011 (15.09.2011)	(Earliest) Priority Date (<i>day/month/year</i>) 24 SEPTEMBER 2010 (24.09.2010)
Applicant DAMAKA, INC. et al		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

- b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).
c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (See Box No. III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 8
☐ as suggested by the applicant.
☒ as selected by this Authority, because the applicant failed to suggest a figure.
☐ as selected by this Authority, because this figure better characterizes the invention.
b. ☐ none of the figure is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/051877**A. CLASSIFICATION OF SUBJECT MATTER***H04L 12/18(2006.01)i, G06F 15/16(2006.01)i, G06F 17/28(2006.01)i*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

H04L 12/18; G06F 17/21; G06F 17/28; G10L 21/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords:convert,language,translation

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2009-0006076 A1 (JINDAL DINESH K.) 01 January 2009 See abstract: paragraphs [0017],[0023],[0030]: claims 1,2	1-20
A	US 06161082A A (GOLDBERG; RANDY G. et al.) 12 December 2000 See abstract: column 3 lines 1-6,20-25, column 5 lines 25-34; claims1,5	1-20
A	US 2010-0223047 A1 (CHRIST OLIVER) 02 September 2010 See paragraphs [0057],[0095]: claims 1,11,18,19	1-20
A	US 2010-0299150 A1 (FEIN GENE S. et al.) 25 November 2010 See abstract: paragraphs [0034],[0036]-[0039],[0071]: claims 1,11	1-20

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

13 APRIL 2012 (13.04.2012)

Date of mailing of the international search report

13 APRIL 2012 (13.04.2012)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 189 Cheongsu-ro,
Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

YANG, CHAN HO

Telephone No. 82-42-481-5689



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2011/051877

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2009-0006076 A1	01.01.2009	None	
US 06161082A A	12.12.2000	None	
US 2010-0223047 A1	02.09.2010	CN 101826072 A	08.09.2010
		EP 2226733 A1	08.09.2010
		GB 0903418 D0	08.04.2009
		GB 2468278 A	08.09.2010
		JP 2010-205268 A	16.09.2010
		US 2011-0184719 A1	28.07.2011
US 2010-0299150 A1	25.11.2010	None	

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
TIMOTHY F. BLISS

HOWISON & ARNOTT, L.L.P. P.O. BOX 741715 DALLAS
TX 75374-1715 USA

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **13 APRIL 2012 (13.04.2012)**

Applicant's or agent's file reference
DAMA-30,937

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2011/051877

International filing date (day/month/year)

15 SEPTEMBER 2011 (15.09.2011)

Priority date (day/month/year)

24 SEPTEMBER 2010 (24.09.2010)

International Patent Classification (IPC) or both national classification and IPC

H04L 12/18(2006.01)i, G06F 15/16(2006.01)i, G06F 17/28(2006.01)i

Applicant

DAMAKA, INC. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/KR
Korean Intellectual Property Office
Government Complex-Daejeon, 189
Cheongsa-ro, Seo-gu, Daejeon 302-
701, Republic of Korea
Facsimile No. 82-42-472-7140

Date of completion of this opinion

13 APRIL 2012 (13.04.2012)

Authorized officer

YANG, CHAN HO

Telephone No. 82-42-481-5689



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/051877

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
 - a. a sequence listing filed or furnished
 - ☐ on paper
 - ☐ in electronic form
 - b. time of filing or furnishing
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/051877

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-20	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: US 2009-0006076 A1 (JINDAL DINESH K.) 01 January 2009
D2: US 06161082A A (GOLDBERG; RANDY G. et al.) 12 December 2000
D3: US 2010-0223047 A1 (CHRIST OLIVER) 02 September 2010
D4: US 2010-0299150 A1 (FEIN GENE S. et al.) 25 November 2010

1. Novelty and Inventive Step

D1 and D2, which is considered to be close prior art to the subject matter of claim 1 of the present invention, discloses a method for communicating, by a first endpoint, in an ongoing peer-to-peer communication session between the first endpoint and a second endpoint in a hybrid peer-to-peer network comprising:

establishing, by the first endpoint, a communications route directly between the first endpoint and the second endpoint, wherein signaling communications are sent directly from the first endpoint to the second endpoint via a signaling path provided by the communications route (see column 3 lines 1-6, 20-25 in D2);

receiving, by the first endpoint, audio speech input in a first spoken language from a user of the first endpoint (see paragraph [0023]; claim 1 in D1);

determining, by the first endpoint, whether the audio speech input is to be translated from the first spoken language to a second spoken language (see column 5 lines 25-34 in D2); and

sending, by the first endpoint, the audio speech input to a language translation component accessible to the first endpoint via the hybrid peer-to-peer network if the audio speech input is to be translated from the first spoken language to the second spoken language, wherein the first endpoint does not send the audio speech input directly to the second endpoint if the audio speech input is to be translated from the spoken language to the second spoken language (see paragraph [0023]; claim 1 in D1).

However, the subject matter of claim 1 differs from these prior art documents in sending, by the first endpoint, the audio speech input directly to the second endpoint via the communications route if the audio speech input is not to be translated from the first spoken language to the second language. And it is not obvious to a person skilled in the art by the documents, taken alone or in combination. Therefore, claim 1 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Continued on Supplemental Box

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/051877

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Box V

Claims 2-9 are dependant on claim 1 and therefore meet the requirements of PCT Article 33(2) and (3).

The subject matter of claim 10 differs from these prior art documents in notifying, by the first endpoint, a language translation component in the hybrid peer-to-peer network of the inbound port, wherein the language translation component is accessible to the first endpoint via the hybrid peer-to-peer network, and wherein the notifying instructs the language translation component to send audio received from the endpoint to the inbound port. And it is not obvious to a person skilled in the art by the documents, taken alone or in combination. Therefore, claim 10 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Claims 11-17 are dependant on claim 10 and therefore meet the requirements of PCT Article 33(2) and (3).

The subject matter of claim 18 differs from these prior art documents in performing an authentication process with an access server in a hybrid peer-to-peer network, wherein the authentication process authorizes the first endpoint to access the hybrid peer-to-peer network. And it is not obvious to a person skilled in the art by the documents, taken alone or in combination. Therefore, claim 18 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Claims 19 and 20 are dependant on claim 18 and therefore meet the requirements of PCT Article 33(2) and (3).

2. Industrial Applicability

Claims 1-20 are industrially applicable under PCT Article 33(4).

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference DAMA-30.960	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2011/055101	International filing date (day/month/year) 06 OCTOBER 2011 (06.10.2011)	(Earliest) Priority Date (day/month/year) 11 OCTOBER 2010 (11.10.2010)
Applicant DAMAKA, INC. et al		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (See Box No. III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

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☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1
☐ as suggested by the applicant.
☒ as selected by this Authority, because the applicant failed to suggest a figure.
☐ as selected by this Authority, because this figure better characterizes the invention.
b. ☐ none of the figure is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/055101**A. CLASSIFICATION OF SUBJECT MATTER***H04L 29/06(2006.01)i, H04L 12/56(2006.01)i, H04L 12/58(2006.01)i*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

H04L 29/06; H04B 7/00; G06F 15/16; H04L 12/66; H04W 4/00; H04L 12/28

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: call, forwarding, deliver*, switchover, redirect, rerout*, peer-to-peer, P2P, SIP, session initiation protocol, invitation

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2005-0130650 A1 (THOMAS CREAMER et al.) 16 June 2005 See claims 1-3 and 6; paragraphs [34]-[40]; figures 1 and 2	1-26
A	US 2009-0088150 A1 (CHATURVEDI SIVAKUMAR et al.) 02 April 2009 See claims 1-6; paragraphs [19]-[24],[34]-[36]; figures 1,2,4 and 5	1-26
A	US 2005-0286519 A1 (SIVAKUMAR RAVIKUMAR et al.) 29 December 2005 See paragraphs [57]-[60],[89]-[92],[101]; figures 4 and 13	1-26
A	US 2010-0011111 A1 (VIZAEI MOHAMMAD) 14 January 2010 See claims 8,13 and 14; paragraphs [12],[28]-[36]; figure 1	1-26

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

21 MAY 2012 (21.05.2012)

Date of mailing of the international search report

22 MAY 2012 (22.05.2012)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
189 Cheongsa-ro, Seo-gu, Daejeon Metropolitan
City, 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

Lee Hyoung Il

Telephone No. 82-42-481-8199



INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/US2011/055101

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2005-0130650 A1	16.06.2005	CN 1630266 A	22.06.2005
		CN 1630266 C	14.05.2008
		JP 04-160951 B2	08.10.2008
		JP 2005-184820 A	07.07.2005
		US 7215959 B2	08.05.2007
US 2009-0088150 A1	02.04.2009	WO 2009-043016 A2	02.04.2009
		WO 2009-043016 A3	14.05.2009
US 2005-0286519 A1	29.12.2005	AU 2005-264013 A1	26.01.2006
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		CA 2571754 A1	26.01.2006
		CA 2676770 A1	09.08.2007
		CN 101044735 A	26.09.2007
		EP 1766919 A1	28.03.2007
		JP 04-681697 B2	10.02.2011
		JP 2008-505580 A	21.02.2008
		JP 2011-103121 A	26.05.2011
		JP 4681697 B2	11.05.2011
		MX 2007000141 A	15.04.2009
		US 2006-0039365 A1	23.02.2006
		US 2006-0050700 A1	09.03.2006
		US 2006-0095365 A1	04.05.2006
		US 2006-0120375 A1	08.06.2006
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		US 2009-0262742 A1	22.10.2009
		US 2009-0296606 A1	03.12.2009
		US 2010-0318678 A1	16.12.2010
		US 7570636 B2	04.08.2009
		US 7623476 B2	24.11.2009
		US 7623516 B2	24.11.2009
		US 7656870 B2	02.02.2010
		US 7778187 B2	17.08.2010
		US 7933260 B2	26.04.2011
		US 8000325 B2	16.08.2011
		US 8009586 B2	30.08.2011
		US 8050272 B2	01.11.2011
		US 8139578 B2	20.03.2012
		WO 2006-008589 A1	26.01.2006
		WO 2007-027478 A1	08.03.2007
		WO 2007-047554 A2	26.04.2007
		WO 2007-070670 A2	21.06.2007
		WO 2007-089717 A2	09.08.2007
		WO 2007-134260 A2	22.11.2007
		WO 2007-134261 A2	22.11.2007

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/US2011/055101

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2010-0011111 A1	14.01.2010	WO 2007-134263 A2	22.11.2007
		CN 101536481 A	16.09.2009
		EP 2057832 A1	13.05.2009
		KR 10-2009-0053924 A	28.05.2009
		WO 2008-022855 A1	28.02.2008

Form PCT/ISA/210 (patent family annex) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

TIMOTHY F. BLISS

HOWISON & ARNOTT, L.L.P. P.O. BOX 741715 DALLAS
TX 75374-1715 USA

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **22 MAY 2012 (22.05.2012)**

Applicant's or agent's file reference
DAMA-30.960

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2011/055101

International filing date (day/month/year)

06 OCTOBER 2011 (06.10.2011)

Priority date(day/month/year)

11 OCTOBER 2010 (11.10.2010)

International Patent Classification (IPC) or both national classification and IPC

H04L 29/06(2006.01)I, H04L 12/56(2006.01)I, H04L 12/58(2006.01)I

Applicant

DAMAKA, INC. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/KR
Korean Intellectual Property Office
189 Cheongsu-ro, Seo-gu, Daejeon
Metropolitan City, 302-701,
Republic of Korea
Facsimile No. 82-42-472-7140

Date of completion of this opinion

21 MAY 2012 (21.05.2012)

Authorized officer

Lee Hyoung Il

Telephone No. 82-42-481-8199



Form PCT/ISA/237 (cover sheet) (July 2011)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/055101

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:

a. a sequence listing filed or furnished

- ☐ on paper
- ☐ in electronic form

b. time of filing or furnishing

- ☐ contained in the international application as filed.
- ☐ filed together with the international application in electronic form.
- ☐ furnished subsequently to this Authority for the purposes of search.

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/055101

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-26	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-26	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-26	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: US 2005-0130650 A1 (THOMAS CREAMER et al.) 16 June 2005
D2: US 2009-0088150 A1 (CHATURVEDI SIVAKUMAR et al.) 02 April 2009
D3: US 2005-0286519 A1 (SIVAKUMAR RAVIKUMAR et al.) 29 December 2005
D4: US 2010-0011111 A1 (VIZAEI MOHAMMAD) 14 January 2010

1. Novelty and Inventive Step

1.1 Claims 1-13

The subject matter of claim 1 differs from these prior art documents in receiving an inbound call, wherein the inbound call is received via one of a cellular network and a public switched telephone network and continuing the inbound call on the one of the cellular network and the public switched telephone network on which the inbound call was received if the acknowledgement message has not been received. And it is not obvious to a person skilled in the art by the documents, taken alone or in combination. Therefore, claim 1 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Claims 2-13 are dependent on claim 1 and therefore meet the requirements of PCT Article 33(2) and (3).

1.2 Claims 14-20

The subject matter of claim 14 differs from these prior art documents in receiving a first plurality of digits identifying a first destination device and initiating an outbound call to the first destination device based on the first plurality of digits, wherein the outbound call is initiated via one of a cellular network and a public switched telephone network. And it is not obvious to a person skilled in the art by the documents, taken alone or in combination. Therefore, claim 14 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Claims 15-20 are dependent on claim 14 and therefore meet the requirements of PCT Article 33(2) and (3).

[Continued on Supplemental Box]

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/055101

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Figures 2a-2c, 10A-10B and 11A-11B do not comply with PCT Rule 11.13(k) because the different figures shall not be numbered in Arabic numerals consecutively and independently of the numbering of the sheets.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2011/055101

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

[Box V]

1.2 Claims 21-26

Claim 21 relates to an endpoint to perform the method according to claim 14. Claim 21 is considered to be novel and to involve an inventive step under PCT Article 33(2) and (3), because the subject matter of claim 14 is considered to be novel and to involve an inventive step under PCT Article 33(2) and (3).

Claims 22-26 depend on claim 21 and consequently they are also considered to be novel and to involve an inventive step under PCT Article 33(2) and (3).

2. Industrial Applicability

Claims 1-26 are industrially applicable under PCT Article 33(4).

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)
(PCT Rule 44bis.1(c))

To:

BLISS, Timothy, F.
Howison & Arnott, L.L.P.
P.O. Box 741715
Dallas, TX 75374-1715
ETATS-UNIS D'AMERIQUE

Date of mailing (<i>day/month/year</i>) 30 August 2012 (30.08.2012)		
Applicant's or agent's file reference DAMA-30,559		IMPORTANT NOTICE
International application No. PCT/US2011/024870	International filing date (<i>day/month/year</i>) 15 February 2011 (15.02.2011)	Priority date (<i>day/month/year</i>) 15 February 2010 (15.02.2010)
Applicant DAMAKA, INC. et al		

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Simin Baharlou
Facsimile No. +41 22 338 82 70	e-mail: pt09.pct@wipo.int

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DAMA-30,559	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2011/024870	International filing date (<i>day/month/year</i>) 15 February 2011 (15.02.2011)	Priority date (<i>day/month/year</i>) 15 February 2010 (15.02.2010)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DAMAKA, INC.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).																								
2.	This REPORT consists of a total of 6 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">☒</td> <td style="width: 30%;">Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	☒	Box No. I	Basis of the report	☐	Box No. II	Priority	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	☐	Box No. IV	Lack of unity of invention	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	☐	Box No. VI	Certain documents cited	☒	Box No. VII	Certain defects in the international application	☐	Box No. VIII	Certain observations on the international application
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☐	Box No. VIII	Certain observations on the international application																							
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																								

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Date of issuance of this report 21 August 2012 (21.08.2012)</td> </tr> <tr> <td style="padding: 5px;"> Authorized officer <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Simin Baharlou</div> </td> </tr> </table> e-mail: pt09.pct@wipo.int	Date of issuance of this report 21 August 2012 (21.08.2012)	Authorized officer <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Simin Baharlou</div>
Date of issuance of this report 21 August 2012 (21.08.2012)			
Authorized officer <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Simin Baharlou</div>			

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

BLISS TIMOTHY F.

HOWISON & ARNOTT, L.L.P. P.O. BOX 741715 DALLAS
TX 75374-1715 USA

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **26 OCTOBER 2011 (26.10.2011)**

Applicant's or agent's file reference
DAMA-30,559

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2011/024870

International filing date (day/month/year)

15 FEBRUARY 2011 (15.02.2011)

Priority date(day/month/year)

15 FEBRUARY 2010 (15.02.2010)

International Patent Classification (IPC) or both national classification and IPC

H04L 12/28(2006.01)i, G06F 15/173(2006.01)i, H04L 29/06(2006.01)i

Applicant

DAMAKA, INC. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/KR  Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Date of completion of this opinion 26 OCTOBER 2011 (26.10.2011)	Authorized officer KWON, Ho Young Telephone No. 82-42-481-8478 
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Form PCT/ISA/237 (cover sheet) (July 2011)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/024870

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
 - a. a sequence listing filed or furnished
 - ☐ on paper
 - ☐ in electronic form
 - b. time of filing or furnishing
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/024870

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-20	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: J. ROSENBERG et al. "Session Traversal Utilities for NAT (STUN)", draft-ietf-behave-rfc3489bis-06, March 5, 2007
D2: US 7623516 B2 (CHATURVEDI, SIVAKUMAR R. et al.) 24 November 2009
D3: US 7623476 B2 (RAVIKUMAR, SIVAKUMAR et al.) 24 November 2009
D4: US 7590758 B2 (TAKEDA, YUTAKA et al.) 15 September 2009
D5: US 2006-0182100 A1 (LI, JIN et al.) 17 August 2006

1. Novelty (PCT Article 33(2)) and Inventive Step (PCT Article 33(3))

1.1 Claims 1-5

D1 is regarded as the closest prior art to the subject matter of claim 1. The subject matter of claim 1 differs from that of D1 in that the method in claim 1 comprises "receiving, by the first endpoint, a first private presence message, a first public presence message, and a first relay presence message from the second endpoint via private, public, and relay routes, respectively, wherein the private route corresponds to a local address assigned to the first endpoint by a network address translation (NAT) device in a local network, the public route corresponds to a public address of the NAT device, and the relay route uses a reflector", "sending to the second endpoint by the first endpoint", "sending a second private presence message", "receiving a second response from the second endpoint to one of the second private, public, or relay message by the first endpoint", "selecting the private, public, or relay route by the first endpoint", and "identifying the private, public, or relay route". These features of claim 1 are not shown in any other prior art documents (D2-D5) cited in the ISR. Hence, claim 1 is considered novel under PCT Article 33(2).

Regarding inventive step, the subject matter of claim 1 is not obvious to a person skilled in the art over the documents individually or in combination. Therefore, claim 1 is considered to involve an inventive step under PCT Article 33(3).

Claims 2-5 are dependent on claim 1 and as such also meet the requirements of PCT Article 33(2) and 33(3).

1.2 Claims 6-18

D1 is regarded as the closest prior art to the subject matter of claim 6. The subject matter of claim 6 differs from that of D1 in that the method in claim 6 comprises "sending, by the first endpoint, a first presence message to the second endpoint via a first route", "sending, by the first endpoint, a second presence message to the second endpoint via a second route", and "receiving a response from the second endpoint to one of the first and second presence messages, wherein the response identifies which of the first and second presence messages is being answered by the response". These features of claim 6 are not shown in any other prior art documents (D2-D5) cited in the ISR. Hence, claim 6 is considered novel under PCT Article 33(2).

Regarding inventive step, the subject matter of claim 6 is not obvious to a person skilled in the art over the documents individually or in combination. Therefore, claim 6 is considered to involve an inventive step under PCT Article 33(3).

Claims 7-18 are dependent on claim 6 and as such also meet the requirements of PCT Article 33(2) and 33(3).

Continued on Supplemental Box

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/024870

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

According to the requirements of PCT Rule 11.13(k), the different figures shall be numbered in Arabic numerals consecutively and independently of the numbering of the sheet. This requirement is not met in view of the use of FIG. 2a, FIG. 2b, FIG. 2c, FIG. 2d, FIG. 2e, FIG. 2f, FIG. 2g, FIG. 3a, FIG. 3b, FIG. 19A, FIG. 19B, FIG. 23A, FIG. 23B.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/024870

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of :

Box V

1.3 Claims 19-20

D1 is regarded as the closest prior art to the subject matter of claim 19. The subject matter of claim 19 differs from that of D1 in that the endpoint in claim 19 comprises "sending first and second presence messages via first and second routes", "receiving a first response from the other endpoint to one of the first and second presence messages", "selecting the first or second route that corresponds to the first or second presence message, respectively", "receiving a third presence message via one of the first and second routes", "sending a second response to the third presence message to the other endpoint via the first or second route". These features of claim 19 are not shown in any other prior art documents (D2-D5) cited in the ISR. Hence, claim 19 is considered novel under PCT Article 33(2).

Regarding inventive step, the subject matter of claim 19 is not obvious to a person skilled in the art over the documents individually or in combination. Therefore, claim 19 is considered to involve an inventive step under PCT Article 33(3).

Claims 20 is dependent on claim 19 and as such also meets the requirements of PCT Article 33(2) and 33(3).

2. Industrial Applicability (PCT Article 33(4))

The subject matter of claims 1-20 has industrial applicability and meets the requirement of PCT Article 33(4).

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)
(PCT Rule 44bis.1(c))

To:

BLISS, Timothy, F.
Howison & Arnott, L.L.P.
P.O. Box 741715
Dallas, TX 75374-1715
ETATS-UNIS D'AMERIQUE

Date of mailing (<i>day/month/year</i>) 30 August 2012 (30.08.2012)		
Applicant's or agent's file reference DAMA-30,562		IMPORTANT NOTICE
International application No. PCT/US2011/024891	International filing date (<i>day/month/year</i>) 15 February 2011 (15.02.2011)	
Priority date (<i>day/month/year</i>) 15 February 2010 (15.02.2010)		
Applicant DAMAKA,INC et al		

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Philippe Bécamel
Facsimile No. +41 22 338 82 70	e-mail: pt01.pct@wipo.int

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DAMA-30,562	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2011/024891	International filing date (<i>day/month/year</i>) 15 February 2011 (15.02.2011)	Priority date (<i>day/month/year</i>) 15 February 2010 (15.02.2010)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DAMAKA, INC		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).																								
2.	This REPORT consists of a total of 5 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">☒</td> <td style="width: 30%;">Box No. I</td> <td style="width: 60%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	☒	Box No. I	Basis of the report	☐	Box No. II	Priority	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	☐	Box No. IV	Lack of unity of invention	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	☐	Box No. VI	Certain documents cited	☐	Box No. VII	Certain defects in the international application	☐	Box No. VIII	Certain observations on the international application
☒	Box No. I	Basis of the report																							
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4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																								

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Date of issuance of this report 21 August 2012 (21.08.2012)</td> </tr> <tr> <td style="padding: 2px;">Authorized officer Philippe Bécamel e-mail: pt01.pct@wipo.int</td> </tr> </table>	Date of issuance of this report 21 August 2012 (21.08.2012)	Authorized officer Philippe Bécamel e-mail: pt01.pct@wipo.int
Date of issuance of this report 21 August 2012 (21.08.2012)			
Authorized officer Philippe Bécamel e-mail: pt01.pct@wipo.int			

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

BLISS TIMOTHY F.

HOWISON & ARNOTT, L.L.P. P.O. BOX 741715 DALLAS
TX 75374-1715 USA

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **25 NOVEMBER 2011 (25.11.2011)**

Applicant's or agent's file reference
DAMA-30,562

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2011/024891

International filing date (day/month/year)

15 FEBRUARY 2011 (15.02.2011)

Priority date(day/month/year)

15 FEBRUARY 2010 (15.02.2010)

International Patent Classification (IPC) or both national classification and IPC

H04L 29/06(2006.01)i, H04L 12/28(2006.01)i, H04L 12/56(2006.01)i

Applicant

DAMAKA,INC et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
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2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

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For further options, see Form PCT/ISA/220.

<p>Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongsa-ro, Seo-gu, Daejeon 302- 701, Republic of Korea Facsimile No. 82-42-472-7140</p>	<p>Date of completion of this opinion 24 NOVEMBER 2011 (24.11.2011)</p>	<p>Authorized officer Kim Sun Jong Telephone No.82-42-481-8260</p>
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Form PCT/ISA/237 (cover sheet) (July 2011)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/024891

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
 - a. a sequence listing filed or furnished
 - ☐ on paper
 - ☐ in electronic form
 - b. time of filing or furnishing
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/024891

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-20	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: US 2007-0019545 A1 (WADE R. ALT et al.) 25 January 2007
D2: US 2005-0208947 A1 (PRADEEP BAHL) 22 September 2005
D3: US 2007-0297430 A1 (PETRI NYKANEN et al.) 27 December 2007
D4: US 2003-0214955 A1 (JUN-HYEONG KIM) 20 November 2003
D5: US 2005-0270992 A1 (AJIT SANZGIRI et al.) 08 December 2005

1. Novelty (PCT Article 33(2)) and Inventive Step (PCT Article 33(3))

D1 discloses a method for providing packetized communication services, the method comprising: receiving a request from a first endpoint of a first domain for establishing a communication session with a second endpoint of a second domain; and establishing a tunnel by a network address translation server to support the communication session, the network address translation server being controlled by a service provider as part of a managed communication service, the tunnel traversing a first firewall and a first network address translator of the first domain and a second firewall and a second network address translator of the second domain to reach the second endpoint; and encrypting the communication session for transport via the tunnel.

D2 discloses a method and mobile node that facilitate persisting virtual private network structures across multiple network addresses assigned to the mobile node. The method includes initially setting up a virtual private network tunnel between a mobile node and a virtual private network tunnel server.

D3 discloses a communication network for providing seamless peer-to-peer connectivity between nodes of different communication network environments, the communication network comprising at least one tunneling server comprising an access unit for providing access to the communication network and an addressing unit for assigning a dynamic address of a first addressing scheme routable in the communication network to a node connecting itself to the tunneling server, the node having a fixed address of a second addressing scheme, and storing at runtime an association between the fixed address of the second addressing scheme and the dynamic address of the first addressing scheme.

D4 discloses a network connection apparatus for communicating between a network device located in a first private network and a second private network located outside the first private network. The apparatus includes an address acquisition module capable of acquiring a public IP address of a network management device from a DNS based on a domain name of the network management device of the second private network.

D5 discloses a method for transferring information in a digital network, wherein the network includes a router, an access point, a user device, and a plurality of other devices all coupled to the network, the method comprising creating a multipoint tunnel communication mode to transfer information from the user device to at least one of the other devices; using a routing configuration to route communications over the multipoint tunnel; and modifying the routing configuration in response to a discovered host.

Continued on Supplemental Box

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/024891

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of :

Box V

1.1 In regard to claim 1, none of the documents D1 to D5 nor any combination thereof teaches or fairly suggests the features wherein "determining identifies that none of a private interface, a public interface, and a relay interface are available when using the first message protocol" and wherein "the private interface corresponds to a local address assigned to the first endpoint by a NAT device in a local network, the public interface corresponds to a public address of the NAT device that represents the first endpoint in networks outside of the local network, and the relay interface corresponds to a reflector located outside of the local network". Accordingly, it would not have been obvious to a person skilled in the art to apply the knowledge of D1 to D5 in order to create the method for establishing a peer-to-peer communication session between first and second endpoints according to claim 1. Therefore, claim 1 meets the requirements of PCT Article 33(2) and 33(3).

1.2 The features of claim 9 essentially correspond to those of claim 1 in that the former are described from the viewpoint of a tunneling server and the latter from that of a first endpoint. Therefore, claim 9 meets the requirements of PCT Article 33(2) and 33(3) for the same reasoning as given for claim 1.

1.3 The features of claim 15 essentially correspond to those of claim 1 except that their invention categories are different. Therefore, claim 15 meets the requirements of PCT Article 33(2) and 33(3) for the same reasoning as given for claim 1.

1.4 Claims 2-8, 10-14, and 16-20 are dependent on claims 1, 9, and 15, respectively, and therefore meet the requirements of PCT Article 33(2) and 33(3).

2. Industrial Applicability (PCT Article 33(4))

Claims 1-20 have industrial applicability and meet the requirement of PCT Article 33(4).

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)
(PCT Rule 44bis.1(c))

To:

BLISS, Timothy, F.
Howison & Arnott, L.L.P.
P.O.Box 741715
Dallas, TX 75374-1715
ETATS-UNIS D'AMERIQUE

Date of mailing (<i>day/month/year</i>) 04 October 2012 (04.10.2012)		
Applicant's or agent's file reference DAMA-30,563		IMPORTANT NOTICE
International application No. PCT/US2011/028685	International filing date (<i>day/month/year</i>) 16 March 2011 (16.03.2011)	Priority date (<i>day/month/year</i>) 19 March 2010 (19.03.2010)
Applicant DAMAKA, INC. et al		

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Nora Lindner
Facsimile No. +41 22 338 82 70	e-mail: pt03.pct@wipo.int

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DAMA-30,563	FOR FURTHER ACTION		See item 4 below
International application No. PCT/US2011/028685	International filing date (<i>day/month/year</i>) 16 March 2011 (16.03.2011)	Priority date (<i>day/month/year</i>) 19 March 2010 (19.03.2010)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant DAMAKA, INC.			

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).																								
2.	This REPORT consists of a total of 5 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 5%; text-align: center;">☒</td> <td style="width: 35%;">Box No. I</td> <td style="width: 60%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	☒	Box No. I	Basis of the report	☐	Box No. II	Priority	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	☐	Box No. IV	Lack of unity of invention	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	☐	Box No. VI	Certain documents cited	☐	Box No. VII	Certain defects in the international application	☒	Box No. VIII	Certain observations on the international application
☒	Box No. I	Basis of the report																							
☐	Box No. II	Priority																							
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability																							
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☐	Box No. VII	Certain defects in the international application																							
☒	Box No. VIII	Certain observations on the international application																							
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																								

<p style="text-align: center;">The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. +41 22 338 82 70</p>	<p>Date of issuance of this report 25 September 2012 (25.09.2012)</p> <hr/> <p>Authorized officer</p> <p style="text-align: center; font-size: 1.2em;">Nora Lindner</p> <p>e-mail: pt03.pct@wipo.int</p>
--	--

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

BLISS TIMOTHY F.

HOWISON & ARNOTT, L.L.P. P.O.BOX 741715 DALLAS
TX 75374-1715 USA

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **09 NOVEMBER 2011 (09.11.2011)**

Applicant's or agent's file reference
DAMA-30,563

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2011/028685

International filing date (day/month/year)

16 MARCH 2011 (16.03.2011)

Priority date(day/month/year)

19 MARCH 2010 (19.03.2010)

International Patent Classification (IPC) or both national classification and IPC

H04L 9/32(2006.01)i, H04L 29/06(2006.01)i, H04L 12/28(2006.01)i, H04L 12/56(2006.01)i

Applicant

DAMAKA, INC. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

<p>Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongsa-ro, Seo-gu, Daejeon 302- 701, Republic of Korea Facsimile No. 82-42-472-7140</p> 	<p>Date of completion of this opinion 08 NOVEMBER 2011 (08.11.2011)</p>	<p>Authorized officer Yang, Jong Phil Telephone No.82-42-481-8595</p> 
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Form PCT/ISA/237 (cover sheet) (July 2011)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/028685

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
 - a. a sequence listing filed or furnished
 - ☐ on paper
 - ☐ in electronic form
 - b. time of filing or furnishing
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/028685

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-20	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: US 2008-0080392 A1 (WALSH, RICHARD J et al.) 03 April 2008
D2: US 2006-0218624 A1 (RAVIKUMAR, SIVAKUMAR et al.) 28 September 2006
D3: US 2009-0300673 A1 (BACHET, FRANCK et al.) 03 December 2009

1. Novelty and Inventive Step

The subject matter of claims 1, 12 and 18 differs from the documents D1-D3 in that a mapped endpoint lacks the functionality needed to communicate directly with a peer-to-peer network (or the mapped endpoint is incompatible with the peer-to-peer network). Accordingly, claims 1, 12 and 18 are not anticipated by any of the documents, nor are they obvious to a person skilled in the art over the documents individually or in combination.

Thus, **claims 1, 12 and 18 meet the requirements of PCT Article 33(2) and 33(3) with respect to novelty and inventive step, and claims 2-11, 13-17 and 19-20 comply with PCT Article 33(2) and 33(3) as they are dependent on claims 1, 12 and 18, respectively.**

2. Industrial Applicability

Claims 1-20 are industrially applicable under PCT Article 33(4).

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/028685

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 11, dependent on claim 1, is worded in reference to a method step of claim 1, "sending a message by the virtual endpoint to the mapped endpoint". However, said method step has not been worded in claim 1. Therefore, claim 11 does not meet the requirements of PCT Article 6.

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)
(PCT Rule 44bis.1(c))

To:

BLISS, Timothy, F.
Howison & Arnott, L.L.P.
P.O.Box 741715
Dallas, TX 75374-1715
ETATS-UNIS D'AMERIQUE

Date of mailing (<i>day/month/year</i>) 26 October 2012 (26.10.2012)		
Applicant's or agent's file reference DAMA-30,572		IMPORTANT NOTICE
International application No. PCT/US2011/031245	International filing date (<i>day/month/year</i>) 05 April 2011 (05.04.2011)	Priority date (<i>day/month/year</i>) 16 April 2010 (16.04.2010)
Applicant DAMAKA, INC. et al		

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Athina Nickitas-Etienne e-mail: pt04.pct@wipo.int
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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DAMA-30,572	FOR FURTHER ACTION		See item 4 below
International application No. PCT/US2011/031245	International filing date (<i>day/month/year</i>) 05 April 2011 (05.04.2011)	Priority date (<i>day/month/year</i>) 16 April 2010 (16.04.2010)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant DAMAKA, INC.			

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).		
2.	This REPORT consists of a total of 8 sheets, including this cover sheet.		
	In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.		
3.	This report contains indications relating to the following items:		
	☒	Box No. I	Basis of the report
	☐	Box No. II	Priority
	☒	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
	☐	Box No. IV	Lack of unity of invention
	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	☐	Box No. VI	Certain documents cited
	☐	Box No. VII	Certain defects in the international application
	☒	Box No. VIII	Certain observations on the international application
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).		

	Date of issuance of this report 16 October 2012 (16.10.2012)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Athina Nickitas-Etienne
Facsimile No. +41 22 338 82 70	e-mail: pt04.pct@wipo.int

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

BLISS TIMOTHY F.

HOWISON & ARNOTT, L.L.P. P.O.BOX 741715 DALLAS
TX 75374-1715 USA

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **26 DECEMBER 2011 (26.12.2011)**

Applicant's or agent's file reference
DAMA-30,572

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2011/031245

International filing date (day/month/year)

05 APRIL 2011 (05.04.2011)

Priority date(day/month/year)

16 APRIL 2010 (16.04.2010)

International Patent Classification (IPC) or both national classification and IPC

H04L 29/06(2006.01)i, H04L 12/66(2006.01)i, H04L 12/46(2006.01)i

Applicant

DAMAKA, INC. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/KR  Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongsa-ro, Seo-gu, Daejeon 302- 701, Republic of Korea Facsimile No. 82-42-472-7140	Date of completion of this opinion 26 DECEMBER 2011 (26.12.2011)	Authorized officer Kim Sun Jong Telephone No.82-42-481-8260 
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Form PCT/ISA/237 (cover sheet) (July 2011)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/031245

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
 - a. a sequence listing filed or furnished
 - ☐ on paper
 - ☐ in electronic form
 - b. time of filing or furnishing
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/031245

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 7

because:

☐ the said international application, or the said claims Nos. _____
relate to the following subject matter which does not require an international search (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 7
are so unclear that no meaningful opinion could be formed (*specify*):

Claim 7, dependent on claim 1, relates to a method that an enterprise network performs, but claim 1 relates to an enterprise network. As there is an inconsistency in the matter for which protection is sought, claim 7 does not meet the requirements of PCT Article 6.

☐ the claims, or said claims Nos. _____ are so inadequately supported
by the description that no meaningful opinion could be formed (*specify*):

☒ no international search report has been established for said claims Nos. 7

☐ a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit:

☐ furnish a sequence listing on paper complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in a form and manner acceptable to it.

☐ furnish a sequence listing in electronic form complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in a form and manner acceptable to it.

☐ pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rule 13ter.1(a) or (b).

☐ See Supplemental Box for further details.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/031245

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-6,8-21	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-6,8-21	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-6,8-21	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: EP 1988698 A1 (RESEARCH IN MOTION LIMITED) 05 November 2008
D2: US 2009-0052399 A1 (A. SILVER et al.) 26 February 2009
D3: US 2007-0206563 A1 (A. SILVER et al.) 06 September 2007
D4: EP 1988697 A1 (RESEARCH IN MOTION LIMITED) 05 November 2008

1. Novelty and Inventive step

1.1 Claim 1 relates to an enterprise network comprising:

- an enterprise private branch exchange (PBX) having a pilot number associated therewith, wherein the enterprise PBX is configured to communicate signaling information with a client of the enterprise network when the client is positioned in a cellular network that is separate from the enterprise network and is outside of the enterprise network's control, and wherein the enterprise PBX is further configured to communicate signaling information with an external device coupled to a PSTN that is external to the enterprise network;
- an enterprise IP-Public Switched Telephone Network (PSTN) media gateway configured to provide a first media path between the client and the enterprise IP-PSTN media gateway when the client is positioned in the cellular network, and further configured to provide a second media path between the enterprise IP-PSTN media gateway and the external device;
- a voice call continuity (VCC) Session Initiation Protocol (SIP) server configured to communicate with the enterprise PBX in order to perform signaling functions for the client via the enterprise PBX when the client is positioned in the cellular network, and further configured to communicate signaling information directly with the client when the client is positioned in an IP network that is separate from the enterprise network and is outside of the enterprise network's control; and
- a VCC media gateway configured to communicate with the enterprise IP-PSTN media gateway and the VCC SIP server and to receive digits corresponding to a destination number associated with the external device from the client after the client places a call to the pilot number, further configured to anchor the first and second media paths, and further configured to provide a third media path directly to the client when the client is positioned in the IP network and to anchor the third media path.

None of the prior art documents D1 to D4 teach or fairly suggest the features of said enterprise network of claim 1, and the features of claim 1 cannot be easily derived from each prior art document or any combination thereof by one skilled in the art. Hence, the subject matter of claim 1 is considered to be novel and to involve an inventive step in the sense of PCT Article 33(2) and 33(3).

1.2 Claims 2-5 are dependent on claim 1 and therefore meet the requirements of PCT Article 33(2) and 33(3).

Continued on Supplemental Box

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/031245

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 7, dependent on claim 1, relates to a method that an enterprise network performs, but claim 1 relates to an enterprise network. As there is an inconsistency in the matter for which protection is sought, claim 7 does not meet the requirements of PCT Article 6.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/031245

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Box V

1.3 Claim 6 relates to a method for use within an enterprise network comprising:

- receiving, by the enterprise network, a call request at a pilot number of the enterprise network from a first device that is a client of the enterprise network, wherein the enterprise network designates a call received at the pilot number as a request for a voice call continuity (VCC) communication session, and wherein the first device is located in a first communication network that is external to the enterprise network and not controlled by the enterprise network;
- receiving, by the enterprise network, a plurality of digits from the first device, wherein the plurality of digits provide contact information corresponding to a second device that is located in a second communication network that is external to the enterprise network and not controlled by the enterprise network;
- performing, by the enterprise network, signaling with the first device and the second device to establish the communication session between the first and second devices, wherein the establishment of the communication session is controlled by the enterprise network;
- establishing, by the enterprise network, a first media path between the enterprise network and the first device, wherein the first media path is anchored on a media gateway within the enterprise network; and
- establishing, by the enterprise network, a second media path between the enterprise network and the second device, wherein the second media path is anchored on the media gateway, and wherein the first and second media paths connect the first and second devices for the communication session.

None of the prior art documents D1 to D4 teach or fairly suggest the features of said method of claim 6, and the features of claim 6 cannot be easily derived from each prior art document or any combination thereof by one skilled in the art. Hence, the subject matter of claim 6 is considered to be novel and to involve an inventive step in the sense of PCT Article 33(2) and 33(3).

1.4 Claims 8-15 are dependent on claim 6 and therefore meet the requirements of PCT Article 33(2) and 33(3).

1.5 Claim 16 relates to a method for use within an enterprise network comprising:

- receiving, by the enterprise network, a call at a pilot number of the enterprise network from a second device that is not a client of the enterprise network, wherein the enterprise network designates a call received at the pilot number as a request for a voice call continuity (VCC) communication session, wherein the call identifies a first device that is a client of the enterprise network as a destination, and wherein the first and second devices are both located in communication networks that are external to the enterprise network and are not controlled by the enterprise network;
- identifying, by the enterprise network, whether the first device is registered with the enterprise network as available to the enterprise network via an Internet Protocol (IP) network;
- performing, by the enterprise network, signaling with the first device and the second device to establish the communication session between the first and second devices, wherein the establishment of the communication session is controlled by the enterprise network;
- establishing, by the enterprise network, a first media path between the enterprise network and the first device, wherein the first media path is anchored on a media gateway within the enterprise network, and wherein the first media path is a cellular bearer path if the first device is not registered as available via the IP network and is an IP bearer path if the first device is registered as available via the IP network; and
- establishing, by the enterprise network, a second media path between the enterprise network and the second device, wherein the second media path is anchored on the media gateway, wherein the first and second media paths connect the first and second devices for the communication session.

None of the prior art documents D1 to D4 teach or fairly suggest the features of said method of claim 16, and the features of claim 16 cannot be easily derived from each prior art document or any combination thereof by one skilled in the art. Hence, the subject matter of claim 16 is considered to be novel and to involve an inventive step in the sense of PCT Article 33(2) and 33(3).

Continued on Supplemental Box

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/031245

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of :

Box V

1.6 Claims 17-21 are dependent on claim 16 and therefore meet the requirements of PCT Article 33(2) and 33(3).

2. Industrial Applicability

Claims 1-6 and 8-21 have industrial applicability and meet the requirement of PCT Article 33(4).

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)
(PCT Rule 44bis.1(c))

To:

BLISS, Timothy, F.
Howison & Arnott, LLP
P.O. Box 741715
Dallas, TX 75374-1715
ETATS-UNIS D'AMERIQUE

Date of mailing (<i>day/month/year</i>) 11 October 2012 (11.10.2012)		
Applicant's or agent's file reference DAMA-30,568		IMPORTANT NOTICE
International application No. PCT/US2011/029954	International filing date (<i>day/month/year</i>) 25 March 2011 (25.03.2011)	Priority date (<i>day/month/year</i>) 29 March 2010 (29.03.2010)
Applicant DAMAKA, INC. et al		

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Yukari Nakamura
Facsimile No. +41 22 338 82 70	e-mail: pt07.pct@wipo.int

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DAMA-30,568	FOR FURTHER ACTION See item 4 below	
International application No. PCT/US2011/029954	International filing date (<i>day/month/year</i>) 25 March 2011 (25.03.2011)	Priority date (<i>day/month/year</i>) 29 March 2010 (29.03.2010)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DAMAKA, INC.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).																									
2.	This REPORT consists of a total of 4 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																									
3.	<p>This report contains indications relating to the following items:</p> <table border="0"> <tr> <td>☒</td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td>☐</td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td>☐</td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td>☐</td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td>☒</td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td>☐</td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td>☐</td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td>☐</td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>		☒	Box No. I	Basis of the report	☐	Box No. II	Priority	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	☐	Box No. IV	Lack of unity of invention	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	☐	Box No. VI	Certain documents cited	☐	Box No. VII	Certain defects in the international application	☐	Box No. VIII	Certain observations on the international application
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☐	Box No. VIII	Certain observations on the international application																								
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																									

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Date of issuance of this report 02 October 2012 (02.10.2012)
	Authorized officer <p style="text-align: center;">Yukari Nakamura</p> e-mail: pt07.pct@wipo.int

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

BLISS TIMOTHY F.

HOWISON & ARNOTT, L.L.P. P.O. BOX 741715 DALLAS
TX 75374-1715 USA

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **24 NOVEMBER 2011 (24.11.2011)**

Applicant's or agent's file reference
DAMA-30,568

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2011/029954

International filing date (day/month/year)

25 MARCH 2011 (25.03.2011)

Priority date(day/month/year)

29 MARCH 2010 (29.03.2010)

International Patent Classification (IPC) or both national classification and IPC

H04L 29/06(2006.01)i, H04L 12/28(2006.01)i, H04L 12/56(2006.01)i, H04L 9/32(2006.01)i

Applicant

DAMAKA, INC. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

<p>Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongsa-ro, Seo-gu, Daejeon 302- 701, Republic of Korea Facsimile No. 82-42-472-7140</p> 	<p>Date of completion of this opinion 24 NOVEMBER 2011 (24.11.2011)</p>	<p>Authorized officer Kim Sun Jong Telephone No.82-42-481-8260</p> 
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Form PCT/ISA/237 (cover sheet) (July 2011)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/029954

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
 - a. a sequence listing filed or furnished
 - ☐ on paper
 - ☐ in electronic form
 - b. time of filing or furnishing
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/029954

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-20	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: US 2009-0003322 A1 (ISUMI, SHINYA) 01 January 2009
D2: US 2009-0327516 A1 (AMISHIMA, MAKI et al.) 31 December 2009
D3: EP 1848163 A1 (SHARP KABUSHIKI KAISHA) 24 October 2007
D4: US 2006-0187926 A1 (IMAI, NAOKI) 24 August 2006

1. Novelty (PCT Article 33(2)) and Inventive Step (PCT Article 33(3))

1.1. In regard to claim 10, document D1, which is considered to represent the most relevant state of the art, discloses (the references in parentheses applying to this document):

A method for sweeping an active session exiting between a first endpoint and a second endpoint from the first endpoint to a third endpoint (see 'change the first communication to the second communication' in claim 1), the method comprising:
receiving, by the first end point, a go away message directly from the third end point (see 'receiving a call instruction' in claim 2); and
transferring, by the first endpoint, session information to the third endpoint, wherein the session information includes information needed by the third endpoint to enter the active session with the second endpoint (see 'employing the coding scheme stored in the memory to perform ... call setting between the second and third IP phones' in claim 2).

However, D1 does not explicitly disclose the features of checking, by the first endpoint, a policy associated with the first endpoint to determine an action to be taken upon receipt of the go away message; and identifying, by the first endpoint, that the first endpoint is engaged in an active session with the second endpoint. In addition, these features of claim 10 are not disclosed in any other documents cited in the ISR, nor would they be obvious to a person skilled in the art. Therefore, claim 10 meets the requirements of PCT Article 33(2) and 33(3) with respect to novelty and inventive step.

1.2. Claims 1 and 18 include the essential features of claim 10, and the features of claims 1 and 18 essentially correspond to those defined in claim 10. Therefore, claims 1 and 18 meet the requirements of PCT Article 33(2) and 33(3) with respect to novelty and inventive step.

1.3. Claims 2-9, 11-17, and 19-20 are dependent on claims 1, 10, and 18, respectively, and therefore meet the requirements of PCT Article 33(2) and 33(3).

2. Industrial Applicability (PCT Article 33(4))

Claims 1-20 have industrial applicability and meet the requirement of PCT Article 33(4).

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)
(PCT Rule 44bis.1(c))

To:

BLISS, Timothy, F.
Howison & Arnott, L.L.P.
P.O.Box 741715
Dallas, TX 75374-1715
ETATS-UNIS D'AMERIQUE

Date of mailing (<i>day/month/year</i>) 08 November 2012 (08.11.2012)		
Applicant's or agent's file reference DAMA-30,746		IMPORTANT NOTICE
International application No. PCT/US2011/031246	International filing date (<i>day/month/year</i>) 05 April 2011 (05.04.2011)	Priority date (<i>day/month/year</i>) 29 April 2010 (29.04.2010)
Applicant DAMAKA, INC. et al		

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Athina Nickitas-Etienne
Facsimile No. +41 22 338 82 70	e-mail: pt04.pct@wipo.int

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DAMA-30,746	FOR FURTHER ACTION		See item 4 below
International application No. PCT/US2011/031246	International filing date (<i>day/month/year</i>) 05 April 2011 (05.04.2011)	Priority date (<i>day/month/year</i>) 29 April 2010 (29.04.2010)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant DAMAKA, INC.			

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).		
2.	This REPORT consists of a total of 4 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.		
3.	This report contains indications relating to the following items:		
	☒	Box No. I	Basis of the report
	☐	Box No. II	Priority
	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
	☐	Box No. IV	Lack of unity of invention
	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	☐	Box No. VI	Certain documents cited
	☐	Box No. VII	Certain defects in the international application
	☐	Box No. VIII	Certain observations on the international application
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).		

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland		Date of issuance of this report 30 October 2012 (30.10.2012)
Facsimile No. +41 22 338 82 70		Authorized officer Athina Nickitas-Etienne
Form PCT/IB/373 (January 2004)		e-mail: pt04.pct@wipo.int

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

BLISS TIMOTHY F.

HOWISON & ARNOTT, L.L.P. P.O.BOX 741715 DALLAS
TX 75374-1715 USA

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **28 DECEMBER 2011 (28.12.2011)**

Applicant's or agent's file reference
DAMA-30,746

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2011/031246

International filing date (day/month/year)

05 APRIL 2011 (05.04.2011)

Priority date(day/month/year)

29 APRIL 2010 (29.04.2010)

International Patent Classification (IPC) or both national classification and IPC

H04L 29/06(2006.01)i, H04L 12/56(2006.01)i, H04L 12/28(2006.01)i

Applicant

DAMAKA, INC. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

<p>Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongsa-ro, Seo-gu, Daejeon 302- 701, Republic of Korea Facsimile No. 82-42-472-7140</p> 	<p>Date of completion of this opinion 27 DECEMBER 2011 (27.12.2011)</p>	<p>Authorized officer YANG, CHAN HO Telephone No.82-42-481-5689</p> 
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Form PCT/ISA/237 (cover sheet) (July 2011)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/031246

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
 - a. a sequence listing filed or furnished
 - ☐ on paper
 - ☐ in electronic form
 - b. time of filing or furnishing
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/031246

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-24	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-24	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-24	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: US 2005-0286519 A1 (SIVAKUMAR RAVIKUMAR et al.) 29 December 2005
D2: US 2006-0203750 A1 (SIVAKUMAR RAVIKUMAR et al.) 14 September 2006
D3: US 2006-0120375 A1 (SIVAKUMAR RAVIKUMAR et al.) 08 June 2006
D4: US 2007-0165629 A1 (SIVAKUMAR CHATURVEDI et al.) 19 July 2007

(1) Novelty (N) and Inventive Step (IS)

The subject matter of claim 1, 10, and 18 differs from these prior art documents in establishing, by the first endpoint, at least one media route with the second endpoint to carry media for the call, wherein the at least one media route is established using the peer-to-peer hybrid network and not the third party instant message system. And it is not obvious to a person skilled in the art by the documents, taken alone or in combination. Therefore, claim 1, 10, and 18 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Claims 2-9 are dependant on claim 1 and therefore meet the requirements of PCT Article 33(2) and (3).

Claims 11-17 are dependant on claim 10 and therefore meet the requirements of PCT Article 33(2) and (3).

Claims 19-24 are dependant on claim 18 and therefore meet the requirements of PCT Article 33(2) and (3).

(2) Industrial Applicability (IA)

Claims 1-24 are industrially applicable under PCT Article 33(4).

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

To:

Timothy F. Bliss
Howison & Arnott, L.L.P.
P.O. Box 741715
Dallas, Texas 75374-1715
United States of America

Date of mailing (day/month/year) 18 October 2012 (18.10.2012)	
Applicant's or agent's file reference DAMA-31343	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/US 2012/046026	International filing date (day/month/year) 10 July 2012 (10.07.2012)
Applicant DAMAKA, INC. et al.	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.
Filing of amendments and statement under Article 19:
 The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):
When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.
Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes
 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70
 For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004–9.011.
2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3. ☐ With regard to any protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
 - ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.
 - ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.
4. **Reminders**
 The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.
 Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90bis.1 and 90bis.3).
 Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.
 In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.
 For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ FIPS Russia, 123995, Moscow, G-59, GSP-5, Berezhkovskaya nab., 30-1	Authorized officer  L. Tsohan
Facsimile No. +7 (499) 243-33-37	Telephone No. 495-531-64-81

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference DAMA-31343	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US 2012/046026	International filing date (<i>day/month/year</i>) 10 July 2012 (10.07.2012)	(Earliest) Priority Date (<i>day/month/year</i>) 15 July 2011 (15.07.2011)
Applicant DAMAKA, INC. et al.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found **unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the drawings to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☒ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 2012/046026

A. CLASSIFICATION OF SUBJECT MATTER

H04L 12/56 (2006.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

H04L 12/56, 12/24, 12/26, H04W 24/00, 28/00, 28/02, H04L 1/00, 1/16, 29/06

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WIPO, Esp@cenet, USPTO, PatSearch

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2006/064047 A1 (INTERNATIONAL BUSINESS MACHINES CORPORATION et al.) 22.06.2006	1-16
A	EP 1638275 A2 (WECOMM LIMITED) 22.03.2006	1-16
A	EP 1603339 A1 (STMICROELECTRONICS S.R.L.) 07.12.2005	1-16

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"F" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

24 September 2012 (24.09.2012)

Date of mailing of the international search report

18 October 2012 (18.10.2012)

Name and mailing address of the ISA/ PIPS
Russia, 123995, Moscow, G-59, GSP-5,
Berezhkovskaya nab., 30-1

Authorized officer

K. Raskovalev

Facsimile No. +7 (499) 243-33-37

Telephone No. (495)531-64-81

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

From the INTERNATIONAL SEARCHING AUTHORITY

To:

Timothy F. Bliss
Howison & Arnott, L.L.P.
P.O. Box 741715
Dallas, Texas 75374-1715
United States of America

Date of mailing (day/month/year) 18 October 2012 (18.10.2012)		
Applicant's or agent's file reference DAMA-31343		FOR FURTHER ACTION See paragraph 2 below
International application No. PCT/US 2012/046026	International filing date (day/month/year) 10 July 2012 (10.07.2012)	Priority date (day/month/year) 15 July 2011 (15.07.2011)
International Patent Classification (IPC) or both national classification and IPC H04L 12/56 (2006.01)		
Applicant DAMAKA, INC. et al.		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability, citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/230 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/ IPEA Russia, 123995, Moscow, G-59, GSP-5, Berezhkovskaya nab., 30-1	Date of completion of this opinion 24 September 2012 (24.09.2012)	Authorized officer K. Raskovalov
Facsimile No. +7 (495) 243-33-37	Telephone No. (495) 531-64-81	

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US 2012/046026

Box No. 1 Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:
☒ the international application in the language in which it was filed.
☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. ☐ This opinion has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a)).
3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
 - a. (means)
☐ on paper
☐ in electronic form
 - b. (time)
☐ in the international application as filed
☐ together with the international application in electronic form
☐ subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US 2012/046026

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-16	YES
	Claims		NO
Inventive step (IS)	Claims	1-16	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-16	YES
	Claims		NO

2. Citations and explanations:

D1: WO 2006/064047 A1, D2: EP 1638275 A2 D3: EP 1603339 A1.

D1 discloses a method for streaming data using a virtual bi-directional data stream between a first communication device and a second communication device (page 1, lines 37-39), including the following stages:

creating, by the first device, a streaming data packet (DP) (D1, fig. 10);

inserting, by the first device, the data segment and DP into a payload section of a connection-less transport layer packet (D1, fig. 10), wherein at least one of DP and the transport layer packet includes a send field identifying a starting location in the data stream of a data segment to be sent with DP (D1, page 4, lines 2-4), an acknowledgement (ACK) field identifying a location in the data stream up to which all data has been received by the first device (D1, page 2, lines 6-9), a unique identifier (UID) identifying a connection used by the first device for the data stream (D1, page 3, lines 37-38), a packet type field (D1, page 2, lines 34-39), a pad field identifying an amount of padding used to ensure DP has a predefined length (D1, page 3, lines 15-16), a network address of the first device, a network address of the second device (D1, page 3, lines 12-15), and a length of the transport layer packet (D1, page 4, lines 4-5);

sending, by the first device, the transport layer packet to the second device (D1, fig. 4);

obtaining, by the first device, a current round trip time (RTT) that is based on first and second RTTs of packets previously sent from the first device to the second device and a configurable RTT variation factor (D1, page 13, paragraph 1);

calculating, by the first device, a timeout for DP based on the current RTT (D1, page 13, paragraph 1) and

resending, by the first device, D1 if the timeout does not exceed a predefined timeout limit and if an ACK for D1 has not been received from the second device (D1, fig. 7; page 2, paragraph 2).

The invention of claim 1 differs from the invention of D1 in that DP contains "a window field identifying an amount of space available in a receive buffer of the first device", which is obvious for a person skilled in the art, as well as in that the first device receives the current round trip time variance, which is based on the previous RTT variance, the first and second RTTs, and a configurable RTT variance variation factor, and the first device is calculating a timeout for DP based, among other values, on the current RTT variance, which does not obviously follow from the state of the art, and contributes to defining the timeout time more precisely, and, as a result, increasing the connection reliability.

Therefore, the invention of independent claim 1 and dependent claims 2-16 meets the criteria of novelty and inventive step.

The invention of claims 1-16 meets the criterion of industrial applicability.

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)
(PCT Rule 44bis.1(c))

To:

BLISS, Timothy, F.
Howison & Arnott, L.L.P.
P.O. Box 741715
Dallas, TX 75374-1715
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year) 03 January 2013 (03.01.2013)		IMPORTANT NOTICE	
Applicant's or agent's file reference DAMA-30,814			
International application No. PCT/US2011/040864	International filing date (day/month/year) 17 June 2011 (17.06.2011)	Priority date (day/month/year) 18 June 2010 (18.06.2010)	
Applicant DAMAKA, INC. et al			

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Simin Baharlou e-mail: pt09.pct@wipo.int
---	--

Facsimile No. +41 22 338 92 70

Form PCT/IB/326 (January 2004)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DAMA-30,814	FOR FURTHER ACTION See item 4 below	
International application No. PCT/US2011/040864	International filing date (day/month/year) 17 June 2011 (17.06.2011)	Priority date (day/month/year) 18 June 2010 (18.06.2010)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DAMAKA, INC.		

<p>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>																								
<p>3. This report contains indications relating to the following items:</p> <table border="0"> <tr> <td>☒</td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td>☐</td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td>☐</td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td>☐</td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td>☒</td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td>☐</td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td>☐</td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td>☐</td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis.2).</p>	☒	Box No. I	Basis of the report	☐	Box No. II	Priority	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	☐	Box No. IV	Lack of unity of invention	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	☐	Box No. VI	Certain documents cited	☐	Box No. VII	Certain defects in the international application	☐	Box No. VIII	Certain observations on the international application
☒	Box No. I	Basis of the report																						
☐	Box No. II	Priority																						
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☐	Box No. IV	Lack of unity of invention																						
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																						
☐	Box No. VI	Certain documents cited																						
☐	Box No. VII	Certain defects in the international application																						
☐	Box No. VIII	Certain observations on the international application																						

<p>The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. +41 22 338 92 70</p>	<p>Date of issuance of this report 19 December 2012 (19.12.2012)</p>
	<p>Authorized officer</p> <p>Simin Baharlou</p> <p>e-mail: pt09.pct@wipo.int</p>

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
BLISS TIMOTHY E.

HOWISON & ARNOTT, L.L.P. P.O. BOX 741715 DALLAS
TX 75374-1715 USA

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **17 FEBRUARY 2012 (17.02.2012)**

Applicant's or agent's file reference
DAMA-30,814

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2011/040864

International filing date (day/month/year)

17 JUNE 2011 (17.06.2011)

Priority date(day/month/year)

18 JUNE 2010 (18.06.2010)

International Patent Classification (IPC) or both national classification and IPC

H04L 29/02(2006.01); H04L 12/56(2006.01); H04L 12/28(2006.01); G06F 15/16(2006.01)

Applicant

DAMAKA, INC. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/KR
Korean Intellectual Property Office
Government Complex-Daejeon, 189
Cheongja-ro, Seo-gu, Daejeon 302-
701, Republic of Korea
Facsimile No. 82-42-472-7140



Date of completion of this opinion

10 FEBRUARY 2012 (10.02.2012)

Authorized officer

Kim Sim Jong

Telephone No. 82-42-481-8260



Form PCT/ISA/237 (cover sheet) (July 2011)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/040864

Box No. 1 Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:
- ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.3(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
- a. a sequence listing filed or furnished
 - ☐ on paper
 - ☐ in electronic form
 - b. time of filing or furnishing
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/040864

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-20	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Reference is made to the following documents:

D1: US 2008-0250408 A1 (C. Y. TSUI et al.) 03 October 2008
D2: US 2009-0190016 A1 (M. GONNOI et al.) 28 May 2009
D3: US 2006-0203750 A1 (S. RAVIKUMAR et al.) 14 September 2006
D4: US 2008-0235302 A1 (S. KJESBU et al.) 25 September 2008

1. Novelty and inventive step

Regarding independent claim 1, document D1 which is considered to represent the most relevant state of the art discloses (the references in parentheses applying to this document):

a method for transferring a call in a hybrid peer-to-peer network comprising:

- receiving, by a first endpoint, an instruction to transfer a call to a second endpoint, wherein the first endpoint is engaged in the call with a third endpoint when the instruction is received (lines 10-17 in paragraph [51]);
- determining, by the first endpoint, whether the first endpoint has a buddy relationship with the second endpoint, wherein the first endpoint cannot transfer the call to the second endpoint unless the first and second endpoints have a buddy relationship because the buddy relationship is needed to provide permission by the second endpoint for the first endpoint to communicate with the second endpoint (paragraph [52]);
- sending, by the first endpoint, at least one transfer message to the second endpoint to transfer the call, wherein the at least one transfer message indicates that the first endpoint wants to transfer the call to the second endpoint and identifies the third endpoint as being involved in the call (paragraphs [52],[53]); and
- ending, by the first endpoint, the first endpoint's involvement in the call after the call is transferred (paragraphs [52],[56]).

The subject matter of claim 1 differs from that of D1 in that D1 does not disclose the features of establishing, by the first endpoint, a buddy relationship with the second endpoint if the first and second endpoints are not in a buddy relationship. In addition, this difference would not be obvious to a person skilled in the art over D1. Therefore, claim 1 meets the requirements of PCT Article 32(2) and 23(3) with respect to novelty and inventive step.

1.2 The features of independent claim 10 essentially correspond to those of claim 1 in that the former are described from a second endpoint receiving a call transfer and the latter from that of a first endpoint performing a call transfer. Therefore, claim 10 meets the requirements of PCT Article 32(2) and 23(3) with respect to novelty and inventive step.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/040864

Supplemental Box

In case the space in any of the preceding boxes is not sufficient,
Continuation of:

Box 9

33(2) and 33(3) with respect to novelty and inventive step for the same reasoning as given for claim 1.

1.3 The features of independent claim 18 essentially correspond to those of claim 1 except that claimed categories are different to each other. Therefore, claim 18 meets the requirements of PCT Article 33(2) and 33(3) with respect to novelty and inventive step for the same reasoning as given for claim 1.

1.4 Claims 2-9 are dependent on claim 1, and therefore meet the requirements of PCT Article 33(2) and 33(3).

1.5 Claims 11-17 are dependent on claim 10, and therefore meet the requirements of PCT Article 33(2) and 33(3).

1.6 Claims 19 and 20 are dependent on claim 18, and therefore meet the requirements of PCT Article 33(2) and 33(3).

2. Industrial Applicability

Claims 1-20 have industrial applicability and meet the requirement of PCT Article 33(4).

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)
(PCT Rule 44bis.1(c))

To:

BLISS, Timothy, F.
Howison & Arnott, L.L.P.
P.O. Box 741715
Dallas, TX 75374-1715
ETATS-UNIS D'AMERIQUE

Date of mailing (<i>day/month/year</i>) 10 January 2013 (10.01.2013)		
Applicant's or agent's file reference DAMA-30,815		IMPORTANT NOTICE
International application No. PCT/US2011/041565	International filing date (<i>day/month/year</i>) 23 June 2011 (23.06.2011)	Priority date (<i>day/month/year</i>) 23 June 2010 (23.06.2010)
Applicant DAMAKA, INC. et al		

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Simin Baharlou
Facsimile No. +41 22 338 82 70	e-mail: pt09.pct@wipo.int

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DAMA-30,815	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2011/041565	International filing date (<i>day/month/year</i>) 23 June 2011 (23.06.2011)	Priority date (<i>day/month/year</i>) 23 June 2010 (23.06.2010)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DAMAKA, INC.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).																								
2.	This REPORT consists of a total of 5 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">☒</td> <td style="width: 30%;">Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	☒	Box No. I	Basis of the report	☐	Box No. II	Priority	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	☐	Box No. IV	Lack of unity of invention	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	☐	Box No. VI	Certain documents cited	☐	Box No. VII	Certain defects in the international application	☐	Box No. VIII	Certain observations on the international application
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☐	Box No. VII	Certain defects in the international application																							
☐	Box No. VIII	Certain observations on the international application																							
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																								

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Date of issuance of this report 28 December 2012 (28.12.2012)</td> </tr> <tr> <td style="padding: 2px;"> Authorized officer <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Simin Baharlou</div> </td> </tr> </table> e-mail: pt09.pct@wipo.int	Date of issuance of this report 28 December 2012 (28.12.2012)	Authorized officer <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Simin Baharlou</div>
Date of issuance of this report 28 December 2012 (28.12.2012)			
Authorized officer <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Simin Baharlou</div>			

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

BLISS TIMOTHY F.

HOWISON & ARNOTT, L.L.P. P.O. BOX 741715 DALLAS
TX 75374-1715 USA

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **05 JANUARY 2012 (05.01.2012)**

Applicant's or agent's file reference
DAMA-30,815

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2011/041565

International filing date (day/month/year)

23 JUNE 2011 (23.06.2011)

Priority date(day/month/year)

23 JUNE 2010 (23.06.2010)

International Patent Classification (IPC) or both national classification and IPC

H04L 9/14(2006.01)i, H04L 29/06(2006.01)i, H04L 12/56(2006.01)i, G06F 21/20(2006.01)i

Applicant

DAMAKA, INC. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/KR
Korean Intellectual Property Office
Government Complex-Daejeon, 189
Cheongsa-ro, Seo-gu, Daejeon 302-
701, Republic of Korea
Facsimile No. 82-42-472-7140



Date of completion of this opinion

05 JANUARY 2012 (05.01.2012)

Authorized officer

Yang, Jong Phil

Telephone No.82-42-481-8595



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/041565

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
 - a. a sequence listing filed or furnished
 - ☐ on paper
 - ☐ in electronic form
 - b. time of filing or furnishing
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/041565

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-19	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	2-4,11,13-19	YES
	Claims	1,5-10,12	NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: Wireless Application Protocol - Wireless Transport Layer Security Specification, Version 18-Feb-2000, Wireless Application Forum, Ltd. 2000.
D2: US 2008-0235511 A1 (O'BRIEN WILLIAM G. et al.) 25 September 2008
D3: US 2010-0049980 A1 (BARRIGA LUIS et al.) 25 February 2010

1. Novelty and Inventive Step

1.1 Claims 1-12

D1, which is considered to represent the most relevant state of the art to the subject matter of independent claim 1, discloses a method for changing an encryption key, the method comprising: receiving, by a first endpoint, an instruction to change from a first encryption key to a second encryption key; sending, by the first endpoint, a first message to a second endpoint that the first endpoint is going to change to the second encryption key, wherein the first message includes information representing the second encryption key; receiving, by the first endpoint, in response to the first message, a second message from the second endpoint indicating that the second endpoint received the first message; sending, by the first endpoint, a third message to the second endpoint acknowledging receipt of the second message; and changing, by the first endpoint, from the first encryption key to the second encryption key, wherein all incoming messages for the first endpoint are to be encrypted using the second encryption key (the technical features related to "Key refresh" and 'Finished' in the whole document of D1).

D1 does not disclose the feature, "the messages are defined for use with a transactional state model in a peer-to-peer network". However, it would be readily derived from the features in figures 2,4a-6b and claims 1-13 of D2 by a person skilled in the art. Accordingly, claim 1 is obvious over D1 in view of D2. Therefore, **claim 1 lacks an inventive step under PCT Article 33(3).**

The additional feature of claim 5, dependent on claim 1, would be readily derived from figures 2,4a-6b and claims 1-13 of D2 by a person skilled in the art.

The additional features of claims 6-7 and 10, dependent on claim 1, would be readily derived from the features related to "Key refresh" and 'Finished' of D1 and figures 2,4a-6b and claims 1-13 of D2 by a person skilled in the art.

<Continued on Supplemental Box>

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/041565

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of :

<Box No.V>

The additional features of claims 8-9, dependent on claim 7, are not explicitly disclosed in any of the documents D1-D3. However, they would be regarded as normal design options by a person skilled in the art.

The additional feature of claim 12, dependent on claim 1, are not explicitly disclosed in any of the documents D1-D3. However, it would be regarded as a normal design option by a person skilled in the art.

Therefore, **claims 5-10 and 12 lack an inventive step under PCT Article 33(3).**

The additional features of claims 2-4 and 11, dependent on claim 1, are not disclosed in any of the documents D1-D3, nor are they obvious to a person skilled in the art over the documents individually or in combination. Accordingly, **claims 2-4 and 11 are novel and involve an inventive step under PCT Article 33(2) and (3).**

1.2 Claims 13-19

The subject matter of claims 13 and 17 differs from the documents D1-D3 in the following features: receiving, by a first endpoint, an encrypted message from a second endpoint; applying a first key iteration of a second base encryption key to the encrypted message to determine if the first key iteration will decrypt the encrypted message; if the first key iteration will not decrypt the message, rotating the encryption key to form a next key iteration from the second based encryption key; and applying the next key iteration to the encrypted message to determine if the next key iteration will decrypt the encrypted message as long as untried key iterations are available, continuing the steps of rotating and applying for each key iteration until the message is decrypted.

Accordingly, claims 13 and 17 are not anticipated from any of the documents, nor are they obvious to a person skilled in the art over the documents individually or in combination.

Thus, **claims 13 and 17 meet the requirements of PCT Article 33(2) and 33(3) with respect to novelty and inventive step, and claims 14-16 and 18-19 comply with PCT Article 33(2) and 33(3) as they are dependent on claims 13 and 17, respectively.**

2. Industrial Applicability

Claims 1-19 are industrially applicable under PCT Article 33(4).

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DAMA-30,900	FOR FURTHER ACTION		<i>See item 4 below</i>
International application No. PCT/US2011/049000	International filing date (<i>day/month/year</i>) 24 August 2011 (24.08.2011)	Priority date (<i>day/month/year</i>) 25 August 2010 (25.08.2010)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant DAMAKA, INC.			

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).																								
2.	This REPORT consists of a total of 6 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 5%; text-align: center;">☒</td> <td style="width: 35%;">Box No. I</td> <td style="width: 60%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	☒	Box No. I	Basis of the report	☐	Box No. II	Priority	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	☒	Box No. IV	Lack of unity of invention	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	☐	Box No. VI	Certain documents cited	☐	Box No. VII	Certain defects in the international application	☐	Box No. VIII	Certain observations on the international application
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The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 92 70	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border-bottom: 1px solid black; padding-bottom: 5px;">Date of issuance of this report 26 February 2013 (26.02.2013)</td> <td style="width: 50%;"></td> </tr> <tr> <td style="border-bottom: 1px solid black; padding-bottom: 5px;">Authorized officer Philippe Bécamel</td> <td style="border-bottom: 1px solid black; padding-bottom: 5px;">e-mail: ptfil.pct@wipo.int</td> </tr> </table>	Date of issuance of this report 26 February 2013 (26.02.2013)		Authorized officer Philippe Bécamel	e-mail: ptfil.pct@wipo.int
Date of issuance of this report 26 February 2013 (26.02.2013)					
Authorized officer Philippe Bécamel	e-mail: ptfil.pct@wipo.int				

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

TIMOTHY F. BLISS

HOWISON & ARNOTT, L.L.P. P.O. BOX 741715 DALLAS
TX 75374-1715 USA

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) 27 MARCH 2012 (27.03.2012)

Applicant's or agent's file reference

DAMA-30,900

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2011/049000

International filing date (day/month/year)

24 AUGUST 2011 (24.08.2011)

Priority date(day/month/year)

25 AUGUST 2010 (25.08.2010)

International Patent Classification (IPC) or both national classification and IPC

H04L 29/02(2006.01); H04L 12/56(2006.01); G06F 15/16(2006.01)

Applicant

DAMAKA, INC. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/KR

 Korean Intellectual Property Office
Government Complex-Daejeon, 189
Cheongja-ro, Seo-gu, Daejeon 302-
701, Republic of Korea
Facsimile No. 82-42-472-7140

Date of completion of this opinion

26 MARCH 2012 (26.03.2012)

Authorized officer

Kim Sim Jong

Telephone No. 82-42-481-8260



Form PCT/ISA/237 (cover sheet) (July 2011)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/049000

Box No. 1 Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:
- ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.3(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
- a. a sequence listing filed or furnished
 - ☐ on paper
 - ☐ in electronic form
 - b. time of filing or furnishing
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/049000

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the applicable time limit:
- ☐ paid additional fees
 - ☐ paid additional fees under protest and, where applicable, the protest fee
 - ☐ paid additional fees under protest but the applicable protest fee was not paid
 - ☐ not paid additional fees

2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

- ☐ complied with
- ☒ not complied with for the following reasons:

I. Claims 1-17 are directed to a method for receiving, by a first endpoint, a communication peer-to-peer communication session between a second endpoint and a third end point in a hybrid peer-to-peer network.

II. Claims 18-22 are directed to a method for joining, by a first endpoint, an ongoing peer-to-peer communication session between a second endpoint and a third end point in a hybrid peer-to-peer network.

Since the above mentioned groups of claims do not share any of the technical features identified, a technically special relationship between the inventions does not exist.

Accordingly, the claims do not relate to one invention or to a single inventive concept, a priori.

4. Consequently, this opinion has been established in respect of the following parts of the international application :

- ☒ all parts.
- ☐ the parts relating to claims Nos. _____

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/049000

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-22	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-22	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims	NONE	NO

2. Citations and explanations:

Reference is made to the following documents:

D1: US 2004-0149434 A1 (D. NATSUEARA et al.) 29 July 2004
D2: US 2006-0182215 A1 (J. CZECHOWSKI, III et al.) 16 July 2006
D3: US 2007-0165029 A1 (S. R. CHATURVEDI et al.) 19 July 2007
D4: US 2008-0273541 A1 (A. PHARN) 06 November 2008

1. Novelty and Inventive Step

1.1 Regarding independent claim 1, document D1, which is considered to represent the most relevant state of the art, discloses (see the underlined):

a method for receiving, by a first endpoint, a communication peer-to-peer communication session between a second endpoint and a third endpoint in a hybrid peer-to-peer network comprising (fig. 5):
- sending, by the first endpoint, a first request to an access server in the hybrid peer-to-peer network, wherein the first request includes information that enables the access server to identify a session entry corresponding to the ongoing communication session from a plurality of session entries corresponding to a plurality of communication sessions (lines 1-6 in para. [0055]);
- receiving, by the first endpoint, a response to the first request from the access server, wherein the response includes a network address for a media server (lines 9-10 in para. [0057]);
- sending, by the first endpoint, a second request to the media server, wherein the second request includes information that enables the media server to identify a recording session corresponding to the ongoing communication session from a plurality of recording sessions corresponding to a plurality of communication sessions, wherein each recording session includes communications sent to the media server for recording by at least one endpoint in each of the plurality of communications sessions;
and
- receiving, by the first endpoint via the media server, peer-to-peer communications from the ongoing communication session between the second and third endpoints, wherein the first endpoint does not communicate with either of the second and third endpoints to receive the peer-to-peer communications.

None of the prior art documents D1 to D4 teach or fairly suggest the feature of 'sending, by the first endpoint, a second request to the media server and receiving, via the media server, peer-to-peer communications from the ongoing communication session between the second and third endpoints'. Accordingly, this feature is not obvious, nor can it be easily derived from each prior art document or any combination of said prior art documents by one skilled in the art. Hence, the subject matter of claim 1 is considered to be novel and to involve an inventive step in the sense of PCT Article 33(2) and 33(3).

Continued on Supplemental Box

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/049000

Supplemental Box

In case the space in any of the preceding boxes is not sufficient,
Continuation of:

Box No. V

1.2 Regarding independent claim 18, document D1, which is considered to represent the most relevant state of the art, discloses (see the underlined):

a method for joining, by a first endpoint, an ongoing peer-to-peer communication session between a second endpoint and a third endpoint in a hybrid peer-to-peer network comprising (fig. 4):

- identifying, by the first endpoint, the ongoing communication session from a plurality of communication sessions (lines 1-6 in para. [0049]);
- obtaining from a server, by the first endpoint, first communications occurring between the second and third endpoints that correspond to the ongoing communication session, wherein the server is configured to receive the first communications from the first and second endpoints for recording (lines 1-12 in para. [0050]);
- establishing, by the first endpoint, a communication leg directly with the second endpoint, wherein the communication leg is capable of carrying second communications from the first endpoint to the second endpoint; and
- sending, by the first endpoint, the second communications to the second endpoint.

None of the prior art documents D1 to D4 teach or fairly suggest the feature of 'establishing, by the first endpoint, a communication leg directly with the second endpoint and sending the second communications to the second endpoint'. Accordingly, this feature is not obvious, nor can it be easily derived from each prior art document or any combination of said prior art documents by one skilled in the art. Hence, the subject matter of claim 18 is considered to be novel and to involve an inventive step in the sense of PCT Article 33(2) and 33(3).

1.3 Claim 2-17 are dependent on claim 1 and therefore meet the requirements of PCT Article 23(2) and 23(3).

1.4 Claim 19-22 are dependent on claim 18 and therefore meet the requirements of PCT Article 33(2) and 33(3).

2. Industrial Applicability

Claims 1-23 have industrial applicability and meet the requirement of PCT Article 23(4).

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DAMA-30,937	FOR FURTHER ACTION See item 4 below	
International application No. PCT/US2011/051877	International filing date (<i>day/month/year</i>) 16 September 2011 (16.09.2011)	Priority date (<i>day/month/year</i>) 24 September 2010 (24.09.2010)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DAMAKA, INC.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).	
2.	This REPORT consists of a total of 5 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.	
3.	This report contains indications relating to the following items:	
	☒	Box No. I Basis of the report
	☐	Box No. II Priority
	☐	Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
	☐	Box No. IV Lack of unity of invention
	☒	Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	☐	Box No. VI Certain documents cited
	☐	Box No. VII Certain defects in the international application
	☐	Box No. VIII Certain observations on the international application
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).	

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Date of issuance of this report 26 March 2013 (26.03.2013)
	Authorized officer Nora Lindner e-mail: pt03.pct@wipo.int

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

TIMOTHY F. BLISS

HOWISON & ARNOTT, L.L.P. P.O. BOX 741715 DALLAS
TX 75374-1715 USA

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **13 APRIL 2012 (13.04.2012)**

Applicant's or agent's file reference
DAMA-30,937

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2011/051877

International filing date (day/month/year)

15 SEPTEMBER 2011 (15.09.2011)

Priority date(day/month/year)

24 SEPTEMBER 2010 (24.09.2010)

International Patent Classification (IPC) or both national classification and IPC

H04L 12/18(2006.01)i, G06F 15/16(2006.01)i, G06F 17/28(2006.01)i

Applicant

DAMAKA, INC. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

<p>Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongsa-ro, Seo-gu, Daejeon 302- 701, Republic of Korea Facsimile No. 82-42-472-7140</p> 	<p>Date of completion of this opinion 13 APRIL 2012 (13.04.2012)</p>	<p>Authorized officer YANG, CHAN HO Telephone No.82-42-481-5689</p> 
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Form PCT/ISA/237 (cover sheet) (July 2011)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/051877

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
 - a. a sequence listing filed or furnished
 - ☐ on paper
 - ☐ in electronic form
 - b. time of filing or furnishing
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/051877

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-20	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: US 2009-0006076 A1 (JINDAL DINESH K.) 01 January 2009
D2: US 06161082A A (GOLDBERG; RANDY G. et al.) 12 December 2000
D3: US 2010-0223047 A1 (CHRIST OLIVER) 02 September 2010
D4: US 2010-0299150 A1 (FEIN GENE S. et al.) 25 November 2010

1. Novelty and Inventive Step

D1 and D2, which is considered to be close prior art to the subject matter of claim 1 of the present invention, discloses a method for communicating, by a first endpoint, in an ongoing peer-to-peer communication session between the first endpoint and a second endpoint in a hybrid peer-to-peer network comprising:

establishing, by the first endpoint, a communications route directly between the first endpoint and the second endpoint, wherein signaling communications are sent directly from the first endpoint to the second endpoint via a signaling path provided by the communications route (see column 3 lines 1-6, 20-25 in D2);

receiving, by the first endpoint, audio speech input in a first spoken language from a user of the first endpoint (see paragraph [0023]; claim 1 in D1);

determining, by the first endpoint, whether the audio speech input is to be translated from the first spoken language to a second spoken language (see column 5 lines 25-34 in D2); and

sending, by the first endpoint, the audio speech input to a language translation component accessible to the first endpoint via the hybrid peer-to-peer network if the audio speech input is to be translated from the first spoken language to the second spoken language, wherein the first endpoint does not send the audio speech input directly to the second endpoint if the audio speech input is to be translated from the spoken language to the second spoken language (see paragraph [0023]; claim 1 in D1).

However, the subject matter of claim 1 differs from these prior art documents in sending, by the first endpoint, the audio speech input directly to the second endpoint via the communications route if the audio speech input is not to be translated from the first spoken language to the second language. And it is not obvious to a person skilled in the art by the documents, taken alone or in combination. Therefore, claim 1 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Continued on Supplemental Box

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/051877

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of :

Box V

Claims 2-9 are dependant on claim 1 and therefore meet the requirements of PCT Article 33(2) and (3).

The subject matter of claim 10 differs from these prior art documents in notifying, by the first endpoint, a language translation component in the hybrid peer-to-peer network of the inbound port, wherein the language translation component is accessible to the first endpoint via the hybrid peer-to-peer network, and wherein the notifying instructs the language translation component to send audio received from the endpoint to the inbound port. And it is not obvious to a person skilled in the art by the documents, taken alone or in combination. Therefore, claim 10 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Claims 11-17 are dependant on claim 10 and therefore meet the requirements of PCT Article 33(2) and (3).

The subject matter of claim 18 differs from these prior art documents in performing an authentication process with an access server in a hybrid peer-to-peer network, wherein the authentication process authorizes the first endpoint to access the hybrid peer-to-peer network. And it is not obvious to a person skilled in the art by the documents, taken alone or in combination. Therefore, claim 18 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Claims 19 and 20 are dependant on claim 18 and therefore meet the requirements of PCT Article 33(2) and (3).

2. Industrial Applicability

Claims 1-20 are industrially applicable under PCT Article 33(4).

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DAMA-30.960	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2011/055101	International filing date (<i>day/month/year</i>) 06 October 2011 (06.10.2011)	Priority date (<i>day/month/year</i>) 11 October 2010 (11.10.2010)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DAMAKA, INC.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).																								
2.	This REPORT consists of a total of 6 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%;"> <tr> <td style="width: 10%; text-align: center;">☒</td> <td style="width: 30%;">Box No. I</td> <td style="width: 60%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	☒	Box No. I	Basis of the report	☐	Box No. II	Priority	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	☐	Box No. IV	Lack of unity of invention	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	☐	Box No. VI	Certain documents cited	☒	Box No. VII	Certain defects in the international application	☐	Box No. VIII	Certain observations on the international application
☒	Box No. I	Basis of the report																							
☐	Box No. II	Priority																							
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability																							
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☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																							
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☒	Box No. VII	Certain defects in the international application																							
☐	Box No. VIII	Certain observations on the international application																							
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																								

<p style="text-align: center;">The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. +41 22 338 82 70</p>	<p>Date of issuance of this report 16 April 2013 (16.04.2013)</p> <p>Authorized officer Philippe Bécamel</p> <p>e-mail: pt01.pct@wipo.int</p>
--	--

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

TIMOTHY F.BLISS

HOWISON & ARNOTT, L.L.P. P.O. BOX 741715 DALLAS
TX 75374-1715 USA

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **22 MAY 2012 (22.05.2012)**

Applicant's or agent's file reference
DAMA-30.960

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2011/055101

International filing date (day/month/year)

06 OCTOBER 2011 (06.10.2011)

Priority date(day/month/year)

11 OCTOBER 2010 (11.10.2010)

International Patent Classification (IPC) or both national classification and IPC

H04L 29/06(2006.01)i, H04L 12/56(2006.01)i, H04L 12/58(2006.01)i

Applicant

DAMAKA, INC. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/KR
Korean Intellectual Property Office
189 Cheongsa-ro, Seo-gu, Daejeon
Metropolitan City, 302-701,
Republic of Korea
Facsimile No. 82-42-472-7140



Date of completion of this opinion

21 MAY 2012 (21.05.2012)

Authorized officer

Lee Hyoung Il

Telephone No.82-42-481-8199



Form PCT/ISA/237 (cover sheet) (July 2011)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/055101

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
 - a. a sequence listing filed or furnished
 - ☐ on paper
 - ☐ in electronic form
 - b. time of filing or furnishing
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/055101

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-26	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-26	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-26	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: US 2005-0130650 A1 (THOMAS CREAMER et al.) 16 June 2005
D2: US 2009-0088150 A1 (CHATURVEDI SIVAKUMAR et al.) 02 April 2009
D3: US 2005-0286519 A1 (SIVAKUMAR RAVIKUMAR et al.) 29 December 2005
D4: US 2010-0011111 A1 (VIZAEI MOHAMMAD) 14 January 2010

1. Novelty and Inventive Step

1.1 Claims 1-13

The subject matter of claim 1 differs from these prior art documents in receiving an inbound call, wherein the inbound call is received via one of a cellular network and a public switched telephone network and continuing the inbound call on the one of the cellular network and the public switched telephone network on which the inbound call was received if the acknowledgement message has not been received. And it is not obvious to a person skilled in the art by the documents, taken alone or in combination. Therefore, claim 1 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Claims 2-13 are dependent on claim 1 and therefore meet the requirements of PCT Article 33(2) and (3).

1.2 Claims 14-20

The subject matter of claim 14 differs from these prior art documents in receiving a first plurality of digits identifying a first destination device and initiating an outbound call to the first destination device based on the first plurality of digits, wherein the outbound call is initiated via one of a cellular network and a public switched telephone network. And it is not obvious to a person skilled in the art by the documents, taken alone or in combination. Therefore, claim 14 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Claims 15-20 are dependent on claim 14 and therefore meet the requirements of PCT Article 33(2) and (3).

[Continued on Supplemental Box]

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2011/055101

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Figures 2a-2c, 10A-10B and 11A-11B do not comply with PCT Rule 11.13(k) because the different figures shall not be numbered in Arabic numerals consecutively and independently of the numbering of the sheets.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/055101

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of :

[Box V]

1.2 Claims 21-26

Claim 21 relates to an endpoint to perform the method according to claim 14. Claim 21 is considered to be novel and to involve an inventive step under PCT Article 33(2) and (3), because the subject matter of claim 14 is considered to be novel and to involve an inventive step under PCT Article 33(2) and (3).

Claims 22-26 depend on claim 21 and consequently they are also considered to be novel and to involve an inventive step under PCT Article 33(2) and (3).

2. Industrial Applicability

Claims 1-26 are industrially applicable under PCT Article 33(4).

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)
(PCT Rule 44bis.1(c))

To:

BLISS, Timothy, F.
Howison & Arnott, L.L.P.
P.O. Box 741715
Dallas, TX 75374-1715
ETATS-UNIS D'AMERIQUE

Date of mailing (<i>day/month/year</i>) 30 January 2014 (30.01.2014)		
Applicant's or agent's file reference DAMA-31343		IMPORTANT NOTICE
International application No. PCT/US2012/046026	International filing date (<i>day/month/year</i>) 10 July 2012 (10.07.2012)	Priority date (<i>day/month/year</i>) 15 July 2011 (15.07.2011)
Applicant DAMAKA, INC. et al		

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Nora Lindner
Facsimile No. +41 22 338 82 70	e-mail: pt05.pct@wipo.int

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DAMA-31343	FOR FURTHER ACTION See item 4 below	
International application No. PCT/US2012/046026	International filing date (<i>day/month/year</i>) 10 July 2012 (10.07.2012)	Priority date (<i>day/month/year</i>) 15 July 2011 (15.07.2011)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DAMAKA, INC.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).	
2.	This REPORT consists of a total of 4 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.	
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4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).	

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Date of issuance of this report 21 January 2014 (21.01.2014)
	Authorized officer Nora Lindner e-mail: pt05.pct@wipo.int

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

From the INTERNATIONAL SEARCHING AUTHORITY

To:

Timothy F.Bliss
Howison & Arnott, L.L.P.
P.O. Box 741715
Dallas, Texas 75374-1715
United States of America

Date of mailing (<i>day/month/year</i>) 18 October 2012 (18.10.2012)		
Applicant's or agent's file reference DAMA-31343		FOR FURTHER ACTION See paragraph 2 below
International application No. PCT/US 2012/046026	International filing date (<i>day/month/year</i>) 10 July 2012 (10.07.2012)	Priority date (<i>day/month/year</i>) 15 July 2011 (15.07.2011)
International Patent Classification (IPC) or both national classification and IPC H04L 12/56 (2006.01)		
Applicant DAMAKA, INC. et al.		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
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- ☐ Box No. VIII Certain observations on the international application

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For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/ FIPS Russia, 123995, Moscow, G-59, GSP-5, Berezhkovskaya nab., 30-1	Date of completion of this opinion 24 September 2012 (24.09.2012)	Authorized officer K. Raskovalov
Facsimile No. +7 (499) 243-33-37	Telephone No. (495)531-64-81	

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US 2012/046026

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:
☒ the international application in the language in which it was filed.
☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
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3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
 - a. (means)
☐ on paper
☐ in electronic form
 - b. (time)
☐ in the international application as filed
☐ together with the international application in electronic form
☐ subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US 2012/046026

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-16	YES
	Claims		NO
Inventive step (IS)	Claims	1-16	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-16	YES
	Claims		NO

2. Citations and explanations:

D1: WO 2006/064047 A1, D2: EP 1638275 A2 D3: EP 1603339 A1.

D1 discloses a method for streaming data using a virtual bi-directional data stream between a first communication device and a second communication device (page 1, lines 37-39), including the following stages:

creating, by the first device, a streaming data packet (DP) (D1, fig. 10);

inserting, by the first device, the data segment and DP into a payload section of a connection-less transport layer packet (D1, fig. 10), wherein at least one of DP and the transport layer packet includes a send field identifying a starting location in the data stream of a data segment to be sent with DP (D1, page 4, lines 2-4), an acknowledgement (ACK) field identifying a location in the data stream up to which all data has been received by the first device (D1, page 2, lines 6-9), a unique identifier (UID) identifying a connection used by the first device for the data stream (D1, page 3, lines 37-38), a packet type field (D1, page 2, lines 34-39), a pad field identifying an amount of padding used to ensure DP has a predefined length (D1, page 3, lines 15-16), a network address of the first device, a network address of the second device (D1, page 3, lines 12-15), and a length of the transport layer packet (D1, page 4, lines 4-5);

sending, by the first device, the transport layer packet to the second device (D1, fig. 4);

obtaining, by the first device, a current round trip time (RTT) that is based on first and second RTTs of packets previously sent from the first device to the second device and a configurable RTT variation factor (D1, page 13, paragraph 1);

calculating, by the first device, a timeout for DP based on the current RTT (D1, page 13, paragraph 1) and

resending, by the first device, D1 if the timeout does not exceed a predefined timeout limit and if an ACK for D1 has not been received from the second device (D1, fig. 7; page 2, paragraph 2).

The invention of claim 1 differs from the invention of D1 in that DP contains "a window field identifying an amount of space available in a receive buffer of the first device", which is obvious for a person skilled in the art, as well as in that the first device receives the current round trip time variance, which is based on the previous RTT variance, the first and second RTTs, and a configurable RTT variance variation factor, and the first device is calculating a timeout for DP based, among other values, on the current RTT variance, which does not obviously follow from the state of the art, and contributes to defining the timeout time more precisely, and, as a result, increasing the connection reliability.

Therefore, the invention of independent claim 1 and dependent claims 2-16 meets the criteria of novelty and inventive step.

The invention of claims 1-16 meets the criterion of industrial applicability.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: TIMOTHY F. BLISS
HOWISON & ARNOTT, L.L.P.
P.O. BOX 741715
DALLAS, TX 75374-1715

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing (day/month/year)	30 SEP 2014
Applicant's or agent's file reference DAMA-32202	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/US2014/039777	International filing date (day/month/year) 28 May 2014
Applicant DAMAKA, INC.	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

How? Directly to the International Bureau of WIPO preferably through ePCT or on paper to, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3. ☐ With regard to any protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.
- ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Reminders

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. These comments will be made available to the public after international publication. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established.

Shortly after the expiration of 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90bis.1 and 90bis.3).

Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise, the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices. In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months. For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Within 19 months from the priority date, the applicant may request that a supplementary international search be carried out by a different International Searching Authority that offers this service (Rule 45bis.1). The procedure for requesting supplementary international search is described in the *PCT Applicant's Guide*, International Phase, paragraphs 8.006-8.032.

Name and mailing address of the ISA/
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-3201

Authorized officer

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4300
Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2014)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference DAMA-32202	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2014/039777	International filing date (day/month/year) 28 May 2014	(Earliest) Priority Date (day/month/year) 16 July 2013
Applicant DAMAKA, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed.
☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (see Box No. II).

3. ☐ Unity of invention is lacking (see Box No. III).

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 1
☐ as suggested by the applicant.
☒ as selected by this Authority, because the applicant failed to suggest a figure.
☐ as selected by this Authority, because this figure better characterizes the invention.
- b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2014/039777

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H04N 7/15 (2014.01)

CPC - H04N 2007/145 (2014.02)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - H04N 7/15 (2014.01)

USPC - 345/613, 629, 638; 348/14.01, 14.03, 14.04, 14.07, 14.08, 14.1; 715/201, 204, 210, 277

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - G09G 2340/12, 2340/125; H04N 7/141, 7/15, 7/155, 2007/145 (2014.02)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase, Orbit, Google Patents, Google Scholar

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 8,407,576 B1 (YIN et al.) 26 March 2013 (26.03.2013) entire document	1-22
Y	US 6,195,894 B1 (CHEN et al.) 27 February 2001 (27.02.2001) entire document	1-22
Y	US 2011/0141220 A1 (MIURA) 16 June 2011 (16.06.2011) entire document	11-12
A	US 8,200,796 B1 (MARGULIS) 12 June 2012 (12.06.2012) entire document	1-22

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"Z" document member of the same patent family

Date of the actual completion of the international search

01 September 2014

Date of mailing of the international search report

30 SEP 2014

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents

P.O. Box 1460, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-3201

Authorized officer:

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4390

PCT OSP: 571-272-7774

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: TIMOTHY F. BLISS
HOWISON & ARNOTT, L.L.P.
P.O. BOX 741715
DALLAS, TX 75374-1715

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year)

30 SEP 2014

Applicant's or agent's file reference
DAMA-32202

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2014/039777

International filing date (day/month/year)

28 May 2014

Priority date (day/month/year)

16 July 2013

International Patent Classification (IPC) or both national classification and IPC

IPC(8) - H04N 7/15 (2014.01)

CPC - H04N 2007/145 (2014.02)

Applicant DAMAKA, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis(b)* that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-3201

Date of completion of this opinion

01 September 2014

Authorized officer:

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2014/039777

Box No. 1 Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. ☐ This opinion has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a)).
3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
 - a. (means)
 - ☐ on paper
 - ☐ in electronic form
 - b. (time)
 - ☐ in the international application as filed
 - ☐ together with the international application in electronic form
 - ☐ subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2014/039777

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-22	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-22	NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-10, 13-22 lack an inventive step under PCT Article 33(3) as being obvious over Yin et al., hereinafter referred to as Yin, in view of Chen et al., hereinafter referred to as Chen.

Regarding claims 1, 16, Yin teaches mobile device (the client computer is a web-enabled mobile device, col. 9 lines 38-41) comprising: a network interface (the client computer is a web-enabled mobile device [would include a network interface], col. 9 lines 38-41); a processor coupled to the network interface (the client machine is operated by a processor which performs the operations [the processor would be coupled to components such as the network interface], col. 14 lines 43-47); and a memory coupled to the processor and configured to store a plurality of instructions executable by the processor (the client machine has memory, all processes are performed by executable computer instructions stored on and read from computer-readable media [the stored instructions would be executed by the processor], col. 14 lines 43-56), the instructions including instructions for [Claim 1]; and a method (a method of assembling a situational Web-based dashboard with digital components, col. 3 lines 38-40) comprising [Claim 16]: receiving, by a function block stored in the memory of the mobile device, a request for video from a superblock application stored in the memory of the mobile device (when a user is using a web browser [superblock application as defined in paragraph 0022 of the instant PCT application] on a client machine the user can access a web-based interface to create a web component, components such as video components are created from existing web pages with the help of a browser add-on [function block as defined in paragraph 0031 of the instant PCT application], the user clicks on the web browser's add-on button to enter the componentization mode [the request would be sent from the browser to the browser add-on, the browser and add-on would be stored in the client computer's memory], col. 7 lines 12-15, 42-50); determining, by the function block, that the superblock application is authorized to access video functionality provided by the function block (the web browser's add-on includes a "Post" button captures metadata and communicates the metadata to the server, the server retrieves metadata including requesting user's permission to access the dashboard page, if the user has the right permission to access the dashboard page the corresponding server application components will generate a dashboard page to be rendered in the web browser [the metadata sent by the function block would be used to determine the superblock's authorization], col. 7 lines 46-51, col. 8 lines 58-65, col. 9 lines 15-22); establishing, by the function block, the video between the superblock application and the resource via the network interface, wherein the establishing is not supported by the superblock application (the web browser's add-on includes a "Post" button captures metadata and communicates the metadata to the server [the post instruction would be a functionality limited to the add-on as opposed to the browser], the Server Application Components update the database with the corresponding metadata, the corresponding server application components will generate a dashboard page to be rendered in the web browser [the dashboard page components include the video], col. 7 lines 24-30, 46-61, col. 9 lines 15-22); providing, by the function block, video output for the video to a video window within a display window of the superblock application on the mobile device (the web browser's add-on includes a "Post" button captures metadata and communicates the metadata to the server [the video is provided by the function block], the content is rendered directly and visually right in the web browser as part of that containing web page occupying part of the real estate of the screen without the need to click and open it in another web page or external application, for "component 1" its source is from "web site 1" so the Ajax-based Dashboard Page will make a HTTP request to the specific web component and display it in the visual area of "component 1" [depicted as a video window], fig. 1c, col. 6 lines 7-15, col. 7 lines 46-61, col. 9 lines 25-30), wherein the video window is displayed simultaneously with the display window of the superblock application on a screen of the mobile device (the content is rendered directly and visually right in the web browser as part of that containing web page occupying part of the real estate of the screen without the need to click and open it in another web page or external application, for "component 1" its source is from "web site 1" so the Ajax-based Dashboard Page will make a HTTP request to the specific web component and display it in the visual area of "component 1" [depicted as a video window, would be displayed simultaneously], fig. 1c, col. 6 lines 7-15, col. 9 lines 25-30); but lacks the teaching a request for an audio/video (A/V) call; determining, by the function block, that the A/V service requires access to a resource that is external to the mobile device; establishing the A/V call between the superblock application and the resource via the network interface; and providing, by the function block, audio for the A/V call via the mobile device.

(Continued in Supplemental Box)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2014/039777

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Regarding claims 1, 16 (Cont.):

Chen is in the field of reconfiguring devices (title) and teaches a request for an audio/video (A/V) call (the user may select a video phone call or even a video conferencing call with application sharing if the other end has the same facility, then the control program embedded in the HTML application will invoke API functions to initiate kiosk video conferencing function, a collaborative session includes video and audio, col. 15 lines 8-13, 48-53); determining, by the function block, that the A/V service requires access to a resource that is external to the mobile device (a user selects an application for which the kiosk is to be configured and browser 160 interacts with one or more servers 195 to fetch one or more configuration sets 175, by selecting a second application the kiosk is again reconfigured for the second application [it would be determined that a new configuration set is needed; where the function block is interpreted as a type of stored instruction set and the mobile device is interpreted as a type of device], col. 5 lines 45-51, col. 6 lines 1-2); establishing the A/V call between the superblock application and the resource via the network interface (the user may select a video phone call or even a video conferencing call with application sharing if the other end has the same facility, then the control program embedded in the HTML application will invoke API functions to initiate kiosk video conferencing function, kiosk 100 comprises computer 110 which has an appropriate known network interface 155 [the call would take place over the network; where the superblock application is interpreted as a type of application], col. 4 lines 9-12, col. 15 lines 8-13); and providing, by the function block, audio for the A/V call via the mobile device (a collaborative session includes video and audio [where the function block is interpreted as a type of stored instruction set and the mobile device is interpreted as a type of device], col. 15 lines 48-53). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claim 9, Yin teaches a mobile device (the client computer is a web-enabled mobile device, col. 9 lines 38-41) comprising: a network interface (the client computer is a web-enabled mobile device [would include a network interface], col. 9 lines 38-41); a processor coupled to the network interface (the client machine is operated by a processor which performs the operations [the processor would be coupled to components such as the network interface], col. 14 lines 43-47); and a memory coupled to the processor and configured to store a plurality of instructions executable by the processor (the client machine has memory, all processes are performed by executable computer instructions stored on and read from computer-readable media [the stored instructions would be executed by the processor], col. 14 lines 43-56), the instructions including instructions for a superblock application having instructions for a function block included therein (when a user is using a web browser [superblock application as defined in paragraph 0022 of the instant PCT application] on a client machine the user can access a web-based interface to create a web component, components such as video components are created from existing web pages with the help of a browser add-on [function block as defined in paragraph 0031 of the instant PCT application], the user clicks on the web browser's add-on button to enter the componentization mode [the request would be sent from the browser to the browser add-on, the browser and add-on would be stored in the client computer's memory], col. 7 lines 12-15, 42-50), wherein the function block is configured to provide a plurality of functions that are accessible to the superblock application (components are created from existing web pages with the help of a browser add-on, the components which will show up in a dashboard page a live are component 155 or video 153 or widget 156, the dashboard page is created to be rendered in the web browser, col. 7 lines 42-46, col. 9 lines 15-18), wherein the functions are provided within the superblock application itself and are accessible within the superblock application without switching context to another application on the mobile device (the content is rendered directly and visually right in the web browser as part of that containing web page occupying part of the real estate of the screen without the need to click and open it in another web page or external application, col. 2 lines 49-57, col. 6 lines 7-15), and wherein the superblock application cannot access at least one of the functions of the function block without providing an authorization code (the web browser's add-on includes a "Post" button captures metadata and communicates the metadata to the server, the server retrieves metadata including requesting user's permission to access the dashboard page, if the user has the right permission to access the dashboard page the corresponding server application components will generate a dashboard page to be rendered in the web browser [the metadata sent by the function block would be used to determine the superblock's authorization, the user data sent to the server to determine authorization functions as an authorization code], col. 7 lines 48-61, col. 8 lines 58-65, col. 9 lines 15-22); but lacks the teaching wherein the function block is configured to provide a plurality of functions that are accessible to the superblock application via an application programming interface (API) of the function block; and wherein the superblock application cannot access at least one of the functions of the function block without providing the function block with an authorization code. Chen is in the field of reconfiguring devices (title) and teaches wherein the function block is configured to provide a plurality of functions that are accessible to the superblock application via an application programming interface (API) of the function block (embedded control programs 620 are content specific processes that use the non-content specific control mechanisms 640 to control local application program interfaces 680 associated with the respective input/output devices 130 [where the superblock application is interpreted as a type of application, and the function block is interpreted as a type of stored instruction set], col. 5 lines 5-10); and wherein the superblock application cannot access at least one of the functions of the function block without providing the function block with an authorization code (the kiosk requests a PIN code from Mr. Smith [where the superblock application is interpreted as a type of application, and the function block is interpreted as a type of stored instruction set], col. 7 lines 4-8). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claims 2, 17, Yin lacks the teaching wherein the instructions further include determining, by the function block, whether the function block has the capability to provide the A/V call. Chen is in the field of reconfiguring devices (title) and teaches wherein the instructions further include determining, by the function block, whether the function block has the capability to provide the A/V call (applications files 175 are used to query which input/output devices 130 are installed or operational in a given kiosk, in this way server 195 can determine which other application files 175 to send to the kiosk to enable the installed or operational input/output devices 130 and not to enable the uninstalled or faulty devices [where the function block is interpreted as a type of instruction set and the A/V call is interpreted as a type of functionality], col. 7 lines 34-40, col. 13 lines 4-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2014/039777

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Regarding claims 3, 18, Yin lacks the teaching wherein the instructions further include determining, by the function block, whether the dashboard framework has the capability to render the A/V call. However, Yin teaches rendering video (each component is dynamically rendered in the dashboard framework, col. 8 lines 48-52). Chen is in the field of reconfiguring devices (title) and teaches wherein the instructions further include determining, by the function block, whether the function block has the capability to render the A/V call (applications files 175 are used to query which input/output devices 130 are installed or operational in a given kiosk, in this way server 195 can determine which other application files 175 to send to the kiosk to enable the installed or operational input/output devices 130 and not to enable the uninstalled or faulty devices [where the function block is interpreted as a type of instruction set and rendering the A/V call is interpreted as a type of functionality], col. 7 lines 34-40, col. 13 lines 4-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claims 4, 19, Yin lacks the teaching wherein the instructions further include determining, by the function block, whether the superblock has the capability to render the A/V call. However, Yin teaches rendering video (each component is dynamically rendered in the dashboard framework, col. 8 lines 48-52). Chen is in the field of reconfiguring devices (title) and teaches wherein the instructions further include determining, by the function block, whether the superblock has the capability to render the A/V call (applications files 175 are used to query which input/output devices 130 are installed or operational in a given kiosk, in this way server 195 can determine which other application files 175 to send to the kiosk to enable the installed or operational input/output devices 130 and not to enable the uninstalled or faulty devices [where the function block is interpreted as a type of instruction set, the superblock is interpreted as a type of application, and rendering the A/V call is interpreted as a type of functionality], col. 7 lines 34-40, col. 13 lines 4-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claim 5, Yin lacks the teaching wherein the instructions further include determining, by the function block, that the resource is currently available prior to establishing the A/V call. Chen is in the field of reconfiguring devices (title) and teaches wherein the instructions further include determining, by the function block, that the resource is currently available prior to establishing the A/V call (applications files 175 are used to query which input/output devices 130 are installed or operational in a given kiosk, in this way server 195 can determine which other application files 175 to send to the kiosk to enable the installed or operational input/output devices 130 and not to enable the uninstalled or faulty devices [where the function block is interpreted as a type of instruction set and resources are interpreted as input/output devices], col. 7 lines 34-40, col. 13 lines 4-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claims 6, 20, Yin teaches wherein the instructions further include initializing the function block, by the superblock application, when the superblock application is loaded into the memory and executed (a browser add-on is installed [the add-on would be initialized by the browser when the browser is run], col. 7 lines 32-39).

Regarding claims 7, 21, Yin lacks the teaching wherein the request is an application programming interface (API) call from the superblock application to the function block. Chen is in the field of reconfiguring devices (title) and teaches Chen is in the field of reconfiguring devices (title) and teaches (embedded control programs 620 are content specific processes that use the non-content specific control mechanisms 640 to control local application program interfaces 680 associated with the respective input/output devices 130 [where the superblock application is interpreted as a type of application, and the function block is interpreted as a type of stored instruction set], col. 5 lines 5-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claims 8, 22, Yin lacks the teaching wherein the instructions further include enabling, by the function block, a user of the device to collaborate on at least one of a document, a file, or an application with a user on another device. However, Yin teaches at least one of a document, a file, or an application (components include office documents, col. 6 lines 25-26). Chen is in the field of reconfiguring devices (title) and teaches wherein the instructions further include enabling, by the function block, a user of the device to collaborate with a user on another device (a real-time collaborative session is started with video, audio, shared screen and remote device control functions [where the function block is interpreted as a type of instruction set], col. 15 lines 48-53). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claim 10, Yin teaches wherein the plurality of functions includes access to an external service not present on the mobile device (components are created from existing web pages, the server application components are used to generate the dashboard page to be rendered in the web browser, col. 7 lines 42-43, col. 9 lines 15-18).

Regarding claim 13, Yin teaches wherein the instructions further include providing, by the function block, video data to the superblock application for rendering by the superblock application (the web browser's add-on includes a "Post" button captures metadata and communicates the metadata to the server [the video is provided by the function block], the content is rendered directly and visually right in the web browser as part of that containing web page occupying part of the real estate of the screen without the need to click and open it in another web page or external application, for "component 1" its source is from "web site 1" so the Ajax-based Dashboard Page will make a HTTP request to the specific web component and display it in the visual area of "component 1" [depicted as a video window], fig. 1c, col. 6 lines 7-15, col. 7 lines 48-61, col. 9 lines 25-30), wherein the superblock application renders the video data in a video window that is superimposed on a display of the superblock application, and wherein both the video window and at least a portion of the display of the superblock application are simultaneously viewable (the content is rendered directly and visually right in the web browser as part of that containing web page occupying part of the real estate of the screen without the need to click and open it in another web page or external application, for "component 1" its source is from "web site 1" so the Ajax-based Dashboard Page will make a HTTP request to the specific web component and display it in the visual area of "component 1" [depicted as a video window, would be displayed simultaneously], fig. 1c, col. 6 lines 7-15, col. 9 lines 25-30).

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2014/039777

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Regarding claim 14, Yin lacks the teaching wherein the video window is associated with an audio/video (A/V) call session, and wherein the function block communicates with an external service to support the A/V call session. Chen is in the field of reconfiguring devices (title) and teaches wherein the video window is associated with an audio/video (A/V) call session (the user may select a video phone call or even a video conferencing call with application sharing if the other end has the same facility, then the control program embedded in the HTML application will invoke API functions to initiate kiosk video conferencing function, a collaborative session includes video and audio, col. 15 lines 8-13, 48-53), and wherein the function block communicates with an external service to support the A/V call session (a user selects an application for which the kiosk is to be configured and browser 160 interacts with one or more servers 185 to fetch one or more configuration sets 175, by selecting a second application the kiosk is again reconfigured for the second application [it would be determined that a new configuration set is needed; where the function block is interpreted as a type of stored instruction set], col. 5 lines 48-51, col. 6 lines 1-2). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claim 15, Yin teaches wherein the superblock application is not authorized to use at least one of the functions of the function block (the web browser's add-on includes a "Post" button captures metadata and communicates the metadata to the server, the server retrieves metadata including requesting user's permission to access the dashboard page, If the user has the right permission to access the dashboard page the corresponding server application components will generate a dashboard page to be rendered in the web browser [the metadata sent by the function block would be used to determine the superblock's authorization, were the browser to fail the authentication challenge the function would be unauthorized], col. 7 lines 48-61, col. 8 lines 58-65, col. 9 lines 15-22).

Claims 11-12 lack an inventive step under PCT Article 33(3) as being obvious over Yin in view of Chen, and further in view of Miura.

Regarding claim 11, Yin as modified lacks the teaching wherein the instructions further include providing an event notification by the function block to the superblock application when the function block receives a message from the external service. Miura is in the field of video phones (abstract) and teaches wherein the instructions further include providing an event notification by the function block to the superblock application when the function block receives a message from the external service (control unit 10 determines whether an incoming call from a called party is a request for call using the video phone function or a request for audio communication only [the control unit would receive notification of an incoming call; where the function block is interpreted as a type of instruction set and the superblock application as a type of application], para. 0070). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Miura to incorporate the above features in the invention of Yin. The motivation would have been to smoothly perform communication (Miura, para. 0008).

Regarding claim 12, Yin lacks the teaching wherein the instructions further include receiving, by the function block, a response to the event notification from the superblock application. Miura is in the field of video phones (abstract) and teaches wherein the instructions further include receiving, by the function block, a response to the event notification from the superblock application (control unit 10 starts communication using the video phone function with a called party [the control unit would provide an indication of acceptance of the call; where the function block is interpreted as a type of instruction set and the superblock application as a type of application], para. 0086). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Miura to incorporate the above features in the invention of Yin. The motivation would have been to smoothly perform communication (Miura, para. 0008).

Claims 1-22 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: TIMOTHY F. BLISS
HOWISON & ARNOTT, L.L.P.
P.O. BOX 741715
DALLAS, TX 75374-1715

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Applicant's or agent's file reference DAMA-32203	Date of mailing <i>(day/month/year)</i> 17 OCT 2014
International application No. PCT/US 14/39782	International filing date <i>(day/month/year)</i> 28 May 2014 (28.05.2014)
Applicant DAMAKA, INC.	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.
 Filing of amendments and statement under Article 19:
 The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):
 When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.
 How? Directly to the International Bureau of WIPO preferably through ePCT or on paper to, 34 chemin des Colombettes
 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70
 For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.
2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3. ☐ With regard to any protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
 - ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.
 - ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.
4. Reminders
 The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. These comments will be made available to the public after international publication. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established.
 Shortly after the expiration of 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90bis.1 and 90bis.3).
 Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise, the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices. In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months. For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.
 Within 19 months from the priority date, the applicant may request that a supplementary international search be carried out by a different International Searching Authority that offers this service (Rule 45bis.1). The procedure for requesting supplementary international search is described in the *PCT Applicant's Guide*, International Phase, paragraphs 8.006-8.032.

Name and mailing address of the ISA/
 Melt Stop PCT, Attn: ISA/US
 Commissioner for Patents
 P.O. Box 1450, Alexandria, Virginia 22313-1450
 Facsimile No. 571-273-3201

Authorized officer

 Lee W. Young

 PCT Helpdesk: 571-272-4800
 Telephone No. PCT O&P: 571-272-1774

Form PCT/ISA/220 (July 2014)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference DAMA-32203	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US 14/39782	International filing date (day/month/year) 28 May 2014 (28.05.2014)	(Earliest) Priority Date (day/month/year) 18 October 2013 (18.10.2013)
Applicant DAMARA, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed.
☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (see Box No. II).

3. ☐ Unity of invention is lacking (see Box No. III).

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 1A
☐ as suggested by the applicant.
☒ as selected by this Authority, because the applicant failed to suggest a figure.
☐ as selected by this Authority, because this figure better characterizes the invention.
- b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 14/35782

A. CLASSIFICATION OF SUBJECT MATTER

IPC(B) - G06F 9/48 (2014.01)

CPC - G06F 9/4881

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(B): G06F 9/48 (2014.01)

CPC: G06F 9/4881

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

IPC(B): G06F 9/48 (2014.01); CPC: G06F 9/4881; G06F 9/4843; G06F 9/3851; G06F 9/4887; G06F 9/52; USPC: 718/1; 718/108; 718/100; 718/107 (keyword limited; terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase; Google/Web; Search terms used: collaboration resource sharing timer period transfer control owner state gain lose request buffer cursor pointers

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	US 2010/0174783 A1 (Zarom) 08 July 2010 (08.07.2010), entire document especially Fig. 1, 3; para [0045], [0052]-[0057], [0060]-[0072], [0162], [0126]	1-5, 7-15 8, 16-20
Y	US 2007/0294828 A1 (Fletcher et al.) 20 December 2007 (20.12.2007), entire document especially para [0016]-[0020], [0038]-[0041], [0067], [0071]	6, 18
Y	US 2004/0249885 A1 (Petrocoukakis et al.) 09 December 2004 (09.12.2004), entire document especially para [0206], [0233], [0242]-[0251], [0266], [0274]-[0278], [0326]	16-20

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:	"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Z" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

08 September 2014 (08.09.2014)

Date of mailing of the international search report

17 OCT 2014

Name and mailing address of the ISA/US

Mell Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-3201

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: TIMOTHY F. BLISS
HOWISON & ARNOTT, L.L.P.
P.O. BOX 741715
DALLAS, TX 75374-1715

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing (day/month/year)		17 OCT 2014
Applicant's or agent's file reference DAMA-32203		FOR FURTHER ACTION See paragraph 2 below
International application No. PCT/US 14/39782	International filing date (day/month/year) 28 May 2014 (28.05.2014)	Priority date (day/month/year) 18 October 2013 (18.10.2013)
International Patent Classification (IPC) or both national classification and IPC IPC(8) - G06F 9/46 (2014.01) CPC - G06F 9/4881		
Applicant DAMAKA, INC.		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1460, Alexandria, Virginia 22313-1460 Facsimile No. 571-273-3201	Date of completion of this opinion 08 September 2014 (08.09.2014)	Authorized officer: Lse W. Young <small>PCT Helpdesk: 571-273-4906 PCT EBP: 571-273-7774</small>
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Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US 14/39782

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:
☒ the international application in the language in which it was filed.
☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. ☐ This opinion has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a)).
3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
 - a. (means)
☐ on paper
☐ in electronic form
 - b. (time)
☐ in the international application as filed
☐ together with the international application in electronic form
☐ subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US 14/39782

Box No. V Reasoned statement under Rule 43bis.1(u)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	8, 16-20	YES
	Claims	1-5, 7-15	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-5 and 7-15 lack novelty under PCT Article 33(2) as being anticipated by US 2010/0174783 A1 (Zarom).

Regarding claim 1, Zarom teaches a method comprising: receiving, by a first device of a plurality of devices involved in a collaboration session that uses a shared resource, first input from a second device of the plurality of devices, wherein the first input represents a request to take control of the shared resource (user computer B, 150 sends a request for lock-in / control rights to edit a collaborative shared session document to a document serving / coordinating device 110; Fig. 1, 3; para [0052], [0060], [0062]-[0065], [0102], [0126]); determining, by the first device, that a third device of the plurality of devices is currently in control of the shared resource (coordinating device designates exclusive rights and lock-in control to device user A, 140; para [0040], [0057], [0060], [0063]); starting a timer, by the first device, wherein control of the shared resource will automatically pass from the third device to the second device when a time period defined by the timer expires (control is shared / switched or given up to the second device based on time count, cycle numbers, number / times of occurrence, etc.; para [0054]-[0057], [0063], [0065], [0066]); executing, by the first device, second input received from the third device after the timer has been started and before the time period expires, wherein the second input represents at least one action to be taken using the shared resource (execute the third devices commands during its temporary lock-in period; para [0061], [0063], [0065], [0066]); sending, by the first device, a result obtained by executing the at least one action represented by the second input to each of the plurality of devices (para [0069]-[0072]); buffering, by the first device, third input received from the second device after the timer has been started and before the time period expires, wherein the third input represents at least one action to be taken using the shared resource (the coordinating device accepts buffered local stored version inputs / commands submitted by the second device during the lock-out period of the second device; para [0052], [0061], [0067]-[0070]); and executing, by the first device, the at least one action represented by the third input after control is passed from the third device to the second device (submit / accept the commands for merging and integration after the lock-period for the second device is over; para [0070]); and sending, by the first device, a result obtained by executing the at least one action represented by the third input to each of the plurality of devices (para [0070]-[0072]).

Regarding claim 2, Zarom teaches receiving, by the first device, fourth input from the second device, wherein the fourth input is received before the first input and while the third device is in control of the shared resource, and wherein the fourth input represents at least one action to be taken using the shared resource (rejected commands are submitted by the third device during the second devices lock-out period and before requesting / submitting the control requests; para [0057], [0060], [0061]); and ignoring, by the first device, the fourth input (rejected non-entered commands; para [0057], [0060], [0061]).

Regarding claim 3, Zarom teaches determining, by the first device, whether the second input includes a restricted action, wherein the restricted action is ignored and not executed (restricted lock-out modifications are blocked / discarded; para [0057], [0059]-[0061]).

Regarding claim 4, Zarom teaches the first device is sharing the shared resource (coordinating sharing; abstract, para [0020], [0038], [0050]), the method further comprising taking control of the shared resource from any other device of the plurality of devices that currently has control (para [0040], [0053], [0065]).

Regarding claim 5, Zarom teaches sending, by the first device, a message to the plurality of devices to inform the plurality of devices that the second device is now in control of the shared resource (para [0061], [0063]).

Regarding claim 7, Zarom teaches receiving, by the first device, a message from the third device indicating that the third device relinquishes control to the second device prior to the expiration of the time period (manual command / message to remove the lock; para [0062], [0065]).

Regarding claim 8, Zarom teaches the shared resource is user-controllable and wherein the first, second, and third input correspond to user input (para [0043], [0051], [0052]).

--CONTINUED IN SUPPLEMENTAL BOX--

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP 14/38752

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 9 depends from claim 1. Therefore, this Authority has interpreted claim 9 to instead depend from claim 1.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US 14/38782

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Box No. V.2. Citations and explanations:

Regarding claim 8, Zaron teaches the shared resource includes a user interface device (Fig. 2, 4, 5; para [0043], [0051], [0052]).

Regarding claim 10, Zaron teaches receiving, by the first device, a locked indicator prior to starting the timer, wherein the locked indicator signifies that control cannot be transferred from the third device (lock-out messages displayed before / during controlling user's editing period; para [0061], [0063], [0065], [0066]); and receiving, by the first device, an unlocked indicator following the receipt of the locked indicator (para [0065]), wherein the unlocked indicator signifies that control can be transferred from the third device and wherein the timer is started after receiving the unlocked indicator (para [0063], [0065], [0066]).

Regarding claim 11, Zaron teaches taking control of the shared resource, by the first device, after control is passed from the third device to the second device and the second device leaves the collaboration session without passing control to another device of the plurality of devices (the coordinating device automatically takes and transfer control in absence of locking inputs for a session / editing sequence, e.g., when the user leaves or is disconnected from the session; para [0038], [0059], [0065], [0067], [0126]).

Regarding claim 12, Zaron teaches receiving, by the first device, fourth input from the third device, wherein the fourth input represents a request to take control of the shared resource after control of the resource has passed to the second device (a command to override or give up the temporary control rights from the second device; para [0060], [0063], [0066]); and determining whether a cooling off period has expired, wherein the second device cannot gain control of the shared resource until the cooling off period has expired (the device cannot gain control until the temporary lock-out, i.e., cooling, period has passed; para [0060], [0063], [0065], [0066]).

Regarding claim 13, Zaron teaches the cooling off period is applied to each of the plurality of devices (temporary lock-out period feature provided equally / proportionately to all devices; para [0040], [0066], [0066]).

Regarding claim 14, Zaron teaches the cooling off period is applied only to the second device (weighted or prioritized access and lock-out is given to select computers, e.g., only the second device is selected; para [0040], [0060], [0062], [0065]).

Regarding claim 15, Zaron teaches access to the shared resource by the first device is handled by the first device in an identical manner as access by any other device of the plurality of devices (equal and proportionate access is given by the coordinating device; para [0040], [0061], [0065]).

Claim 6 lacks an inventive step under PCT Article 33(3) as being obvious over Zaron in view of US 2007/0264626 A1 to Fletcher et al. (hereinafter "Fletcher").

Regarding claim 6, Zaron teaches sending, by the first device, a message to the third device (indicating temporary access commands are integrated / locked-out or not; para [0061], [0065], [0066], [0075], [0086]), but fails to disclose indicating that the third device will lose control of the shared resource when the time period expires. Fletcher teaches indicating that the third device will lose control of the shared resource when the time period expires (to indicated request and control changes to inform all users; para [0018]-[0020], [0040], [0041], [0067], [0071]). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method of Zaron to include indicating that the third device will lose control of the shared resource when the time period expires as taught by Fletcher for the advantage of providing enhanced information and change identification.

—CONTINUED IN NEXT SUPPLEMENTAL BOX—

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 14/38762

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:
Box No. V. 2. Citations and explanations:

Claims 16, 17, 19 and 20 lack an inventive step under PCT Article 35(3) as being obvious over Zaron in view of US 2004/0249685 A1 to Petropoulos et al. (hereinafter "Petropoulos").

Regarding claim 16, Zaron teaches a method comprising: monitoring, by a first device of a plurality of devices involved in a collaboration session that uses a shared resource (Fig. 1, 3; para [0062], [0060], [0062]-[0065], [0102], [0126]), a state of each of the plurality of devices as one of an owner state (locked in exclusive rights; para [0063], [0066]), a not owner state (lock-out state of control / ownership; para [0065], [0068]), a gaining ownership state, and a losing ownership state; receiving, by the first device, first input from a second device of the plurality of devices, wherein the first input represents a request to take control of the shared resource (user computer B, 140 sends a request for lock-in / control rights to edit a collaborative shared session document to a document serving / coordinating device 110; Fig. 1, 3; para [0062], [0060], [0062]-[0065], [0102], [0126]); identifying, by the first device, that the second device is in the not owner state and that a third device of the plurality of devices is currently in the owner state, wherein the not owner state indicates that the second device is currently not in control of the shared resource and wherein the owner state indicates that the third device is currently in control of the shared resource (coordinating device designates exclusive rights and lock-in control to device user A, 140; para [0040], [0067], [0080], [0063]); starting a timer, by the first device, wherein control of the shared resource will automatically pass from the third device to the second device when a transition period defined by the timer expires (control is shared / switched or given up to the second device based on time count, cycle numbers, number / times of occurrence, etc.; para [0054]-[0057], [0063], [0065], [0068]); modifying, by the first device, the state of the second device from the not owner state to the gaining ownership state (give permission / rights to another computer changing from lock-out to locked-in; para [0059], [0060], [0063], [0065]), wherein second input received from the second device is buffered by the first device as the second input is received and not sent to each of the plurality of devices, wherein the second input represents at least one action to be taken using the shared resource (the coordinating device accepts buffered local stored version inputs / commands submitted by the second device to a queue / list during the lock-out period of the second device; para [0052], [0061], [0067]-[0070], [0081]); modifying, by the first device, the state of the third device from the owner state, wherein third input received from the third device is executed by the first device as the third input is received and a result obtained by executing the third input is sent to each of the plurality of devices, wherein the third input represents at least one action to be taken using the shared resource (the controlling device with lock-in rights / status sends shared document commands / edit modifications to each device for integration through the coordinating device; para [0061], [0063], [0065], [0068], [0069]-[0072]); modifying, by the first device, the state of the third device to the not owner state upon expiration of the timer (para [0054]-[0057], [0063], [0065], [0068]); modifying, by the first device, the state of the second device to the owner state upon expiration of the timer (para [0061], [0063], [0065], [0068], [0070]); executing, by the first device, the second input once the second device is in the owner state (para [0061], [0063], [0065], [0068], [0070]); and sending, by the first device, a result obtained by executing the second input to each of the plurality of devices (para [0070]-[0072]), but fails to specifically disclose second input received from the second device while in the gaining ownership state; to the losing ownership state; while in the losing ownership state; from the losing ownership state to the not owner state; from the gaining ownership state to the owner state. Petropoulos teaches second input received from the second device while in the gaining ownership state (transition / change state flag indicating the relinquishing and taking control commands in a collaboration session; para [0233], [0250], [0251], [0274]-[0276]); to the losing ownership state (indicates lose state to switch control to another user to receive supervision and assistance; para [0242], [0246], [0274], [0275]); while in the losing ownership state (labels indicating changing from the active to the passive mode / lose state to avoid relinquishing control to another user before a control task / operation is complete; para [0206], [0206], [0274], [0326]); from the losing ownership state to the not owner state (relinquishing control to a passive state / mode; para [0246], [0274]-[0278]); from the gaining ownership state to the owner state (gaining control and changing from a passive mode to an active mode; para [0274]-[0278]). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method of Zaron to include second input received from the second device while in the gaining ownership state; to the losing ownership state; while in the losing ownership state; from the losing ownership state to the not owner state; from the gaining ownership state to the owner state as taught by Petropoulos for the advantage of providing change indications so that the current task can be completed and so that the next controlling user is prepared to continue where the last user left off.

Regarding claim 17, Zaron teaches receiving, by the first device, fourth input from a fourth device of the plurality of devices, wherein the fourth input represents at least one action to be taken using the shared resource (rejected commands are submitted by the another device during the second devices lock-out period and before requesting / submitting the control requests; para [0057], [0060], [0061]); identifying, by the first device, that the fourth device is not in either the owner state (para [0058], [0061]) or the gaining ownership state; identifying, by the first device, that the fourth input does not represent a request to take control of the shared resource (non-submitted edit for local usage only; para [0061], [0070]); and ignoring the fourth input (rejected / discarded commands; para [0057], [0060], [0061], [0065]).

Regarding claim 19, Zaron teaches determining, by the first device, that the second device is no longer part of the collaboration session but is currently listed as being in the owner state (the coordinating device automatically takes and transfers control in absence of locked-in inputs, e.g., when the user leaves / ends a session or is disconnected from the session; para [0038], [0059], [0065]-[0067], [0125]); and modifying, by the first device, the state of the first device from the not owner state to the owner state without passing through the gaining ownership state (the coordinating device can automatically take control / transfer rights after the time-out period or session leaving / ended, to control and transfer the commands and rights to the other computers; para [0065], [0067], [0068], [0125]). It would have been obvious to prevent locking-out all users when a controlling device is disconnected from the collaboration session.

-CONTINUED IN NEXT SUPPLEMENTAL BOX-

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 14/35782

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:
Box No. V. 2. Citations and explanations:

Regarding claim 20, Zaron teaches device comprising: a network interface; a processor coupled to the network interface; and a memory coupled to the processor and configured to store a plurality of instructions executable by the processor (Fig. 1, 3; para [0052], [0050], [0062]-[0065], [0102], [0126]), the instructions including instructions for: monitoring a state of each of a plurality of devices as one of an owner state (locked in exclusive rights; para [0063], [0065]), a not owner state (lock-out state of control / ownership; para [0066], [0068]), a gaining ownership state, and a losing ownership state, wherein the plurality of devices are involved in a collaboration session that uses a shared resource being shared by the device, receiving first input from a second device of the plurality of devices via the network interface, wherein the first input represents a request to take control of the shared resource (user computer B, 140 sends a request for lock-in / control rights to edit a collaborative shared session document to a document serving / coordinating device 110; Fig. 1, 3; para [0052], [0060], [0062]-[0065], [0102], [0126]); identifying that the second device is in the not owner state and that a third device of the plurality of devices is currently in the owner state, wherein the not owner state indicates that the second device is currently not in control of the shared resource and wherein the owner state indicates that the third device is currently in control of the shared resource (coordinating device designates exclusive rights and lock-in control to device user A, 140; para [0040], [0057], [0060], [0063]); starting a timer, wherein control of the shared resource will automatically pass from the third device to the second device when a transition period defined by the timer expires (control is shared / switched or given up to the second device based on time count, cycle numbers, number / times of occurrence, etc.; para [0064]-[0067], [0068], [0069], [0085]); modifying the state of the second device from the not owner state, wherein second input received via the network interface from the second device is buffered by the first device as the second input is received and not sent to each of the plurality of devices, wherein the second input represents at least one action to be taken using the shared resource (the coordinating device accepts buffered local stored version inputs / commands submitted by the second device to a queue / list during the lock-out period of the second device; para [0062], [0061], [0067]-[0070], [0081]); modifying the state of the third device from the owner state, wherein third input received via the network interface from the third device is executed by the first device as the third input is received and a result obtained by executing the third input is sent to each of the plurality of devices, wherein the third input represents at least one action to be taken using the shared resource (the controlling device with lock-in rights / status sends shared document commands / edit modifications to each device for integration through the coordinating device; para [0061], [0063], [0065], [0068], [0069], [0072]); modifying the state of the third device to the not owner state upon expiration of the timer (para [0064]-[0067], [0068], [0069], [0085]); modifying the state of the second device to the owner state upon expiration of the timer (para [0061], [0063], [0065], [0068], [0070]); executing the second input once the second device is in the owner state (para [0061], [0063], [0065], [0068], [0070]); and sending a result obtained by executing the second input to each of the plurality of devices (para [0070]-[0072]), but fails to specifically disclose second input received from the second device while in the gaining ownership state; to the losing ownership state; while in the losing ownership state; from the losing ownership state to the not owner state; from the gaining ownership state to the owner state. Petropoulos teaches second input received from the second device while in the gaining ownership state (transition / change state stage including the relinquishing and taking control commands in a collaboration session; para [0223], [0250], [0251], [0274]-[0276]); to the losing ownership state (indicates lose state to switch control to another user to receive supervision and assistance; para [0242], [0246], [0274], [0275]); while in the losing ownership state (labels indicating changing from the active to the passive mode / lose state to avoid relinquishing control to another user before a control task / operation is complete; para [0208], [0268], [0274], [0328]); from the losing ownership state to the not owner state (relinquishing control to a passive state / mode; para [0248], [0274]-[0276]); from the gaining ownership state to the owner state (gaining control and changing from a passive mode to an active mode; para [0274]-[0276]). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of Zaron to include second input received from the second device while in the gaining ownership state; to the losing ownership state; while in the losing ownership state; from the losing ownership state to the not owner state; from the gaining ownership state to the owner state as taught by Petropoulos for the advantage of providing change indications so that the current task can be completed and so that the next controlling user is prepared to continue where the last user left off.

Claim 18 lacks an inventive step under PCT Article 33(3) as being obvious over Zaron in view of Petropoulos and Fletcher.

Regarding claim 18, Zaron teaches receiving, by the first device, a cursor position for each of the plurality of devices including the second and third devices (para [0061]); and sending, by the first device, cursor information for each of the plurality of devices to each of the other devices (cursor editing sharing; para [0061]), wherein the cursor information includes the cursor position (para [0061]) and Petropoulos further teaches the cursor belonging to whichever device of the plurality of devices currently in the owner state and the losing ownership state (para [0242], [0246], [0274], [0275], [0363]-[0365]), however the combination fails to disclose a cursor type identifier, wherein the cursor type identifier distinguishes the cursor belonging to whichever device of the plurality of devices currently in the owner state and the losing ownership state, and wherein the cursor information is sent regardless of the state of the device from which the cursor position was received. Fletcher teaches a cursor type identifier, wherein the cursor type identifier distinguishes the cursor belonging to whichever device of the plurality of devices currently in the owner state and the losing ownership state (identify multiple cursor pointers for controlling and control requesting devices; para [0038], [0039]), and wherein the cursor information is sent regardless of the state of the device from which the cursor position was received (all cursors are transmitted / shared; para [0038], [0039]). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method of Zaron in view of Petropoulos to include a cursor type identifier, wherein the cursor type identifier distinguishes the cursor belonging to whichever device of the plurality of devices currently in the owner state and the losing ownership state, and wherein the cursor information is sent regardless of the state of the device from which the cursor position was received as taught by Petropoulos for the advantage of providing additional participation information and functionality.

Claims 1-20 have industrial applicability as defined by PCT Article 33(4), because the subject matter can be made or used in industry.

SEARCH HISTORY

Application Number	PCT/US 14/39782
Search Conducted By	CHJ
Search Approved By	PCL

US/IPC Classifications Searched	IPC(8): G06F 9/46 (2014.01) CPC: G06F 9/4881
Date Conducted	08 September 2014 (08.09.2014)

Documents Searched	IPC(8): G06F 9/46 (2014.01); CPC: G06F 9/4881; G06F 9/4843; G06F 9/3851; G06F 9/4887; G06F 9/52; USPC: 718/1; 718/106; 718/100; 718/107 (keyword limited; terms below)
Search Terms Used	collaboration resource sharing timer period transfer control owner state gain lose request buffer cursor pointers
Date Conducted	08 September 2014 (08.09.2014)

Electronic Database Searched	PatBase
Files Searched	Full-text: AU BE BR CA CH CN DE DK EP ES FI FR GB IN JP KR SE TH TW US WO Bibliographic: (Europe) AT BA BE BG CH CS CY CZ DD DK EE ES FI GE GR HR HU IE IS IT LT LU LV MC MD MT NL NO PL PT RO RS SE SI SK SM TR UA YU (Asia) EA GC HK ID IL IN KZ MN MY PH RU SG SU TH TJ TW UZ VN (North America) CA CR CU DO GT HN MX NI PA SV TT (South America) AR BR CL CO EC PE UY (Australasia) AU NZ (Africa) AP DZ EG KE MA MW OA ZA ZM ZW
Date Conducted	08 September 2014 (08.09.2014)
Search Logic:	
1) ic=(G06F9/46) or uc=(718/1 or 718/106 or 718/100 or 718/107) or cpc=(G06F9/4881 or G06F9/4843 or G06F9/3851 or G06F9/4887 or G06F9/52) (54859) 2) 1 and collaborat* w4 shar* (294) 3) 2 and (timer or period w5 time or expiration or elaps* w4 time) (133)	

4) 3 and (cursors or pointers) (38)
 5) 3 not 4 (95)
 6) 2 not 3 (161)
 7) 6 and (control* or owner* or right% gain* or lose) w5 (user% or member* or computer% or client% or device%) (107)
 8) 7 and request* (99)
 9) 6 not 8 (62)
 10) (control* or owner* or right% gain* or lose) w5 (user% or member* or computer% or client% or device%) (100000)
 11) (buffer* or cach*) w5 (command% or request* or edit* or modif*) (71596)
 12) request* w5 (control* or owner* or right% gain* or lose or permit*) (100000)
 13) 10 and 11 (34631)
 14) 13 and 12 (13626)
 15) (timer or period w5 time or expiration or elaps* w4 time) w6 (transfer* or chang* or transition* or state or status or mode%) (81390)
 16) 14 and 15 (709)
 17) collaborat* w4 shar* (4823)
 18) 16 and 17 (14)
 19) collaborat* w4 session% (1805)
 20) 19 and 15 (3)
 21) 19 and 17 (556)
 22) 21 and 12 (138)
 23) 22 and 11 (21)
 24) 22 and 10 (120)
 25) 24 and 15 (7)
 26) 24 not 23 (100)

Electronic Database Searched	Google
Files Searched	Web
Date Conducted	08 September 2014 (08.09.2014)
Search Logic	<p>"collaboration session" resource sharing "time period" transfer control 74</p> <p>"collaboration" "session" "ownership" resource sharing "period of time" "relinquish control" 53</p> <p>"collaboration" "shared" "ownership" "resource" "period of time" "relinquish control" 82</p> <p>"shared control" "period" "timer" mouse pointers 89</p>

Supplemental Search:

Electronic Database Searched	PatBase
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	<p>Full-text: AU BE BR CA CH CN DE DK EP ES FI FR GB IN JP KR SE TH TW US WO</p> <p>Bibliographic: (Europe) AT BA BE BG CH CS CY CZ DD DK EE ES FI GE GR HR HU IE IS IT LT LU LV MC MD MT NL NO PL PT RO RS SE SI SK SM TR UA YU (Asia) EA GC HK ID IL IN KZ MN MY PH RU SG SU TH TJ TW UZ VN (North America) CA CR CU DO GT HN MX NI PA SV TT (South America) AR BR CL CO EC PE UY (Australasia) AU NZ (Africa) AP DZ EG KE MA MW OA ZA ZM ZW</p>
15 September 2014	
<p>Search 1: collaborat* w5 (resource sharing) (Results 50) Search 2: 1 and serial (Results 11) Search 3: 1 and timer (Results 1) Search 4: 1 and buffer* (Results 3)</p>	

Electronic Database Searched	Google
Files Searched	Web, Scholar with patents
Date Conducted	15 September 2014
<p>Search Logic:</p> <p>Scholar: collaborative resource sharing timer passing control About 20,600 results (0.16 sec) collaborative resource sharing timer passing control restricted actions About 19,100 results (0.14 sec) collaborative resource sharing timer passing relinquish control restricted actions About 18,900 results (0.16 sec)</p> <p>Web: collaborative resource sharing timer passing control About 5,300,000 results collaborative resource sharing timer passing control restricted actions About 2,300,000 results collaborative resource sharing timer passing relinquish control restricted actions About 97,100 results</p>	

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: TIMOTHY F. BLISS
HOWISON & AMOTT, LLP
P.O. BOX 741715
DALLAS, TX 75374-1715

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing
(day/month/year) **26 OCT 2015**

Applicant's or agent's file reference
DAMA-32759

FOR FURTHER ACTION See paragraphs 1 and 4 below

International application No.
PCT/US2015/043633

International filing date
(day/month/year) **04 August 2015**

Applicant **DAMAKA, INC.**

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.
Filing of amendments and statement under Article 19:
The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):
When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.
How? Directly to the International Bureau of WIPO preferably through ePCT or on paper to, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70
For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.
2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3. ☐ With regard to any protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
 - ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.
 - ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Reminders

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. These comments will be made available to the public after international publication. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established.

Shortly after the expiration of 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90bis.1 and 90bis.3).

Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise, the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices. In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months. For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Within 19 months from the priority date, the applicant may request that a supplementary international search be carried out by a different International Searching Authority that offers this service (Rule 45bis.1). The procedure for requesting supplementary international search is described in the *PCT Applicant's Guide*, International Phase, paragraphs 8.006-8.032.

Name and mailing address of the ISA/
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-8300

Authorized officer

Blaine R. Copenhaver

PCT Helpdesk: 571-272-4300
Telephone No. PCT CSP: 571-272-7774

Form PCT/ISA/220 (July 2014)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference DAMA-32759	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2015/043633	International filing date <i>(day/month/year)</i> 04 August 2015	(Earliest) Priority Date <i>(day/month/year)</i> 05 August 2014
Applicant DAMAKA, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (see Box No. II).

3. ☐ Unity of invention is lacking (see Box No. III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. FG.11

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2015/043633

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - G06F 17/28 (2015.01) CPC - G06F 17/28 (2015.04) According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC(8) - G06F 17/28, H04L 9/32, H04L 12/28, H04L 12/56 (2015.01) USPC - 370/254, 370/401, 704/3, 726/5 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched CPC - G06F 17/28, G06F 17/289, G06F 21/31, G10L 15/005, H04L 9/3234, H04L 63/0853, H04L 63/0861, H04L 67/104, H04L 67/1048, H04L 67/1059, H04L 2209/56, H04L 2209/76 (2015.04) (keyword delimited) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Orbit, Google Patents, Google Scholar, Google. Search terms used: provide connectivity, federated domain relationship, federated domain request, access server, endpoints, granted, updated information		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2011/0320821 A1 (ALKHATIB et al) 29 December 2011 (29.12.2011), entire document	1-21
Y	US 2008/0320565 A1 (BUCH et al) 25 December 2008 (25.12.2008), entire document	4-8, 11-21
Y	US 2010/0191954 A1 (KIM et al) 29 July 2010 (29.07.2010), entire document	1-10
Y	US 2013/0111064 A1 (MANI et al) 02 May 2013 (02.05.2013), entire document	1-10, 15-21
Y	US 2007/0280253 A1 (ROOHOLAMINI et al) 06 December 2007 (06.12.2007), entire document	13, 17
Y	US 2013/0067004 A1 (LOGUE et al) 14 March 2013 (14.03.2013), entire document	9, 10
Y	WO 2008/099420 A2 (MADHOK) 21 August 2008 (21.08.2008), entire document	21
A	US 2008/0046984 A1 (BOHMER et al) 21 February 2008 (21.02.2008), entire document	1-21
A	US 2012/0078609 A1 (CHATURVEDI et al) 29 March 2012 (29.03.2012), entire document	1-21
A	US 2006/0233117 A1 (TOMSU et al) 19 October 2006 (19.10.2006), entire document	1-21
A	US 2011/0307556 A1 (CHATURVEDI et al) 15 December 2011 (15.12.2011), entire document	1-21
☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 24 September 2015		Date of mailing of the international search report 26 OCT 2015
Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300		Authorized officer Blaine Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (January 2015)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: **TIMOTHY F. BLISS**
HOWISON & AMOTT, LLP
P.O. BOX 741715
DALLAS, TX 75374-1715

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year)

26 OCT 2015

Applicant's or agent's file reference
DAMA-32759

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/US2015/043633

International filing date (day/month/year)
04 August 2015

Priority date (day/month/year)
05 August 2014

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 17/28 (2015.01)
CPC - G06F 17/28 (2015.04)

Applicant
DAMAKA, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability, citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-8300

Date of completion of this opinion
24 September 2015

Authorized officer
Blaine Copenheaver
PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (January 2015)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043633

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. ☐ This opinion has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a)).
3. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2015/043633

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement			
1. Statement				
Novelty (N)	Claims	1-21	YES	
	Claims	None	NO	
Inventive step (IS)	Claims	None	YES	
	Claims	1-21	NO	
Industrial applicability (IA)	Claims	1-21	YES	
	Claims	None	NO	
2. Citations and explanations:				
<p>Claims 11, 12, and 14 lack an inventive step under PCT Article 33(3) as being obvious over US 2011/0320821 A1 to ALKHATIB et al. (hereinafter ALKHATIB) in view of US 2008/0320565 A1 to BUCH et al. (hereinafter BUCH).</p> <p>Regarding claim 11, ALKHATIB discloses a method for providing connectivity between endpoints in different domains that have a federated domain relationship (provide federation mechanisms for joining an endpoint within the purview of a second authority domain to a first virtual network overlay ("overlay") governed by a first authority domain, para 0005), the method comprising: receiving, by a first access server in a first domain, an add request from a first endpoint in the first domain (joining a subject endpoint under the purview of a second domain authority to a first overlay governed by a first domain authority, a second federation mechanism negotiating with a first federation mechanism on behalf of the subject endpoint, para 0071), wherein the add request identifies a second endpoint in a second domain with which the first endpoint wants to communicate (the overlay 330 enables complete connectivity between the endpoints A 201 and B 202 via the secured connection 335 from the virtual IP address IP.sub.A' 405 to the virtual IP address IP.sub.B' 425, para 0046); determining, by the first access server, that the first domain has a federated domain relationship with the second domain (provide federation mechanisms for joining an endpoint within the purview of a second authority domain to a first virtual network overlay ("overlay") governed by a first authority domain, establishing a communication link between the first overlay and a second overlay that is governed by the second authority domain, para 0005), wherein the federated domain relationship enables endpoints within the first domain to communicate with endpoints within the second domain (the virtualized endpoints (e.g., members of the first and second overlay) may be associated together in a group so that they mutually appear to one another that they are participants within a common dedicated network, para 0007); and sending, by the first access server, a notification of the add request to the second access server (the second federation mechanism sends a request that the subject member join the first overlay. Upon receiving the request, the first federation mechanism allocates a guest IP address from the first address range, para 0022). ALKHATIB does not specifically disclose receiving, by the first access server, a response to the notification from the second access server either granting or denying the add request. However, BUCH is in the field of protecting from open enhanced federation user enumeration (abstract) and discloses receiving, by the first access server, a response to the notification from the second access server either granting or denying the add request (The peer tracking module 214 may maintain and update a threat status indicator value for each untrusted peer, and output or store the threat status indicator value for use by the peer authorization module 216 to determine whether the OEF module 210 should grant or deny a request for a connection 240-1-v from an untrusted peer, para 0031). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine receiving, by the first access server, a response to the notification from the second access server either granting or denying the add request as taught in BUCH with the invention of ALKHATIB, in order to determine whether the OEF module 210 should grant or deny a request for a communications connection 240-1-v from an untrusted peer (BUCH para 0028).</p> <p>Regarding claim 12, ALKHATIB further discloses further comprising: receiving, by the first access server, contact information for the second endpoint from the second access server if the add request is granted by at least one of the second access server and the second endpoint (the endpoint B 202 residing in the data center 325 may be identified by as being a component of the particular service application. The endpoint B 202 may be reachable over the physical network 380 at a second physical IP address. When incorporated into the overlay 330, the endpoint B 202 is assigned a second virtual IP address that locates a virtual presence B' 332 of the endpoint B 202 within the overlay 330, para 0042); and forwarding, by the first access server, the contact information to the first endpoint, wherein the first endpoint is able to use the contact information to attempt to contact the second endpoint (The physical IP address IP.sub.A 410 is reachable over a channel 415 within a topology of a physical network. In contrast, the virtual IP address IP.sub.A' 405 communicates across the secured connection 335 to a virtual IP address IP.sub.B' 425 associated with the endpoint B 385. Additionally, the endpoint B 202 is associated with a physical IP address IP.sub.B 430. The physical IP address IP.sub.B 430 is reachable over a channel 420 within the topology of the physical network para 0045).</p>				

Form PCT/ISA/237 (Box No. V) (January 2015)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043633

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Regarding claim 14, modified ALKHATIB discloses the invention above, but ALKHATIB did not disclose further comprising sending, by the first access server, a response to the first endpoint indicating that the add request has been denied if the add request is denied by at least one of the second access server and the second endpoint. However, BUCH discloses further comprising sending, by the first access server, a response to the first endpoint indicating that the add request has been denied if the add request is denied by at least one of the second access server and the second endpoint (if the request is an incoming request, such as from a peer 130-1 to a peer 110-1, then the request is denied and a response (e.g., 403 Forbidden Response) is sent, para 0052). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine sending, by the first access server, a response to the first endpoint indicating that the add request has been denied if the add request is denied by at least one of the second access server and the second endpoint as taught in BUCH with the invention of ALKHATIB, in order to determine whether the OEF module 210 should grant or deny a request for a communications connection 240-1-v from an untrusted peer (BUCH para 0028).

Claims 1-3 lack an inventive step under PCT Article 33(3) as being obvious over ALKHATIB in view of US 2010/0191954 A1 to KIM et al. (hereinafter KIM) and US 2013/0111064 A1 to MANI et al. (hereinafter MANI).

Regarding claim 1, ALKHATIB discloses a method for providing connectivity in a federated domain relationship (provide federation mechanisms for joining an endpoint within the purview of a second authority domain to a first virtual network overlay ("overlay") governed by a first authority domain, para 0005), the method comprising:

sending, by a first access server in a first domain, a federated domain request for a federated domain relationship to a second access server in a second domain (a second federation mechanism, which is associated with the second authority domain, is provided for negotiating on behalf of the second overlay and endpoint within the second authority domain. The second federation mechanism is also capable of negotiating with, or soliciting delegation of authority [i.e. a federated domain request] from, a first federation mechanism that is associated with the first authority domain, para 0007, this solicitation may involve the federation mechanism x 625 sending a request that conveys a proposed policy to the federation mechanism y 635, para 0062), wherein the federated domain relationship enables a plurality of endpoints within each of the otherwise separate first and second domains to communicate with a plurality of endpoints in the other of the first and second domains (the virtualized endpoints (e.g., members of the first and second overlay) may be associated together in a group so that they mutually appear to one another that they are participants within a common dedicated network, para 0007); receiving, by the first access server, a response to the federated domain request (the federation mechanisms x 625 and y 635 may negotiate a grant of authority over policies controlling aspects of the communication link 520. Initially, upon establishing the communication link 520, the federation mechanism x 625 may offer a request to be granted authority over the communication link 520 from the federation mechanism y 635, para 0062), wherein the response indicates that the federated domain request is granted (the response to the proposed policy from the federation mechanism y 635 is a reply that includes acceptance to the proposed policy in entirety, the federation mechanism x 625 may immediately be transferred the authority from the federation mechanism y 635 to provision and enforce the policy as originally proposed, para 0063).

ALKHATIB does not specifically disclose sending, by the first access server, first domain information about the first domain to the second access server; receiving, by the first access server, second domain information about the second domain from the second access server; and sending, by the first access server, at least a portion of the second domain information to the endpoints in the first domain.

However, KIM is in the field of transmitting a message in a heterogeneous federated environment (para 0001) and discloses sending, by the first access server, first domain information about the first domain to the second access server (The service server 104 is an object via which messages are exchanged between the first and second domains 100 and 140. The service server 104 establishes a trust relationship with a service server 144 of the second domain 140 and exchanges messages directly with the service server 144, para 0028, a specific domain and an external domain exchange their security information and protocol information with each other, para 0052); and receiving, by the first access server, second domain information about the second domain from the second access server (The service server 104 is an object via which messages are exchanged between the first and second domains 100 and 140. The service server 104 establishes a trust relationship with a service server 144 of the second domain 140 and exchanges messages directly with the service server 144, para 0028, a specific domain and an external domain exchange their security information and protocol information with each other, para 0052). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine sending, by the first access server, first domain information about the first domain to the second access server; and receiving, by the first access server, second domain information about the second domain from the second access server as taught in KIM with the invention of ALKHATIB, in order to exchange messages with each other while guaranteeing security between two service servers in different domains with different protocol information (KIM abstract).

MANI is in the field of the caching of communication link information (para 0001) and discloses sending, by the first access server, at least a portion of the second domain information to the endpoints in the first domain (providing the required connection information to an initiating endpoint, claim 5, providing addressing and/or routing information in connection with communication sessions or links between different enterprises or domains, para 0004). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine sending, by the first access server, at least a portion of the second domain information to the endpoints in the first domain as taught in MANI with the invention of ALKHATIB, in order to respond to support requests for connection information required to establish a communication session between communication endpoints (MANI para 0018).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043633

Supplemental Box

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Continuation of:

Regarding claim 2, modified ALKHATIB discloses the invention above, but ALKHATIB did not disclose further comprising receiving, by the first access server, updated information about the second domain from the second access server; and sending, by the first access server, at least a portion of the updated domain information to the endpoints in the first domain. However, MANI discloses further comprising receiving, by the first access server, updated information about the second domain from the second access server (data cache 240 can additionally include federation data 248. The federation data 248 can include data that originates from the federation broker 108, and that is required to establish a communication session between a communication device 116 within a first enterprise 104a and a communication device 116 included in a second enterprise 104b, para 0018, information maintained in a data cache 240 can be updated from time to time para 0023); and sending, by the first access server, at least a portion of the updated domain information to the endpoints in the first domain (providing the required connection information to an initiating endpoint, claim 5, providing addressing and/or routing information in connection with communication sessions or links between different enterprises or domains, para 0004). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine receiving, by the first access server, updated information about the second domain from the second access server; and sending, by the first access server, at least a portion of the updated domain information to the endpoints in the first domain as taught in MANI with the invention of ALKHATIB, in order to update information maintained in a data cache (MANI para 0023).

Regarding claim 3, ALKHATIB further discloses further comprising:
receiving, by the first access server, an add request from a first endpoint of the endpoints in the first domain (joining a subject endpoint under the purview of a second domain authority to a first overlay governed by a first domain authority, a second federation mechanism negotiating with a first federation mechanism on behalf of the subject endpoint, para 0071), wherein the add request identifies a second endpoint of the endpoints in the second domain with which the first endpoint wants to communicate (the overlay 330 enables complete connectivity between the endpoints A 201 and B 202 via the secured connection 335 from the virtual IP address IP.sub.A' 405 to the virtual IP address IP.sub.B' 425, para 0046);
notifying, by the first access server, the second access server of the add request (the second federation mechanism sends a request that the subject member join the first overlay. Upon receiving the request, the first federation mechanism allocates a guest IP address from the first address range, para 0022);
receiving, by the first access server, contact information for the second endpoint from the second access server if the add request is granted by at least one of the second access server and the second endpoint (the endpoint B 202 residing in the data center 325 may be identified by as being a component of the particular service application. The endpoint B 202 may be reachable over the physical network 380 at a second physical IP address. When incorporated into the overlay 330, the endpoint B 202 is assigned a second virtual IP address that locates a virtual presence B' 332 of the endpoint B 202 within the overlay 330, para 0042); and
forwarding, by the first access server, the contact information to the first endpoint (The physical IP address IP.sub.A 410 is reachable over a channel 415 within a topology of a physical network. In contrast, the virtual IP address IP.sub.A' 405 communicates across the secured connection 335 to a virtual IP address IP.sub.B' 425 associated with the endpoint B 385. Additionally, the endpoint B 202 is associated with a physical IP address IP.sub.B 430. The physical IP address IP.sub.B 430 is reachable over a channel 420 within the topology of the physical network para 0045).

Claims 13 lacks an inventive step under PCT Article 33(3) as being obvious over ALKHATIB in view of BUCH, and further in view of US 2007/0280253 A1 to ROOHOLAMINI et al. (hereinafter ROOHOLAMINI).

Regarding claim 13, modified ALKHATIB discloses the invention above, but ALKHATIB did not disclose further comprising storing, by the first access server, an acceptance notification received from the first endpoint. However, ROOHOLAMINI is in the field of receiving a request from an endpoint node on a switch fabric to establish a peer-to-peer connection with another node on the switch fabric (abstract) and discloses further comprising storing, by the first access server, an acceptance notification received from the first endpoint (Memory 230 may also include encoding/decoding information to facilitate or enable the generation of packet-based messages that are received or transmitted when establishing and managing peer-to-peer connections between endpoint nodes, para 0034, A response message denoted as "Query_PtP_Service_Response," at circle 4.0 may return information that enables client connection logic 180 included in endpoint 116 to identify endpoint 112 as including service connection logic 170, para 0064). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine storing, by the first access server, an acceptance notification received from the first endpoint as taught in ROOHOLAMINI with the invention of ALKHATIB, in order to support management activities for elements that process, store and/or forward data through and/or between one or more nodes coupled to a switch fabric (ROOHOLAMINI para 0003).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043633

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Continuation of:

Claims 15, 16, and 18-20 lack an inventive step under PCT Article 33(3) as being obvious over ALKHATIB in view of MANI and BUCH.

Regarding claim 15, ALKHATIB discloses a method for execution by an endpoint (provide federation mechanisms for joining an endpoint within the purview of a second authority domain to a first virtual network overlay ("overlay") governed by a first authority domain, para 0005), the method comprising: sending, by a first endpoint in a first domain, a first add request to an access server in the first domain (joining a subject endpoint under the purview of a second domain authority to a first overlay governed by a first domain authority, a second federation mechanism negotiating with a first federation mechanism on behalf of the subject endpoint, para 0071), wherein the first add request identifies a second endpoint in a second domain with which the first endpoint wants to communicate (the overlay 330 enables complete connectivity between the endpoints A 201 and B 202 via the secured connection 335 from the virtual IP address IP.sub.A' 405 to the virtual IP address IP.sub.B' 425, para 0046), wherein the first domain has a federated domain relationship with the second domain (provide federation mechanisms for joining an endpoint within the purview of a second authority domain to a first virtual network overlay ("overlay") governed by a first authority domain, establishing a communication link between the first overlay and a second overlay that is governed by the second authority domain, para 0005) that enables endpoints within the first domain to communicate with endpoints within the second domain (the virtualized endpoints (e.g., members of the first and second overlay) may be associated together in a group so that they mutually appear to one another that they are participants within a common dedicated network, para 0007). ALKHATIB does not specifically disclose the first endpoint has previously received information about the second domain from the access server; and receiving, by the first endpoint, a denial or approval of the first add request from the access server. However, MANI discloses that the first endpoint has previously received information about the second domain from the access server (providing the required connection information to an initiating endpoint, claim 5, providing addressing and/or routing information in connection with communication sessions or links between different enterprises or domains, para 0004). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the first endpoint has previously received information about the second domain from the access server as taught in MANI with the invention of ALKHATIB, in order to respond to support requests for connection information required to establish a communication session between communication endpoints (MANI para 0018). BUCH discloses receiving, by the first endpoint, a denial or approval of the first add request from the access server (The peer tracking module 214 may maintain and update a threat status indicator value for each untrusted peer, and output or store the threat status indicator value for use by the peer authorization module 216 to determine whether the OEF module 210 should grant or deny a request for a connection 240-1-v from an untrusted peer, para 0031). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine receiving, by the first endpoint, a denial or approval of the first add request from the access server as taught in BUCH with the invention of ALKHATIB, in order to determine whether the OEF module 210 should grant or deny a request for a communications connection 240-1-v from an untrusted peer (BUCH para 0028).

Regarding claim 16, modified ALKHATIB discloses the invention above, and ALKHATIB further discloses further comprising receiving, by the first endpoint, contact information for the second endpoint from the access server if the first add request was approved (the endpoint B 202 residing in the data center 325 may be identified by as being a component of the particular service application. The endpoint B 202 may be reachable over the physical network 380 at a second physical IP address. When incorporated into the overlay 330, the endpoint B 202 is assigned a second virtual IP address that locates a virtual presence B' 332 of the endpoint B 202 within the overlay 330, para 0042); and sending, by the first endpoint, a second add request to at least one of an access server in the second domain and a link server in the second domain (joining a subject endpoint under the purview of a second domain authority to a first overlay governed by a first domain authority, a second federation mechanism negotiating with a first federation mechanism on behalf of the subject endpoint, para 0071), but ALKHATIB did not disclose receiving, by the first endpoint, a denial or acceptance of the second add request. However, BUCH discloses receiving, by the first endpoint, a denial or acceptance of the second add request (The peer tracking module 214 may maintain and update a threat status indicator value for each untrusted peer, and output or store the threat status indicator value for use by the peer authorization module 216 to determine whether the OEF module 210 should grant or deny a request for a connection 240-1-v from an untrusted peer, para 0031). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine receiving, by the first endpoint, a denial or acceptance of the second add request as taught in BUCH with the invention of ALKHATIB, in order to determine whether the OEF module 210 should grant or deny a request for a communications connection 240-1-v from an untrusted peer (BUCH para 0028).

Regarding claim 18, modified ALKHATIB discloses the invention above, but ALKHATIB did not disclose further comprising establishing, by the first endpoint, a communication session with the second endpoint if the second add request was accepted. However, MANI discloses further comprising establishing, by the first endpoint, a communication session with the second endpoint if the second add request was accepted (establishing a communication session between the initiating and destination communication endpoints 116, para 0022). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine establishing, by the first endpoint, a communication session with the second endpoint if the second add request was accepted as taught in MANI with the invention of ALKHATIB, in order to providing addressing and/or routing information in connection with communication sessions or links between different enterprises or domains (MANI para 0004).

Regarding claim 19, ALKHATIB further discloses that the communication session is established directly with the second endpoint (the communication link enables direct communication via peer-to-peer semantics between members of the first overlay and members of the second overlay without relying on a translation mechanism, claim 4, the complete connectivity allows the endpoints of the group to interact in a peer-to-peer relationship, as if granted their own dedicated physical network carved out of a data center, para 0047).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043633

Supplemental Box

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Regarding claim 20, modified ALKHATIB discloses the invention above, but ALKHATIB did not disclose that the communication session is established with the second endpoint via the link server. However, BUCH discloses that the communication session is established with the second endpoint via the link server (The federated enterprise networks 110 may each comprise one or more access edge servers. The access edge servers 140-1-m may manage access to the respective federated enterprise networks, the access edge servers 140-1-m may manage security operations on behalf of their respective networks to allow users of one domain to securely access data or systems of another domain seamlessly, para 0015). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the communication session is established with the second endpoint via the link server as taught in BUCH with the invention of ALKHATIB, in order to control access to the federated enterprise network (BUCH para 0003).

Claims 4-8 lack an inventive step under PCT Article 33(3) as being obvious over ALKHATIB in view of KIM and MANI, and further in view of BUCH.

Regarding claim 4, modified ALKHATIB discloses the invention above, and ALKHATIB further discloses further comprising receiving, by the first access server, an add request from a first endpoint of the endpoints in the first domain (joining a subject endpoint under the purview of a second domain authority to a first overlay governed by a first domain authority, a second federation mechanism negotiating with a first federation mechanism on behalf of the subject endpoint, para 0071), wherein the add request identifies a second endpoint of the endpoints in the second domain with which the first endpoint wants to communicate (the overlay 330 enables complete connectivity between the endpoints A 201 and B 202 via the secured connection 335 from the virtual IP address IP.sub.A' 405 to the virtual IP address IP.sub.B' 425, para 0046); and notifying, by the first access server, the second access server of the add request (the second federation mechanism sends a request that the subject member join the first overlay. Upon receiving the request, the first federation mechanism allocates a guest IP address from the first address range, para 0022), but ALKHATIB did not disclose sending, by the first access server, a response to the first endpoint indicating that the add request has been denied if the add request is denied by at least one of the second access server and the second endpoint. However, BUCH discloses sending, by the first access server, a response to the first endpoint indicating that the add request has been denied if the add request is denied by at least one of the second access server and the second endpoint (If the request is an incoming request, such as from a peer 130-1 to a peer 110-1, then the request is denied and a response (e.g., 403 Forbidden Response) is sent, para 0052). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine sending, by the first access server, a response to the first endpoint indicating that the add request has been denied if the add request is denied by at least one of the second access server and the second endpoint as taught in BUCH with the invention of ALKHATIB, in order to determine whether the OEF module 210 should grant or deny a request for a communications connection 240-1-v from an untrusted peer (BUCH para 0028).

Regarding claim 5, modified ALKHATIB discloses the invention above, and ALKHATIB further discloses further comprising receiving, by the first access server, an add request from the second access server (joining a subject endpoint under the purview of a second domain authority to a first overlay governed by a first domain authority, a second federation mechanism negotiating with a first federation mechanism on behalf of the subject endpoint, para 0071), wherein the add request identifies that a second endpoint of the endpoints in the second domain wants to communicate with a first endpoint of the endpoints in the first domain (the overlay 330 enables complete connectivity between the endpoints A 201 and B 202 via the secured connection 335 from the virtual IP address IP.sub.A' 405 to the virtual IP address IP.sub.B' 425, para 0046), but ALKHATIB did not disclose determining, by the first access server, whether the add request should be granted or denied. However, BUCH discloses determining, by the first access server, whether the add request should be granted or denied (The peer tracking module 214 may maintain and update a threat status indicator value for each untrusted peer, and output or store the threat status indicator value for use by the peer authorization module 216 to determine whether the OEF module 210 should grant or deny a request for a connection 240-1-v from an untrusted peer, para 0031). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine determining, by the first access server, whether the add request should be granted or denied as taught in BUCH with the invention of ALKHATIB, in order to determine whether the OEF module 210 should grant or deny a request for a communications connection 240-1-v from an untrusted peer (BUCH para 0028).

Regarding claim 6, ALKHATIB further discloses further comprising sending, by the first access server, contact information for first endpoint to the second access server if the determining indicates that the add request should be granted (the endpoint B 202 residing in the data center 325 may be identified by as being a component of the particular service application. The endpoint B 202 may be reachable over the physical network 380 at a second physical IP address. When incorporated into the overlay 330, the endpoint B 202 is assigned a second virtual IP address that locates a virtual presence B' 332 of the endpoint B 202 within the overlay 330, para 0042).

Regarding claim 7, modified ALKHATIB discloses the invention above, but ALKHATIB did not disclose further comprising sending, by the first access server, a message to the second access server denying the add request if the determining indicates that the add request should be denied. However, BUCH discloses further comprising sending, by the first access server, a message to the second access server denying the add request if the determining indicates that the add request should be denied (If the request is an incoming request, such as from a peer 130-1 to a peer 110-1, then the request is denied and a response (e.g., 403 Forbidden Response) is sent, para 0052). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine sending, by the first access server, a message to the second access server denying the add request if the determining indicates that the add request should be denied as taught in BUCH with the invention of ALKHATIB, in order to determine whether the OEF module 210 should grant or deny a request for a communications connection 240-1-v from an untrusted peer (BUCH para 0028).

Regarding claim 8, ALKHATIB further discloses that the determining includes applying, by the first access server, a policy to the add request (provisioning security policies upon the members of the overlays and enforcing security policies on the connections between the members of the first and second overlay, para 0007).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043633

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Claims 9 and 10 lack an inventive step under PCT Article 33(3) as being obvious over ALKHATIB in view of KIM and MANI, and further in view of US 2013/0067004 A1 to LOGUE et al. (hereinafter LOGUE).

Regarding claim 9, modified ALKHATIB discloses the invention above, but ALKHATIB did not disclose that sending the first domain information about the first domain to the second access server includes sending an Internet Protocol address of a link server in the first domain. However, LOGUE is in the field of delivering electronic messages (para 0003) and discloses that sending the first domain information about the first domain to the second access server includes sending an Internet Protocol address of a link server in the first domain (Each domain name is associated with one or more servers (each having an IP address), para 0032. The request includes information such as the transmitting authorized server's IP address, the partner key(s), or other identifying information, para 0061). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine sending the first domain information about the first domain to the second access server includes sending an Internet Protocol address of a link server in the first domain as taught in LOGUE with the invention of ALKHATIB, in order to identify the particular server from which the challenge message is sent (LOGUE para 0043).

Regarding claim 10, modified ALKHATIB discloses the invention above, but ALKHATIB did not disclose that sending the first domain information about the first domain to the second access server includes that sending at least a portion of the second domain information to the endpoints in the first domain includes sending an Internet Protocol address of at least one of the second access server and a link server in the second domain. However, LOGUE discloses that sending at least a portion of the second domain information to the endpoints in the first domain includes sending an Internet Protocol address of at least one of the second access server and a link server in the second domain (Each domain name is associated with one or more servers (each having an IP address), para 0032. The request includes information such as the transmitting authorized server's IP address, the partner key(s), or other identifying information, para 0061). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine sending the first domain information about the first domain to the second access server includes that sending at least a portion of the second domain information to the endpoints in the first domain includes sending an Internet Protocol address of at least one of the second access server and a link server in the second domain as taught in LOGUE with the invention of ALKHATIB, in order to identify the particular server from which the challenge message is sent (LOGUE para 0043).

Claim 17 lacks an inventive step under PCT Article 33(3) as being obvious over ALKHATIB in view of MANI and BUCH, and further in view of ROOHOLAMINI.

Regarding claim 17, modified ALKHATIB discloses the invention above, but ALKHATIB did not disclose further comprising storing, by the first endpoint, an acceptance to the second add request on the access server in the first domain if the second add request was accepted. However, ROOHOLAMINI discloses further comprising storing, by the first endpoint, an acceptance to the second add request on the access server in the first domain if the second add request was accepted (Memory 230 may also include encoding/decoding information to facilitate or enable the generation of packet-based messages that are received or transmitted when establishing and managing peer-to-peer connections between endpoint nodes, para 0034. A response message denoted as "Query_PtP_Service_Response," at circle 4.0 may return information that enables client connection logic 180 included in endpoint 116 to identify endpoint 112 as including service connection logic 170, para 0064). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine storing, by the first endpoint, an acceptance to the second add request on the access server in the first domain if the second add request was accepted as taught in ROOHOLAMINI with the invention of ALKHATIB, in order to indicate to each endpoint node whether its parameter information was properly stored in data repository (ROOHOLAMINI para 0062).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043633

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Claim 21 lacks an inventive step under PCT Article 33(3) as being obvious over ALKHATIB in view of MANI and BUCH, and further in view of WO 2008/099420 A2 (MADHOK).

Regarding claim 21, modified ALKHATIB discloses the invention above, and ALKHATIB further discloses further comprising sending, by the first endpoint, a second add request to the access server (joining a subject endpoint under the purview of a second domain authority to a first overlay governed by a first domain authority, a second federation mechanism negotiating with a first federation mechanism on behalf of the subject endpoint, para 0071), wherein the second add request identifies a third endpoint in a third domain with which the first endpoint wants to communicate (the overlay 330 enables complete connectivity between the endpoints A 201 and B 202 via the secured connection 335 from the virtual IP address IP.sub.A' 405 to the virtual IP address IP.sub.B' 425, para 0046), wherein the first domain has a federated domain relationship with the third domain (provide federation mechanisms for joining an endpoint within the purview of a second authority domain to a first virtual network overlay ("overlay") governed by a first authority domain, establishing a communication link between the first overlay and a second overlay that is governed by the second authority domain, para 0005) that enables endpoints within the first domain to communicate with endpoints within the third domain (the virtualized endpoints (e.g., members of the first and second overlay) may be associated together in a group so that they mutually appear to one another that they are participants within a common dedicated network, para 0007), and receiving, by the first endpoint, an approval of the first add request and the second add request (Upon accepting the endpoint B 636, the federation mechanism x 625 may provide the federation mechanism y 635 a unique IP address, or guess IP address, allocated from within the range assigned to overlay VNOj 624, para 0065), but ALKHATIB did not disclose that the second endpoint and the third endpoint cannot communicate with one another directly because the second domain is not in a federated domain relationship with the third domain; and establishing a communication session with the second endpoint and the third endpoint, wherein the first endpoint operates as a bridge between the second endpoint and the third endpoint during the communication session. However, MADHOK is in the field of enabling communication and / or financial and / or any transaction (pg 1 ln 7-11) and discloses that the second endpoint and the third endpoint cannot communicate with one another directly because the second domain is not in a federated domain relationship with the third domain (This mediation before a transaction, whenever the end-points belong to different trust domains, is required for three reasons: b. lack of knowledge of authorization and privileges of the entity (given that the identity and its authorization and privileges are not known outside its originating domain (unless the users from both domains are federated, in which case the two domains act as a single domain), pg 11 ln 26 to pg 12 ln 12); and establishing a communication session with the second endpoint and the third endpoint, wherein the first endpoint operates as a bridge between the second endpoint and the third endpoint during the communication session (forming a contract bridge between two or more arbitrary identities that may belong to different trust domains, over public infrastructure, pg 6 ln 9-11, use single, abstract, persistent (transaction / channel independent) identifiers that unify concrete identifiers, that may belong to different domains / channels / applications, for carrying out transactions across different trust domains, without requiring the trust domains to federate their users or related information, pg 6 ln 3-8). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the second endpoint and the third endpoint cannot communicate with one another directly because the second domain is not in a federated domain relationship with the third domain; and establishing a communication session with the second endpoint and the third endpoint, wherein the first endpoint operates as a bridge between the second endpoint and the third endpoint during the communication session as taught in MADHOK with the invention of ALKHATIB, in order to control a transaction between a source identity and a destination identity (MADHOK abstract).

Claims 1-21 have industrial applicability as defined by PCT Article 33(4), because the subject matter can be made or used in industry.

Search History:

Limited Classification Search

The Patent Analyst performed a limited classification search within the following US, IPC, CPC, ECLA, or F-Term classification areas:

U.S. Class/Subclass(es): 370/254, 370/401, 704/3, 726/5

IPC (8) Class/Subclass(es): G06F 17/28, H04L 9/32, H04L 12/28, H04L 12/56 (2015.01)

CPC Class/Subclass(es): G06F 17/28, G06F 17/289, G06F 21/31, G10L 15/005, H04L 9/3234, H04L 63/0853, H04L 63/0861, H04L 67/104, H04L 67/1048, H04L 67/1059, H04L 2209/56, H04L 2209/76 (2015.04)

See Global Search Results.

Global Patent Literature Text Search

The Patent Analyst performed the following global text search, which was not limited by classification but may or may not have been limited by other criteria:

QUESTEL ORBIT

40	20	14 AND (28 OR 29 OR 30 OR 31 OR 32 OR 33 OR 34 OR 35 OR 36 OR 37 OR 38 OR 39)
39	347	(H04L-2209/76)/CPC AND PD <= 2014-08-05
38	2446	(H04L-2209/56)/CPC AND PD <= 2014-08-05
37	84	(H04L-067/1059)/CPC AND PD <= 2014-08-05
36	141	(H04L-067/1048)/CPC AND PD <= 2014-08-05
35	2305	(H04L-067/104)/CPC AND PD <= 2014-08-05
34	1039	(H04L-063/0861)/CPC AND PD <= 2014-08-05
33	2500	(H04L-063/0853)/CPC AND PD <= 2014-08-05
32	1008	(H04L-009/3234)/CPC AND PD <= 2014-08-05
31	150	(G10L-015/005)/CPC AND PD <= 2014-08-05
30	4522	(G06F-021/31)/CPC AND PD <= 2014-08-05
29	1315	(G06F-017/289)/CPC AND PD <= 2014-08-05
28	3644	(G06F-017/28)/CPC AND PD <= 2014-08-05
27	76	14 AND (23 OR 24 OR 25 OR 26)
26	104387	(H04L-012/56)/IPC AND PD <= 2014-08-05
25	99174	(H04L-012/28)/IPC AND PD <= 2014-08-05
24	49818	(H04L-009/32)/IPC AND PD <= 2014-08-05
23	13075	(G06F-017/28)/IPC AND PD <= 2014-08-05
22	14	14 AND (18 OR 19 OR 20 OR 21)

21	1214	(726005)/PCLM AND PD <= 2014-08-05
20	307	(704003)/PCLM AND PD <= 2014-08-05
19	2704	(370401)/PCLM AND PD <= 2014-08-05
18	2669	(370254)/PCLM AND PD <= 2014-08-05
17	33	14 AND ((INTERNET+ W PROTOCOL+) OR (IP+ W ADDRESS+))
16	74	14 AND LINK+
15	58	14 AND POLIC+
14	249	(CONNECT+ AND FEDERAT+ AND DOMAIN+ AND RELATION+ AND REQUEST AND ACCESS+ AND SERVER+ AND (ENDPOINT+ OR END-POINT+ OR (END+ W POINT+)) AND (GRANT+ OR ALLOW+) AND UPDAT+ AND INFO+ AND ADD+ AND CONTACT+ AND (DEN+ OR REJECT+))/TI/AB/IW/CLMS/TX AND PD <= 2014-08-05
13	237	(CONNECT+ AND FEDERAT+ AND DOMAIN+ AND RELATION+ AND REQUEST AND ACCESS+ AND SERVER+ AND (ENDPOINT+ OR END-POINT+ OR (END+ W POINT+)) AND (GRANT+ OR ALLOW+) AND UPDAT+ AND INFO+ AND ADD+ AND CONTACT+ AND DEN+)/TI/AB/IW/CLMS/TX AND PD <= 2014-08-05
12	309	(CONNECT+ AND FEDERAT+ AND DOMAIN+ AND RELATION+ AND REQUEST AND ACCESS+ AND SERVER+ AND (ENDPOINT+ OR END-POINT+ OR (END+ W POINT+)) AND (GRANT+ OR ALLOW+) AND UPDAT+ AND INFO+ AND ADD+ AND CONTACT+)/TI/AB/IW/CLMS/TX AND PD <= 2014-08-05
11	456	(CONNECT+ AND FEDERAT+ AND DOMAIN+ AND RELATION+ AND REQUEST AND ACCESS+ AND SERVER+ AND (ENDPOINT+ OR END-POINT+ OR (END+ W POINT+)) AND (GRANT+ OR ALLOW+) AND UPDAT+ AND INFO+ AND ADD+)/TI/AB/IW/CLMS/TX AND PD <= 2014-08-05
10	456	(CONNECT+ AND FEDERAT+ AND DOMAIN+ AND RELATION+ AND REQUEST AND ACCESS+ AND SERVER+ AND (ENDPOINT+ OR END-POINT+ OR (END+ W POINT+)) AND (GRANT+ OR ALLOW+) AND UPDAT+ AND INFO+)/TI/AB/IW/CLMS/TX AND PD <= 2014-08-05
9	456	(CONNECT+ AND FEDERAT+ AND DOMAIN+ AND RELATION+ AND REQUEST AND ACCESS+ AND SERVER+ AND (ENDPOINT+ OR END-POINT+ OR (END+ W POINT+)) AND (GRANT+ OR ALLOW+) AND UPDAT+)/TI/AB/IW/CLMS/TX AND PD <= 2014-08-05
8	560	(CONNECT+ AND FEDERAT+ AND DOMAIN+ AND RELATION+ AND REQUEST AND ACCESS+ AND SERVER+ AND (ENDPOINT+ OR END-POINT+ OR (END+ W POINT+)) AND (GRANT+ OR ALLOW+))/TI/AB/IW/CLMS/TX AND PD <= 2014-08-05
7	572	(CONNECT+ AND FEDERAT+ AND DOMAIN+ AND RELATION+ AND

		REQUEST AND ACCESS+ AND SERVER+ AND (ENDPOINT+ OR END-POINT+ OR (END+ W POINT+))) /TI/AB/IW/CLMS/TX AND PD <= 2014-08-05
6	2302	(CONNECT+ AND FEDERAT+ AND DOMAIN+ AND RELATION+ AND REQUEST AND ACCESS+ AND SERVER+) /TI/AB/IW/CLMS/TX AND PD <= 2014-08-05
5	3825	(CONNECT+ AND FEDERAT+ AND DOMAIN+ AND RELATION+ AND REQUEST AND ACCESS+) /TI/AB/IW/CLMS/TX AND PD <= 2014-08-05
4	4536	(CONNECT+ AND FEDERAT+ AND DOMAIN+ AND RELATION+ AND REQUEST) /TI/AB/IW/CLMS/TX AND PD <= 2014-08-05
3	7583	(CONNECT+ AND FEDERAT+ AND DOMAIN+ AND RELATION+) /TI/AB/IW/CLMS/TX AND PD <= 2014-08-05
2	9952	(CONNECT+ AND FEDERAT+ AND DOMAIN+) /TI/AB/IW/CLMS/TX AND PD <= 2014-08-05
	101275	(CONNECT+ AND FEDERAT+) /TI/AB/IW/CLMS/TX AND PD <= 2014-08-05

GOOGLE PATENT http://www.google.com/advanced_patent_search

No. of Hits	Text String
2,090	provide connectivity federated domain relationship
2,000	provide connectivity federated domain relationship federated domain request
1,940	provide connectivity federated domain relationship federated domain request access server
646	provide connectivity federated domain relationship federated domain request access server endpoints
572	provide connectivity federated domain relationship federated domain request access server endpoints granted
636	provide connectivity federated domain relationship federated domain request access server endpoints grant
636	provide connectivity federated domain relationship federated domain request access server endpoints grant updated information
638	provide connectivity federated domain relationship federated domain request access server endpoints grant updated information updated domain information
630	provide connectivity federated domain relationship federated domain request access server endpoints grant add request
629	provide connectivity federated domain relationship federated domain request access server endpoints grant add request contact information
406	provide connectivity federated domain relationship federated domain request access server endpoints grant denied
406	provide connectivity federated domain relationship federated domain request access server endpoints grant deny
406	provide connectivity federated domain relationship federated domain request access server endpoints grant deny contact information
393	provide connectivity federated domain relationship federated domain request access server endpoints grant deny contact information apply policy
406	provide connectivity federated domain relationship federated domain request

	access server endpoints grant deny link server
403	provide connectivity federated domain relationship federated domain request access server endpoints grant deny link server Internet Protocol address
329	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny link server Internet Protocol address
332	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information
333	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request
333	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request contact information
326	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request contact information apply policy
325	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request contact information apply policy link server
320	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request contact information apply policy link server Internet Protocol address
2,090	providing connectivity in a federated domain relationship
2,240	federated domain request for a federated domain relationship
706	federated domain request for federated domain relationship endpoints in first domain communicate with endpoints in second domain
706	federated domain request to join federated domain relationship endpoints in first domain communicate with endpoints in second domain
477	connect federated domains federated domain request to join federated domain relationship endpoints in first domain communicate with endpoints in second domain
699	federated domain request to connect federated domain relationship endpoints in first domain communicate with endpoints in second domain
1	federated "domain request" to connect federated domain relationship endpoints in first domain communicate with endpoints in second domain
483	federated domain request to connect federated domains endpoints in first domain communicate with endpoints in second domain grant response
151	inassignee: Damaka
0	federated inassignee: Damaka
884	federated domain request to connect federated domains grant response exchange information
11,300	domain request to connect domains grant response exchange information
2,270	domain request to connect domains endpoints in first domain communicate with endpoints in second domain grant response exchange information
485	domain request to form federated domains endpoints in first domain communicate with endpoints in second domain grant response exchange information
579	federated domain relationship request endpoints in first domain communicate with endpoints in second domain grant response exchange information
1,460	peer-to-peer connectivity across federated domains
398	peer-to-peer connectivity across federated domains federated domain relationship request endpoints in first domain communicate with endpoints in second domain
669	peer-to-peer connectivity across federated domains federated domain relationship request

2,300	federated domain relationship request first domain second domain
472	federated domain connection request first domain second domain
690	provide connectivity in federated domain relationship endpoints in first domain communicate with endpoints in second domain
1,780	provide connectivity in federated domain relationship exchange domain information
670	provide connectivity in federated domain relationship send second domain information to endpoints in first domain
864	federated domain send second domain information to endpoints in first domain
64	federated domain send "domain information" to endpoints
698	federated domain relationship send domain information to endpoints
12,000	send second domain information to endpoints in first domain
449	send second "domain information" to endpoints in first domain
561	federated domains connectivity send second domain information to endpoints in first domain
826	federated domains connectivity send response connect request denied
256	federated domains connectivity send Internet Protocol address of link server in domain
744	federated domains connectivity send domain link server IP address
742	federated domains connectivity send domain server IP address
8,550	peer-to-peer connectivity send domain server IP address
1,250	send federated domain server IP address
5,150	providing connectivity between endpoints in different domains store acceptance notification received from endpoint
227	endpoints cannot communicate directly non-federated domain relationship establish communication session bridge
238	establish communication session bridge between endpoints in federated domain and non-federated domain

Computer Accessed Text Databases Searched

The Patent Analyst searched the following computer accessed text databases:

GOOGLE: <http://www.google.com>

No. of Hits	Text String
670,000	provide connectivity federated domain relationship
809,000	provide connectivity federated domain relationship federated domain request
697,000	provide connectivity federated domain relationship federated domain request access server
332,000	provide connectivity federated domain relationship federated domain request access server endpoints
91,100	provide connectivity federated domain relationship federated domain request access server endpoints granted
311,000	provide connectivity federated domain relationship federated domain request access server endpoints grant
311,000	provide connectivity federated domain relationship federated domain request access server endpoints grant updated information
310,000	provide connectivity federated domain relationship federated domain request access server endpoints grant updated information updated domain information
359,000	provide connectivity federated domain relationship federated domain request access server endpoints grant add request
357,000	provide connectivity federated domain relationship federated domain request

	access server endpoints grant add request contact information
69,300	provide connectivity federated domain relationship federated domain request access server endpoints grant denied
69,700	provide connectivity federated domain relationship federated domain request access server endpoints grant deny
69,200	provide connectivity federated domain relationship federated domain request access server endpoints grant deny contact information
63,700	provide connectivity federated domain relationship federated domain request access server endpoints grant deny contact information apply policy
61,000	provide connectivity federated domain relationship federated domain request access server endpoints grant deny link server
53,700	provide connectivity federated domain relationship federated domain request access server endpoints grant deny link server Internet Protocol address
28,800	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny link server Internet Protocol address
36,000	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information
37,000	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request
36,600	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request contact information
34,800	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request contact information apply policy
29,700	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request contact information apply policy link server
27,700	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request contact information apply policy link server Internet Protocol address
671,000	providing connectivity in a federated domain relationship
498,000	federated domain request for a federated domain relationship
186,000	federated domain request for federated domain relationship endpoints in first domain communicate with endpoints in second domain
177,000	federated domain request to join federated domain relationship endpoints in first domain communicate with endpoints in second domain
116,000	connect federated domains federated domain request to join federated domain relationship endpoints in first domain communicate with endpoints in second domain
131,000	federated domain request to connect federated domain relationship endpoints in first domain communicate with endpoints in second domain
159	federated "domain request" to connect federated domain relationship endpoints in first domain communicate with endpoints in second domain
71,600	federated domain request to connect federated domains endpoints in first domain communicate with endpoints in second domain grant response
227,000	federated domain request to connect federated domains grant response exchange information
10,500,000	domain request to connect domains grant response exchange information
465,000	domain request to connect domains endpoints in first domain communicate with endpoints in second domain grant response exchange information
83,400	domain request to form federated domains endpoints in first domain communicate with endpoints in second domain grant response exchange information

92,200	federated domain relationship request endpoints in first domain communicate with endpoints in second domain grant response exchange information
476,000	peer-to-peer connectivity across federated domains
72,100	peer-to-peer connectivity across federated domains federated domain relationship request endpoints in first domain communicate with endpoints in second domain
267,000	peer-to-peer connectivity across federated domains federated domain relationship request
921,000	federated domain relationship request first domain second domain
218,000	federated domain connection request first domain second domain
278,000	provide connectivity in federated domain relationship endpoints in first domain communicate with endpoints in second domain
431,000	provide connectivity in federated domain relationship exchange domain information
408,000	provide connectivity in federated domain relationship send second domain information to endpoints in first domain
619,000	federated domain send second domain information to endpoints in first domain
6,810	federated domain send "domain information" to endpoints
446,000	federated domain relationship send domain information to endpoints
6,850,000	send second domain information to endpoints in first domain
56,300	send second "domain information" to endpoints in first domain
207,000	federated domains connectivity send second domain information to endpoints in first domain
546,000	federated domains connectivity send response connect request denied
34,000	federated domains connectivity send Internet Protocol address of link server in domain
233,000	federated domains connectivity send domain link server IP address
242,000	federated domains connectivity send domain server IP address
573,000	peer-to-peer connectivity send domain server IP address
476,000	send federated domain server IP address
669,000	providing connectivity between endpoints in different domains store acceptance notification received from endpoint
8,310	endpoints cannot communicate directly non-federated domain relationship establish communication session bridge
21,800	establish communication session bridge between endpoints in federated domain and non-federated domain

GOOGLE SCHOLAR: <http://scholar.google.com>

No. of Hits	Text String
18,500	provide connectivity federated domain relationship
17,800	provide connectivity federated domain relationship federated domain request
11,500	provide connectivity federated domain relationship federated domain request access server
2,370	provide connectivity federated domain relationship federated domain request access server endpoints
1,340	provide connectivity federated domain relationship federated domain request access server endpoints granted
2,280	provide connectivity federated domain relationship federated domain request access server endpoints grant
2,000	provide connectivity federated domain relationship federated domain request access server endpoints grant updated information
2,000	provide connectivity federated domain relationship federated domain request access server endpoints grant updated information updated domain information

2,010	provide connectivity federated domain relationship federated domain request access server endpoints grant add request
1,650	provide connectivity federated domain relationship federated domain request access server endpoints grant add request contact information
801	provide connectivity federated domain relationship federated domain request access server endpoints grant denied
801	provide connectivity federated domain relationship federated domain request access server endpoints grant deny
687	provide connectivity federated domain relationship federated domain request access server endpoints grant deny contact information
650	provide connectivity federated domain relationship federated domain request access server endpoints grant deny contact information apply policy
707	provide connectivity federated domain relationship federated domain request access server endpoints grant deny link server
1,170	provide connectivity federated domain relationship federated domain request access server endpoints grant deny link server Internet Protocol address
635	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny link server Internet Protocol address
537	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information
500	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request
408	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request contact information
395	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request contact information apply policy
342	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request contact information apply policy link server
333	provide connectivity federated domain relationship federated domain request access servers domains endpoints grant deny updated information add request contact information apply policy link server Internet Protocol address
18,500	providing connectivity in a federated domain relationship
24,900	federated domain request for a federated domain relationship
4,150	federated domain request for federated domain relationship endpoints in first domain communicate with endpoints in second domain
3,080	federated domain request to join federated domain relationship endpoints in first domain communicate with endpoints in second domain
1,530	connect federated domains federated domain request to join federated domain relationship endpoints in first domain communicate with endpoints in second domain
3,760	federated domain request to connect federated domain relationship endpoints in first domain communicate with endpoints in second domain
4	federated "domain request" to connect federated domain relationship endpoints in first domain communicate with endpoints in second domain
1,530	federated domain request to connect federated domains endpoints in first domain communicate with endpoints in second domain grant response
5,150	federated domain request to connect federated domains grant response exchange information
34,800	domain request to connect domains grant response exchange information
12,100	domain request to connect domains endpoints in first domain communicate with endpoints in second domain grant response exchange information

1,350	domain request to form federated domains endpoints in first domain communicate with endpoints in second domain grant response exchange information
1,760	federated domain relationship request endpoints in first domain communicate with endpoints in second domain grant response exchange information
5,510	peer-to-peer connectivity across federated domains
875	peer-to-peer connectivity across federated domains federated domain relationship request endpoints in first domain communicate with endpoints in second domain
2,640	peer-to-peer connectivity across federated domains federated domain relationship request
23,200	federated domain relationship request first domain second domain
22,500	federated domain connection request first domain second domain
3,740	provide connectivity in federated domain relationship endpoints in first domain communicate with endpoints in second domain
17,200	provide connectivity in federated domain relationship exchange domain information
3,170	provide connectivity in federated domain relationship send second domain information to endpoints in first domain
4,810	federated domain send second domain information to endpoints in first domain
134	federated domain send "domain information" to endpoints
4,080	federated domain relationship send domain information to endpoints
42,700	send second domain information to endpoints in first domain
1,200	send second "domain information" to endpoints in first domain
2,500	federated domains connectivity send second domain information to endpoints in first domain
5,910	federated domains connectivity send response connect request denied
5,090	federated domains connectivity send Internet Protocol address of link server in domain
3,410	federated domains connectivity send domain link server IP address
3,990	federated domains connectivity send domain server IP address
21,700	peer-to-peer connectivity send domain server IP address
7,060	send federated domain server IP address
17,200	providing connectivity between endpoints in different domains store acceptance notification received from endpoint
4	endpoints cannot communicate directly non-federated domain relationship establish communication session bridge
6	establish communication session bridge between endpoints in federated domain and non-federated domain

Date search was completed: 24 September 2015

EH / JG

PATENT COOPERATION TREATY

REC'D NOV 04 2015

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

To: TIMOTHY F. BLISS HOWISON & ARNOTT, LLP P.O. BOX 741715 DALLAS, TX 75374-1715	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;"> Date of mailing (day/month/year) </div>
Applicant's or agent's file reference DAMA-32758	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/US2015/043630	International filing date (day/month/year) 04 August 2015
Applicant DAMAKA, INC.	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.
Filing of amendments and statement under Article 19:
The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):
When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.
How? Directly to the International Bureau of WIPO preferably through ePCT or on paper to, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70
For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.
2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3. ☐ With regard to any protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
 - ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.
 - ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Reminders

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. These comments will be made available to the public after international publication. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established.

Shortly after the expiration of 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90bis.1 and 90bis.3).

Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise, the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices. In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months. For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Within 19 months from the priority date, the applicant may request that a supplementary international search be carried out by a different International Searching Authority that offers this service (Rule 45bis.1). The procedure for requesting supplementary international search is described in the *PCT Applicant's Guide*, International Phase, paragraphs 8.006-8.032.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8390	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774
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Form PCT/ISA/220 (July 2014)

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: TIMOTHY F. BLISS
HOWISON & ARNOTT, LLP
P.O. BOX 741715
DALLAS, TX 75374-1715

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing
(day/month/year)

3 0 OCT 2015

Applicant's or agent's file reference

DAMA-32758

FOR FURTHER ACTION See paragraphs 1 and 4 below

International application No.

PCT/US2015/043630

International filing date
(day/month/year)

04 August 2015

Applicant **DAMAKA, INC.**

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

How? Directly to the International Bureau of WIPO preferably through ePCT or on paper to, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ With regard to any protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Reminders

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. These comments will be made available to the public after international publication. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established.

Shortly after the expiration of 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90bis.1 and 90bis.3).

Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise, the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices. In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months. For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Within 19 months from the priority date, the applicant may request that a supplementary international search be carried out by a different International Searching Authority that offers this service (Rule 45bis.1). The procedure for requesting supplementary international search is described in the *PCT Applicant's Guide*, International Phase, paragraphs 8.006-8.032.

Name and mailing address of the ISA/
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-8300

Authorized officer

Blaine R. Copenhaever

PCT Helpdesk: 571-272-4300
Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2014)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference DAMA-32758	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2015/043630	International filing date <i>(day/month/year)</i> 04 August 2015	(Earliest) Priority Date <i>(day/month/year)</i> 05 August 2014
Applicant DAMAKA, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

I. Basis of the report

a. With regard to the language, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed.
☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (see Box No. II).

3. ☐ Unity of invention is lacking (see Box No. III).

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 1
☒ as suggested by the applicant.
☐ as selected by this Authority, because the applicant failed to suggest a figure.
☐ as selected by this Authority, because this figure better characterizes the invention.
- b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2015/043630

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - G06F 7/00 (2015.01) CPC - G06F 7/00 (2015.04) According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC(8) - G06F 7/00; 7/04; 15/173; H04N 7/152 (2015.01) USPC - 348/14.09; 709/223; 726/8 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched CPC - G06F 7/00; 7/04; 15/173; H04N 7/152 (2015.04) (keyword delimited) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Orbit, Google Patents, Google Scholar, Google. Search terms used: universal unified communications and collaboration, incompatible multipoint control unit, joint session, peer to peer, compatible versions, different platforms, video conference compatibility		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2013/0106989 A1 (TELIRIS, INC.) 02 May 2013 (02.05.2013) entire document	1-21
Y	US 6606112 B1 (FALCO) 12 August 2003 (12.08.2003) entire document	1-21
Y	US 2008/0244718 A1 (FROST et al) 02 October 2008 (02.10.2008) entire document	7,19
Y	US 2012/0124191 A1 (LYON) 17 May 2012 (17.05.2012) entire document	11,18
☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "I" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 01 October 2015		Date of mailing of the international search report 30 OCT 2015
Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300		Authorized officer Blaine Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (January 2015)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: TIMOTHY F. BLISS
HOWISON & ARNOTT, LLP
P.O. BOX 741715
DALLAS, TX 75374-1715

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference DAMA-32758		Date of mailing <i>(day/month/year)</i> 30 OCT 2015
International application No. PCT/US2015/043630		International filing date <i>(day/month/year)</i> 04 August 2015
International Patent Classification (IPC) or both national classification and IPC IPC(8) - G06F 7/00 (2015.01) CPC - G06F 7/00 (2015.04)		Priority date <i>(day/month/year)</i> 05 August 2014
Applicant DAMAKA, INC.		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300	Date of completion of this opinion <p style="text-align: center;">01 October 2015</p>	Authorized officer <p style="text-align: center;">Blaine Copenheaver</p> <small>PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774</small>
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Form PCT/ISA/237 (cover sheet) (January 2015)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043630

Box No. 1 Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. ☐ This opinion has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a)).
3. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2015/043630

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-21	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-21	NO
Industrial applicability (IA)	Claims	1-21	YES
	Claims	None	NO

2. Citations and explanations:

See Next Supplemental Box

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043630

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Claims 1-6, 8-10, 12-17, 20, 21, lack an inventive step under PCT Article 33(3) as being obvious over Teliris, Inc., hereinafter referred to as Teliris in view of Falco.

Regarding claims 1, 9, Teliris discloses a method for enabling communications between incompatible communication systems (data streams from the one or more endpoints are normalized to result in multiple similarly formatted data streams for each endpoint input stream received by a media handling resource, thereby addressing incompatibility problems between the different endpoints which have different capabilities and support different communication protocols, para 0040), the method comprising: receiving, by a universal unified communications and collaboration (U2C2) gateway in a first system, a request originating from a first endpoint in the first system (different endpoint devices employ different communication protocols that have different capabilities not compatible with each other [includes first endpoint in the first system], the distributed conferencing system 100 allows to communicate with different endpoint devices [distributed conferencing system provides compatibility between incompatible devices is interpreted as universal unified communications and collaboration (U2C2) gateway], para 0023, 0039, claim 1; fig.3 shows at 302 a call is received from an endpoint device, upon receiving the call, flow continues to operation 304 where call information is transmitted to a decision engine [U2C2 gateway], para 0060; a distributed conferencing system provides an application operating on an endpoint device, the application provides a graphical user interface to receive an user input that allows for scheduling of a conference and inviting attendees to a conference, para 0054), wherein the request invites a second endpoint in a second system that is incompatible with the first system into a unified communications and collaboration (UCC) session with the first endpoint (a distributed conferencing system provides an application operating on an endpoint device, the application provides a graphical user interface to receive an user input that allows for scheduling of a conference and inviting attendees to a conference, the portal provides a moderator with the ability to add or remove endpoints, para 0054; the different endpoint devices different capabilities that are not compatible, the endpoint devices employ different communication protocols and allows the different devices to communicate with each other using the distributed conferencing system 100, para 0023; the distributed conferencing system communication between a first endpoint that supports a low quality video in a small screen and a second endpoint that has a large display screen [second endpoint in a second system], para 0046, 0047, claim 1); establishing, by the U2C2 gateway, a connection with a server in the second system in order to communicate with the second endpoint (the decision engine server 106 directs calls from a particular endpoint, such as endpoint 102A, to a particular media handling resource, such as media handling resource 108A, the connection to the media handling resource is established through the SBC [establishing, by the U2C2 gateway, a connection with a server], para 0035; the distributed conferencing system communication between a first endpoint that supports a low quality video in a small screen and a second endpoint that has a large display screen, further displaying a low quality video on a large screen results in a highly degraded image, the distributed conferencing system employs contextual provisioning to instruct the second endpoint to display a smaller view of the data from the first endpoint rather than utilizing the large display, thereby providing a better image to the second endpoint, para 0046, 0047), wherein the U2C2 gateway uses a plurality of protocols and behaviors defined for use by the second system when communicating with the server in order to make the first system appear to be compatible with the second system (different endpoint devices employ different communication protocols that have different capabilities not compatible with each other, the distributed conferencing system 100 allows to communicate with different endpoint devices, para 0023, 0039; fig.1 shows the distributed conferencing system includes media handling resources 108A-108C that normalize [U2C2 gateway makes the first system appear to be compatible with the second system] the data streams received from endpoints 102A-102D, this addresses the incompatibility problems between endpoints that have different capabilities and support different communication protocols, para 0040, 0057; the distributed conferencing system employs contextual provisioning to instruct the second endpoint to display a smaller view of the data from the first endpoint rather than utilizing the large display, thereby providing a better image to the second endpoint, para 0046, 0047); normalizing, by the U2C2 gateway, media received from the second endpoint via the server for compatibility with the first system (fig.1 shows the distributed conferencing system includes media handling resources 108A-108C that normalize [normalizing, by the U2C2 gateway] the data streams received from endpoints 102A-102D [media received from the second endpoint] and provides the normalized data streams to media transfer components 110A-110C, the media transfer component 110A transmit the normalized data stream received from media handling resource 108A to media transfer components 110B and 110C, this addresses the incompatibility problems between endpoints that have different capabilities and support different communication protocols, para 0040, 0057); and normalizing, by the U2C2 gateway, media received from the MCU for compatibility with the second system (fig.1 shows the distributed conferencing system includes media handling resources 108A-108C that normalize [normalizing, by the U2C2 gateway] the data streams received from endpoints 102A-102D [media received from the second endpoint] and provides the normalized data streams to media transfer components 110A-110C, the media transfer component 110A transmit the normalized data stream received from media handling resource 108A to media transfer components 110B and 110C, this addresses the incompatibility problems between endpoints that have different capabilities and support different communication protocols, para 0040, 0057), but lacks the teaching of notifying, by the U2C2 gateway, a multipoint control unit (MCU) within the first system of the connection, wherein the MCU manages the UCC session and wherein the U2C2 gateway is recognized by the MCU as a source and a destination for communications corresponding to the second endpoint in the UCC session; normalizing media received before sending the media to the MCU for the UCC session, and normalizing media received before sending the media to the second endpoint via the server.

Claims 1, 9 Cont.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043630

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Cont.

Falco is in the field of transmitting pictures at different rates for a videoconferencing (abstract) and teaches notifying, by the U2C2 gateway a multipoint control unit (MCU) within the first system of the connection (figs.1 & 12 shows a videoconferencing between terminals 11, 12, 15 and 16 using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks, wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22 [the communication of packets over the gateway 22 to the MCU and determining the source and destination addresses is interpreted as notifying, by the U2C2 gateway, the MCU of the second connection within the first system of the connection], col. 5, lines 59-67, col.6, lines 54-67), wherein the MCU manages the UCC session (the MC receives an inbound packet and looks at the source address of the packet to determine where it came from, when the MCU determines that a received packet does not belong a particular quadrant then that packet is dropped and the MCU awaits for a next packet, col.6, lines 54-67, col.7, lines 1-10) and wherein the U2C2 gateway is recognized by the MCU as a source and a destination for communications corresponding to the second endpoint in the UCC session (figs.1 & 12 shows a videoconferencing between terminals 11, 12, 15 and 16 using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks, wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22 [the communication of packets over the gateway 22 to the MCU and determining the source and destination addresses is interpreted as gateway is recognized by the MCU as the source and destination for communications], col. 5, lines 59-67, col.6, lines 54-67); normalizing media received before sending the media for the UCC session (figs.1 & 12 shows a videoconferencing between terminals 11, 12, 15 and 16 [adding a third endpoint] using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks [UCC session], wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22 [translating and forwarding the packets over the gateway includes forwarding it to the terminal 16 interpreted as normalizing media received before sending the media], col. 5, lines 59-67, col.6, lines 54-67), and normalizing media received before sending the media to the second endpoint via the server (figs.1 & 12 shows a videoconferencing between terminals 11, 12, 15 and 16 [adding a third endpoint] using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks [UCC session], wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22, using the ISDN 14 and the TCP/IP network 18 [translating and forwarding the packets over the gateway includes forwarding it to the terminal 16 interpreted as normalizing media received before sending the media], col. 5, lines 59-67, col.6, lines 54-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Falco to incorporate notifying, by the U2C2 gateway, a multipoint control unit (MCU) within the first system of the connection, wherein the MCU manages the UCC session and wherein the U2C2 gateway is recognized by the MCU as a source and a destination for communications corresponding to the second endpoint in the UCC session; normalizing media received before sending the media for the UCC session, and normalizing media received before sending the media to the second endpoint via the server into the invention of Teliris. The motivation would have been to provide an optimal level of picture quality of pictures during a video conference (see Falco col.9 lines 30-45).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043630

Supplemental Box

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Regarding claims 2, 12, Tellris further teaches wherein the U2C2 gateway is configured to communicate with a plurality of systems outside of the first system (the decision engine uses a distributed video conferencing system which and uses the static and dynamic variables to select which module of the system is to be employed, wherein the dynamic variables relate to data about a new endpoint that joins a conference, an endpoint leaving a conference, para 0018, 0020; the decision engine 106 [U2C2 gateway] send an instruction to media handling resource 108C to composite the multiple video input streams received from devices at endpoint 102B [first system] through media handling resource 108B into a single stream in a manner that correctly reconstructs the view of the conference room at endpoint 102B prior to sending a composite data stream to endpoint 102C [plurality of systems outside of the first system], para 0051), the method further comprising determining, by the U2C2 gateway, which of the plurality of systems contains the second endpoint (the decision engine uses a distributed video conferencing system which and uses the static and dynamic variables to select which module of the system is to be employed, wherein the dynamic variables relate to data about a new endpoint that joins a conference, an endpoint leaving a conference, para 0018, 0020; the decision engine uses the information received from an SBC to perform initial contextual provisioning for the endpoint joining the conference, the decision engine 106 uses static information about other endpoints identified as participants to the conference, in instances where the conference call was previously scheduled and the participating endpoints were previously identified, para 0030).

Regarding claims 3, 13, 17, Tellris further teaches wherein the U2C2 gateway is configured with a plurality of modules that enable the U2C2 gateway to communicate with the plurality of systems (the decision engine 106 [U2C2 gateway] send an instruction to media handling resource 108C to composite the multiple video input streams received from devices at endpoint 102B [first system] through media handling resource 108B into a single stream in a manner that correctly reconstructs the view of the conference room at endpoint 102B prior to sending a composite data stream to endpoint 102C [a plurality of modules to communicate with the plurality of systems], para 0051), the method further comprising selecting, by the U2C2 gateway, one of the plurality of modules for communication with the second system (the decision engine uses a distributed video conferencing system which and uses the static and dynamic variables to select which module of the system is to be employed, wherein the dynamic variables relate to data about a new endpoint that joins a conference, an endpoint leaving a conference, para 0018, 0020; the decision engine uses the information received from an SBC to perform initial contextual provisioning for the endpoint joining the conference, the decision engine 106 uses static information about other endpoints identified as participants to the conference, in instances where the conference call was previously scheduled and the participating endpoints were previously identified, para 0030).

Regarding claims 4, 14, Tellris further teaches wherein the request originating from the first endpoint is received by the U2C2 gateway from a mediator (the decision engine 106 [U2C2 gateway] send an instruction to media handling resource 108C to composite the multiple video input streams received from devices at endpoint 102B [first endpoint] through media handling resource 108B [mediator] into a single stream in a manner that correctly reconstructs the view of the conference room at endpoint 102B prior to sending a composite data stream to endpoint 102C, para 0051).

Regarding claims 5, 21, Tellris further teaches wherein the mediator is located on the MCU (the decision engine 106 [U2C2 gateway] send an instruction to media handling resource 108C to composite the multiple video input streams received from devices at endpoint 102B [first endpoint] through media handling resource 108B [mediator is located on the MCU] into a single stream in a manner that correctly reconstructs the view of the conference room at endpoint 102B prior to sending a composite data stream to endpoint 102C, para 0051).

Regarding claims 6, 15, Tellris further teaches wherein the request originating from the first endpoint is received by the U2C2 gateway directly from the first endpoint (the system 200 depicts devices at an endpoint communicate directly with a media handling resource after initially joining the conference shown by the communication arrow connecting endpoint 202A [the media handling resources along with the decision engine comprises a U2C2 gateway and is interpreted as request originating from the first endpoint is received by the U2C2 gateway directly], and media handling resource 208A, the decision engine 206 directs the endpoint 202A to media handling resource 208A, the endpoint directly communicates with a media handling resource, para 0058).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043630

Supplemental Box

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Regarding claim 8, Tellris further teaches comprising receiving, by the U2C2 gateway, a second request originating from the first endpoint (different endpoint devices employ different communication protocols that have different capabilities not compatible with each other [includes first endpoint in the first system], the distributed conferencing system 100 allows to communicate with different endpoint devices [distributed conferencing system provides compatibility between incompatible devices is interpreted as universal unified communications and collaboration (U2C2) gateway], para 0023, 0039, claim 1; fig.3 shows at 302 a call is received from an endpoint device, upon receiving the call, flow continues to operation 304 where call information is transmitted to a decision engine [U2C2 gateway], para 0060; a distributed conferencing system provides an application operating on an endpoint device, the application provides a graphical user interface to receive an user input that allows for scheduling of a conference and inviting attendees [receiving a second request] to a conference, para 0054), wherein the second request invites a second endpoint in a second system that is incompatible with the first system into the UCC session (a distributed conferencing system provides an application operating on an endpoint device, the application provides a graphical user interface to receive an user input that allows for scheduling of a conference and inviting attendees to a conference, the portal provides a moderator with the ability to add or remove endpoints, para 0054; the different endpoint devices different capabilities that are not compatible, the endpoint devices employ different communication protocols and allows the different devices to communicate with each other using the distributed conferencing system 100, para 0023; the distributed conferencing system communication between a first endpoint that supports a low quality video in a small screen and a second endpoint that has a large display screen [second endpoint in a second system], para 0046, 0047, claim 1); establishing, by the U2C2 gateway, a connection with a server in order to communicate with the third endpoint (the decision engine server 106 directs calls from a particular endpoint, such as endpoint 102A, to a particular media handling resource, such as media handling resource 108A, the connection to the media handling resource is established through the SBC [establishing, by the U2C2 gateway, a connection with a server], para 0035; the distributed conferencing system communication between a first endpoint that supports a low quality video in a small screen and a second endpoint that has a large display screen, further displaying a low quality video on a large screen results in a highly degraded image, the distributed conferencing system employs contextual provisioning to instruct the second endpoint to display a smaller view of the data from the first endpoint rather than utilizing the large display, thereby providing a better image to the second endpoint, para 0046, 0047), wherein the U2C2 gateway uses a plurality of protocols and behaviors defined for use by the system when communicating with the server in order to make the first system appear to be compatible with the second system (different endpoint devices employ different communication protocols that have different capabilities not compatible with each other, the distributed conferencing system 100 allows to communicate with different endpoint devices, para 0023, 0039; fig.1 shows the distributed conferencing system includes media handling resources 108A-108C that normalize [U2C2 gateway makes the first system appear to be compatible with the second system] the data streams received from endpoints 102A-102D, this addresses the incompatibility problems between endpoints that have different capabilities and support different communication protocols, para 0040, 0057; the distributed conferencing system employs contextual provisioning to instruct the second endpoint to display a smaller view of the data from the first endpoint rather than utilizing the large display, thereby providing a better image to the second endpoint, para 0046, 0047); normalizing, by the U2C2 gateway, media received from the second endpoint for compatibility with the first system (fig.1 shows the distributed conferencing system includes media handling resources 108A-108C that normalize [normalizing, by the U2C2 gateway] the data streams received from endpoints 102A-102D [media received from the second endpoint] and provides the normalized data streams to media transfer components 110A-110C, the media transfer component 110A transmit the normalized data stream received from media handling resource 108A to media transfer components 110B and 110C, this addresses the incompatibility problems between endpoints that have different capabilities and support different communication protocols, para 0040, 0057); and normalizing, by the U2C2 gateway, media received from the MCU for compatibility (fig.1 shows the distributed conferencing system includes media handling resources 108A-108C that normalize [normalizing, by the U2C2 gateway] the data streams received from endpoints 102A-102D [media received from the second endpoint] and provides the normalized data streams to media transfer components 110A-110C, the media transfer component 110A transmit the normalized data stream received from media handling resource 108A to media transfer components 110B and 110C, this addresses the incompatibility problems between endpoints that have different capabilities and support different communication protocols, para 0040, 0057), but lacks the teaching of wherein the second request invites a third endpoint in a third system; establishing a second connection with a second server in the third system in order to communicate with the third endpoint, notifying, by the U2C2 gateway, the MCU of the second connection, wherein the U2C2 gateway is recognized by the MCU as both source and destination for communications corresponding to the third endpoint in the UCC session; normalizing media received before sending the media to the MCU for the UCC session and normalizing the media received from the MCU for compatibility with the third system before sending the media to the third endpoint.

Claim 8 Conti.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043630

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

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Falco is in the field of transmitting pictures at different rates for a video conferencing (abstract) and teaches establishing a second connection with a second server in the third system in order to communicate with the third endpoint (figs.1 & 12 shows a videoconferencing between terminals 11, 12, 15 and 16 [third system in the third endpoint] using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks [UCC session], wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22 [the communication of packets over the gateway 22 to the MCU and determining the source and destination addresses is interpreted as notifying, by the U2C2 gateway, the MCU of the second connection] (figs.1 & 12 shows a videoconferencing between terminals 11, 12, 15 and 16 using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks, wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22 [the communication of packets over the gateway 22 to the MCU and determining the source and destination addresses is interpreted as notifying, by the U2C2 gateway, the MCU of the second connection], col. 5, lines 59-67, col.6, lines 54-67), wherein the U2C2 gateway is recognized by the MCU as both source and destination for communications corresponding to the third endpoint in the UCC session (figs.1 & 12 shows a videoconferencing between terminals 11, 12, 15 and 16 using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks, wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22 [the communication of packets over the gateway 22 to the MCU and determining the source and destination addresses is interpreted as notifying, by the U2C2 gateway, the MCU of the second connection], col. 5, lines 59-67, col.6, lines 54-67); normalizing media received before sending the media for the UCC session and translating the media received from the MCU for compatibility with the third system before sending the media to the third endpoint (figs.1 & 12 shows a videoconferencing between terminals 11, 12, 15 and 16 [adding a third endpoint] using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks [UCC session], wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22 [the communication of packets over the gateway 22 to the MCU and determining the source and destination addresses is interpreted as notifying, by the U2C2 gateway, the MCU of the second connection], col. 5, lines 59-67, col.6, lines 54-67); normalizing media received before sending the media for the UCC session and translating the media received from the MCU for compatibility with the third system before sending the media to the third endpoint into the invention of Teliris. The motivation would have been to provide an optimal level of picture quality of pictures during a video conference (see Falco col.9 lines 30-45).

Regarding claim 10, Teliris lacks the teaching of comprising: adding a third endpoint in the second system to the UCC session, wherein the U2C2 gateway is recognized by the MCU as the source and destination for communications corresponding to the third endpoint in the UCC session; and upon receiving media from the MCU to send to the second system, dropping any of the media that originated in the second system prior to sending any media originating in the first system to the server.

Falco is in the field of transmitting pictures at different rates for a videoconferencing (abstract) and teaches adding a third endpoint in the second system to the UCC session (figs.1 & 12 shows a videoconferencing between terminals 11, 12, 15 and 16 [adding a third endpoint] using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks [UCC session], wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22, col. 5, lines 59-67, col.6, lines 54-67), wherein a gateway is recognized by the MCU as the source and destination for communications corresponding to the third endpoint in the UCC session (figs.1 & 12 shows a videoconferencing between terminals 11, 12, 15 and 16 using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks, wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22 [the communication of packets over the gateway 22 to the MCU and determining the source and destination addresses is interpreted as notifying, by the U2C2 gateway, the MCU of the second connection], col. 5, lines 59-67, col.6, lines 54-67); and upon receiving media from the MCU to send to the second system, dropping any of the media that originated in the second system prior to sending any media originating in the first system to the server (the MC receives an inbound packet and looks at the source address of the packet to determine where it came from, when the MCU determines that a received packet does not belong a particular quadrant then that packet is dropped and the MCU awaits for a next packet, col.6, lines 54-67, col.7, lines 1-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Falco to incorporate adding a third endpoint in the second system to the UCC session, wherein the U2C2 gateway is recognized by the MCU as the source and destination for communications corresponding to the third endpoint in the UCC session; and upon receiving media from the MCU to send to the second system, dropping any of the media that originated in the second system prior to sending any media originating in the first system to the server into the invention of Teliris. The motivation would have been to provide an optimal level of picture quality of pictures during a video conference (see Falco col.9 lines 30-45).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043630

Supplemental Box

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Regarding claim 20, Teliris lacks the teaching of wherein the mediator is located on a separate device from the MCU. Falco is in the field of transmitting pictures at different rates for a videoconferencing (abstract) and teaches wherein the mediator is located on a separate device from the MCU (figs. 1 & 12 shows a videoconferencing between terminals 11, 12, 15 and 16 using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks, wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22 [the communication of packets over the gateway 22 to the MCU and the gateway performs the translating for communications is interpreted as mediator is located on a separate device from the MCU], col. 5, lines 59-67, col.6, lines 54-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Falco to incorporate wherein the mediator is located on a separate device from the MCU into the invention of Teliris. The motivation would have been to provide an optimal level of picture quality of pictures during a video conference (see Falco col.9 lines 30-45).

Claims 7, 19 lack an inventive step under PCT Article 33(3) as being obvious over Teliris in view of Falco and further in view of Frost.

Regarding claim 7, Teliris lacks the teaching of establishing, by the U2C2 gateway, the connection with the server in the second system includes logging into the server as an endpoint of the second system.

Falco is in the field of transmitting pictures at different rates for a video conferencing (abstract) and teaches establishing, by the U2C2 gateway, the connection with the server in the second system (figs.1 & 12 shows a video conferencing between terminals 11, 12, 15 and 16 [third system in the third endpoint] using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks [UCC session], wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22 [forwarding the packets over the gateway includes forwarding it to the terminal 16 interpreted as establishing a second connection], col. 5, lines 59-67, col.6, lines 54-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Falco to incorporate establishing, by the U2C2 gateway, the connection with the server in the second system into the invention of Teliris. The motivation would have been to provide an optimal level of picture quality of pictures during a video conference (see Falco col.9 lines 30-45).

Frost is in the field of receiving a request for user login for a received request (abstract) and teaches logging into the server as an endpoint of a system (fig.1 shows a user accessing a client 102 to send requests to the server 106, wherein the server 106 provides at step 450 the created user account for logging into the server 106, the server 106 provides the created user account for logging into another server 106, the server 106 creates a user account that gives access to one or more of a file, a disk, a drive, or a file space location, para 0042). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Frost to incorporate logging into the server as an endpoint of the second system into the invention of Teliris. The motivation would have been to improve the performance, operation, or quality of service of any type and form of network traffic (see Frost para 0028).

Regarding claim 19, Teliris lacks the teaching of wherein the U2C2 gateway is configured to log into a server in a third system of the plurality of systems as an endpoint of the third system in order to include a third endpoint in the third system in the UCC session.

Falco is in the field of transmitting pictures at different rates for a video conferencing (abstract) and teaches wherein the U2C2 gateway is configured to communicate with a third system of the plurality of systems as an endpoint of the third system in order to include a third endpoint in the third system in the UCC session (figs.1 & 12 shows a videoconferencing between terminals 11, 12, 15 and 16 [third system in the third endpoint] using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks [UCC session], wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22 [forwarding the packets over the gateway includes forwarding it to the terminal 16 interpreted as establishing a second connection], col. 5, lines 59-67, col.6, lines 54-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Falco to incorporate wherein the U2C2 gateway is configured to communicate with a third system of the plurality of systems as an endpoint of the third system in order to include a third endpoint in the third system in the UCC session into the invention of Teliris. The motivation would have been to provide an optimal level of picture quality of pictures during a video conference (see Falco col.9 lines 30-45).

Frost is in the field of receiving a request for user login for a received request (abstract) and teaches logging into the server as an endpoint of a system (fig.1 shows a user accessing a client 102 to send requests to the server 106, wherein the server 106 provides at step 450 the created user account for logging into the server 106, the server 106 provides the created user account for logging into another server 106, the server 106 creates a user account that gives access to one or more of a file, a disk, a drive, or a file space location, para 0042). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Frost to incorporate logging into the server as an endpoint of the second system into the invention of Teliris. The motivation would have been to improve the performance, operation, or quality of service of any type and form of network traffic (see Frost para 0028).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2015/043630

Supplemental Box

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Claims 11, 18 lack an inventive step under PCT Article 33(3) as being obvious over Teliris in view of Falco and further in view of Lyon.

Regarding claim 11, Teliris lacks the teaching of comprising: adding a third endpoint in the second system to the UCC session, wherein the U2C2 gateway is recognized by the MCU as the source and destination for communications corresponding to the third endpoint in the UCC session; and upon receiving media from the MCU to send to the second system, sending the media to the second endpoint only if the media did not originate from the second endpoint, and sending the media to the third endpoint only if the media did not originate from the third endpoint.

Falco is in the field of transmitting pictures at different rates for a videoconferencing (abstract) and teaches adding a third endpoint in the second system to the UCC session (figs.1 & 12 shows a videoconferencing between terminals 11, 12, 15 and 16 [adding a third endpoint] using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks [UCC session], wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22, col. 5, lines 59-67, col.6, lines 54-67), wherein the U2C2 gateway is recognized by the MCU as the source and destination for communications corresponding to the third endpoint in the UCC session (figs.1 & 12 shows a videoconferencing between terminals 11, 12, 15 and 16 using a MCU 20 is implemented to receive various signals from the terminals between the gateway 22 used for translating between the networks, wherein the MCU 20 receives inbound packets and looks at the source address of the packet to determine the site it came from, and forwards the packet accordingly using a gateway 22 [the communication of packets over the gateway 22 to the MCU and determining the source and destination addresses is interpreted as gateway is recognized by the MCU as the source and destination for communications], col. 5, lines 59-67, col.6, lines 54-67); and upon receiving media from the MCU to send to the second system, sending the media to the second endpoint based on an originating address (at block 1402, the MCU receives an inbound packet, and in blocks 1404, 1408, 1412 and 1416, it decides in which quadrant the packet should be stored, based on the source address of the packet to determine the site it came from, and the packet is then forwarded to the correct quadrant, col.6, lines 54-67, col.7, lines 1-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Falco to incorporate adding a third endpoint in the second system to the UCC session, wherein the U2C2 gateway is recognized by the MCU as the source and destination for communications corresponding to the third endpoint in the UCC session; and upon receiving media from the MCU to send to the second system, sending the media to the second endpoint based on an originating address into the invention of Teliris. The motivation would have been to provide an optimal level of picture quality of pictures during a video conference (see Falco col.9 lines 30-45).

Lyon is in the field of managing TCP anycast requests (abstract) and teaches sending the media to the endpoint only if the media did not originate from the endpoint (a CDN node monitors sessions in other CDN nodes and redirects incoming sessions that did not originate at the CDN node but are routed to the CDN node mid-session to the CDN nodes at which they originated, consider that a CDN comprises a CDN node in Chicago and a CDN node in Dallas and that the Internet backbone over which the Dallas CDN node is servicing a session breaks, the session would be routed mid-session by one or more associated ISP nodes to another CDN node, e.g., the CDN node in Chicago, para 0019). Furthermore, to establish the sending for multiple endpoints was a well-known practice in the art and the specifics (second endpoint third endpoint) would have been a matter of design choice. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Lyon to incorporate sending the media to the endpoint only if the media did not originate from the endpoint into the invention of Teliris. The motivation would have been to provide a TCP stability by keeping same sessions alive across different routings (see Lyon para 0019).

Regarding claim 18, Teliris lacks the teaching of wherein the mediator is configured to send the request to the U2C2 gateway only if an endpoint to be added to the UCC session is from a system other than the first system, and is configured to send the request to the MCU if an endpoint to be added to the UCC session is from the first system.

Falco is in the field of transmitting pictures at different rates for a videoconferencing (abstract) and teaches configured to send the request if an endpoint to be added to the UCC session is from the first system (at block 1402, the MCU receives an inbound packet, and in blocks 1404, 1408, 1412 and 1416, it decides in which quadrant the packet should be stored, based on the source address of the packet to determine the site it came from, and the packet is then forwarded to the correct quadrant [configured to send the request if an endpoint to be added to the UCC session is from the first system], the MCU receives an inbound packet and looks at the source address of the packet to determine where it came from, when the MCU determines that a received packet does not belong a particular quadrant then that packet is dropped and the MCU awaits for a next packet, col.6, lines 54-67, col.7, lines 1-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Falco to incorporate configured to send the request if an endpoint to be added to the UCC session is from the first system into the invention of Teliris. The motivation would have been to be provide an optimal level of picture quality of pictures during a video conference (see Falco col.9 lines 30-45).

Lyon is in the field of managing TCP anycast requests (abstract) and teaches to send the request only if an endpoint to be added to the session is from a system other than the first system (a CDN node monitors sessions in other CDN nodes and redirects incoming sessions that did not originate at the CDN node [added to the session is from a system other than the first system] but are routed to the CDN node mid-session to the CDN nodes at which they originated, consider that a CDN comprises a CDN node in Chicago and a CDN node in Dallas and that the Internet backbone over which the Dallas CDN node is servicing a session breaks, the session would be routed mid-session by one or more associated ISP nodes to another CDN node, e.g., the CDN node in Chicago, para 0019). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Lyon to incorporate to send the request only if an endpoint to be added to the session is from a system other than the first system into the invention of Teliris. The motivation would have been to provide a TCP stability by keeping same sessions alive across different routings (see Lyon para 0019).

Claims 1-21 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

Search History:

See Global Search Results.

Limited Classification Search

The Patent Analyst performed a limited classification search within the following US, IPC, CPC, ECLA, or F-Term classification areas:

U.S. Class/Subclass(es): 348/14.09; 709/223; 726/8

IPC (8) Class/Subclass(es): G06F 7/00; 7/04; 15/173; H04N 7/152 (2015.01)

CPC Class/Subclass(es): G06F 7/00; 7/04; 15/173; H04N 7/152 (2015.04)

See Global Search Results.

Global Patent Literature Text Search

The Patent Analyst performed the following global text search, which was not limited by classification but may or may not have been limited by other criteria:

ORBIT

27	1654	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+) AND (COMPATIB+ OR INCOMPAT+) AND (ADD+ OR CONNECTI+ OR LOG+) AND (MCU))/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX
26	5	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+) AND (COMPATIB+ OR INCOMPAT+) AND (ADD+ OR CONNECTI+ OR LOG+) AND (MCU) AND (MOB+))/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX AND (726008)/PCLM
25	411	(726008)/PCLM
24	13	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+) AND (COMPATIB+ OR INCOMPAT+) AND (ADD+ OR CONNECTI+ OR LOG+) AND (MCU) AND (MOB+))/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX AND (709223)/PCLM
23	5935	(709223)/PCLM
22	318	(348014090)/PCLM
21	11	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR

		TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+) AND (COMPATIB+ OR INCOMPAT+) AND (ADD+ OR CONNECTI+ OR LOG+) AND (MCU) AND (MOB+)/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX AND (348014090)/PCLM
20	318	(348014090)/PCLM
19	863	(H04N-007/152)/CPC
18	1	(H04N-007/152)/IPC
17	0	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+) AND (COMPATIB+ OR INCOMPAT+) AND (ADD+ OR CONNECTI+ OR LOG+) AND (MCU) AND (MOB+)/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX AND (H04N-007/152)/IPC
16	30	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+) AND (COMPATIB+ OR INCOMPAT+) AND (ADD+ OR CONNECTI+ OR LOG+) AND (MCU) AND (MOB+)/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX AND (H04N-007/152)/CPC
15	1	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+) AND (COMPATIB+ OR INCOMPAT+) AND (ADD+ OR CONNECTI+ OR LOG+) AND (MCU) AND (MOB+)/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX AND (G06F-015/173)/CPC
14	2074	(G06F-015/173)/CPC
13	34729	(G06F-015/173)/IPC
12	53	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+) AND (COMPATIB+ OR INCOMPAT+) AND (ADD+ OR CONNECTI+ OR LOG+) AND (MCU) AND (MOB+)/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX AND (G06F-015/173)/IPC
11	19	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+) AND (COMPATIB+ OR INCOMPAT+) AND (ADD+ OR CONNECTI+ OR LOG+) AND (MCU) AND (MOB+)/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX AND (G06F-007/00)/IPC

10	51670	(G06F-007/00)/IPC
9	780	(G06F-007/00)/CPC
8	0	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+) AND (COMPATIB+ OR INCOMPAT+) AND (ADD+ OR CONNECTI+ OR LOG+) AND (MCU) AND (MOB+))/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX AND (G06F-007/00)/CPC
7	19	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+) AND (COMPATIB+ OR INCOMPAT+) AND (ADD+ OR CONNECTI+ OR LOG+) AND (MCU) AND (MOB+))/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX AND (G06F-007/00)/IPC
6	1431	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+) AND (COMPATIB+ OR INCOMPAT+) AND (ADD+ OR CONNECTI+ OR LOG+) AND (MCU) AND (MOB+))/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX
5	47034	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+) AND (COMPATIB+ OR INCOMPAT+) AND (ADD+ OR CONNECTI+ OR LOG+))/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX
4	47067	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+) AND (COMPATIB+ OR INCOMPAT+))/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX
3	172182	((UNIVERS+ OR UNIFI+ OR COLLAB+) AND (ENDPOINT+ OR TERMINAL+) AND (REQUEST+ OR INVIT+) AND (SERVER+ OR GATEWAY+))/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX
2	1	US20080244718/PN
1	1	US6606112/PN

Computer Accessed Text Databases Searched

The Patent Analyst searched the following computer accessed text databases:

GOOGLE PATENT https://www.google.com/advanced_patent_search

No. of Hits	Text String
100+	inassignee:"Damaka, Inc."
100+	universal unified communications and collaboration
100+	universal unified communications and collaboration "incompatible" multipoint control unit
100+	first device second device incompatible in a joint session peer to peer
100+	first device and second device by converting them from incompatible versions to compatible versions
100+	establishing collaborative communications between a first device and second device
100+	establishing communications between a devices from different platforms for video conferences compatibility
100+	"first device" "second device" "first system" "second system" compatible collaborative session
100+	providing unified communications between multiple devices compatible incompatible

GOOGLE <https://www.google.com>

No. of Hits	Text String
100+	universal unified communications and collaboration
100+	universal unified communications and collaboration "incompatible" multipoint control unit
100+	first device second device incompatible in a joint session peer to peer
100+	first device and second device by converting them from incompatible versions to compatible versions
100+	establishing collaborative communications between a first device and second device
100+	establishing communications between a devices from different platforms for video conferences compatibility
100+	"first device" "second device" "first system" "second system" compatible collaborative session
100+	providing unified communications between multiple devices compatible incompatible

GOOGLE SCHOLAR <https://scholar.google.com>

No. of Hits	Text String
100+	universal unified communications and collaboration
100+	universal unified communications and collaboration "incompatible" multipoint control unit
100+	first device second device incompatible in a joint session peer to peer
100+	first device and second device by converting them from incompatible versions to compatible versions
100+	establishing collaborative communications between a first device

	and second device
100+	establishing communications between a devices from different platforms for video conferences compatibility
100+	"first device" "second device" "first system" "second system" compatible collaborative session
100+	providing unified communications between multiple devices compatible incompatible

Date search was completed: 01 October 2015

RM/CC

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DAMA-32202	FOR FURTHER ACTION See item 4 below	
International application No. PCT/US2014/038777	International filing date (day/month/year) 28 May 2014 (28.05.2014)	Priority date (day/month/year) 18 July 2013 (18.07.2013)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DAMAKA, INC.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).	
2.	This REPORT consists of a total of 7 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.	
3.	This report contains indications relating to the following items:	
	☒ Box No. I	Basis of the report
	☐ Box No. II	Priority
	☐ Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
	☐ Box No. IV	Lack of unity of invention
	☒ Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	☐ Box No. VI	Certain documents cited
	☐ Box No. VII	Certain defects in the international application
	☐ Box No. VIII	Certain observations on the international application
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 25(2), before the expiration of 30 months from the priority date (Rule 44bis.2).	

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 92 70		Date of issuance of this report 19 January 2016 (19.01.2016) Authorized officer EI Mostafa Moussaid e-mail: pt03.pct@wipo.int
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Form PCT/IB/375 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: TIMOTHY F. BLISS
HOWISON & ARNOTT, L.L.P.
P.O. BOX 741715
DALLAS, TX 75374-1715

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year)

30 SEP 2014

Applicant's or agent's file reference
DAMA-32262

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2014/039777

International filing date (day/month/year)

28 May 2014

Priority date (day/month/year)

16 July 2013

International Patent Classification (IPC) or both national classification and IPC

IPC(8) - H04N 7/15 (2014.01)

CPC - H04N 2007/145 (2014.02)

Applicant DAMAKA, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(s)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/230.

Name and mailing address of the ISA/US
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No: 571-273-3201

Date of completion of this opinion

01 September 2014

Authorized officer:

Blaine R. Copenhaver

PCT Helpdesk: 571-372-4300
PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2014/039777

Box No. 1 Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:
- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. ☐ This opinion has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a)).
3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
- a. (means)
- ☐ on paper
- ☐ in electronic form
- b. (time)
- ☐ in the international application as filed
- ☐ together with the international application in electronic form
- ☐ subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2014/039777

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-22	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-22	NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-10, 13-22 lack an inventive step under PCT Article 33(3) as being obvious over Yin et al., hereinafter referred to as Yin, in view of Chen et al., hereinafter referred to as Chen.

Regarding claims 1, 16, Yin teaches mobile device (the client computer is a web-enabled mobile device, col. 9 lines 38-41) comprising: a network interface (the client computer is a web-enabled mobile device [would include a network interface], col. 9 lines 38-41); a processor coupled to the network interface (the client machine is operated by a processor which performs the operations [the processor would be coupled to components such as the network interface], col. 14 lines 43-47); and a memory coupled to the processor and configured to store a plurality of instructions executable by the processor (the client machine has memory, all processes are performed by executable computer instructions stored on and read from computer-readable media [the stored instructions would be executed by the processor], col. 14 lines 43-56), the instructions including instructions for [Claim 1]; and a method (a method of assembling a situational Web-based dashboard with digital components, col. 3 lines 38-40) comprising [Claim 16]: receiving, by a function block stored in the memory of the mobile device, a request for video from a superblock application stored in the memory of the mobile device (when a user is using a web browser [superblock application as defined in paragraph 0022 of the instant PCT application] on a client machine the user can access a web-based interface to create a web component, components such as video components are created from existing web pages with the help of a browser add-on [function block as defined in paragraph 0031 of the instant PCT application], the user clicks on the web browser's add-on button to enter the componentization mode [the request would be sent from the browser to the browser add-on, the browser and add-on would be stored in the client computer's memory], col. 7 lines 12-15, 42-50); determining, by the function block, that the superblock application is authorized to access video functionality provided by the function block (the web browser's add-on includes a "Post" button captures metadata and communicates the metadata to the server, the server retrieves metadata including requesting user's permission to access the dashboard page, if the user has the right permission to access the dashboard page the corresponding server application components will generate a dashboard page to be rendered in the web browser [the metadata sent by the function block would be used to determine the superblock's authorization], col. 7 lines 46-61, col. 8 lines 58-65, col. 9 lines 15-22); establishing, by the function block, the video between the superblock application and the resource via the network interface, wherein the establishing is not supported by the superblock application (the web browser's add-on includes a "Post" button captures metadata and communicates the metadata to the server [the post instruction would be a functionality limited to the add-on as opposed to the browser], the Server Application Components update the database with the corresponding metadata, the corresponding server application components will generate a dashboard page to be rendered in the web browser [the dashboard page components include the video], col. 7 lines 24-30, 46-61, col. 9 lines 15-22); providing, by the function block, video output for the video to a video window within a display window of the superblock application on the mobile device (the web browser's add-on includes a "Post" button captures metadata and communicates the metadata to the server [the video is provided by the function block], the content is rendered directly and visually right in the web browser as part of that containing web page occupying part of the real estate of the screen without the need to click and open it in another web page or external application, for "component 1" its source is from "web site 1" so the Ajax-based Dashboard Page will make a HTTP request to the specific web component and display it in the visual area of "component 1" [depicted as a video window], fig. 1c, col. 6 lines 7-15, col. 7 lines 46-61, col. 9 lines 25-30), wherein the video window is displayed simultaneously with the display window of the superblock application on a screen of the mobile device (the content is rendered directly and visually right in the web browser as part of that containing web page occupying part of the real estate of the screen without the need to click and open it in another web page or external application, for "component 1" its source is from "web site 1" so the Ajax-based Dashboard Page will make a HTTP request to the specific web component and display it in the visual area of "component 1" [depicted as a video window, would be displayed simultaneously], fig. 1c, col. 6 lines 7-15, col. 9 lines 25-30); but lacks the teaching a request for an audio/video (A/V) call; determining, by the function block, that the A/V service requires access to a resource that is external to the mobile device; establishing the A/V call between the superblock application and the resource via the network interface; and providing, by the function block, audio for the A/V call via the mobile device.

(Continued in Supplemental Box)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2014/039777

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Regarding claims 1, 16 (Cont.).

Chen is in the field of reconfiguring devices (title) and teaches a request for an audio/video (A/V) call (the user may select a video phone call or even a video conferencing call with application sharing if the other end has the same facility, then the control program embedded in the HTML application will invoke API functions to initiate kiosk video conferencing function, a collaborative session includes video and audio, col. 15 lines 6-13, 48-53); determining, by the function block, that the A/V service requires access to a resource that is external to the mobile device (a user selects an application for which the kiosk is to be configured and browser 160 interacts with one or more servers 195 to fetch one or more configuration sets 175, by selecting a second application the kiosk is again reconfigured for the second application [it would be determined that a new configuration set is needed; where the function block is interpreted as a type of stored instruction set and the mobile device is interpreted as a type of device], col. 5 lines 48-51, col. 6 lines 1-2); establishing the A/V call between the superblock application and the resource via the network interface (the user may select a video phone call or even a video conferencing call with application sharing if the other end has the same facility, then the control program embedded in the HTML application will invoke API functions to initiate kiosk video conferencing function, kiosk 100 comprises computer 110 which has an appropriate known network interfaces 155 [the call would take place over the network; where the superblock application is interpreted as a type of application], col. 4 lines 9-12, col. 15 lines 6-13); and providing, by the function block, audio for the A/V call via the mobile device (a collaborative session includes video and audio [where the function block is interpreted as a type of stored instruction set and the mobile device is interpreted as a type of device], col. 15 lines 48-53). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claim 9, Yin teaches a mobile device (the client computer is a web-enabled mobile device, col. 9 lines 38-41) comprising: a network interface (the client computer is a web-enabled mobile device [would include a network interface], col. 9 lines 38-41); a processor coupled to the network interface (the client machine is operated by a processor which performs the operations [the processor would be coupled to components such as the network interface], col. 14 lines 43-47); and a memory coupled to the processor and configured to store a plurality of instructions executable by the processor (the client machine has memory, all processes are performed by executable computer instructions stored on and read from computer-readable media [the stored instructions would be executed by the processor], col. 14 lines 43-56), the instructions including instructions for a superblock application having instructions for a function block included therein (when a user is using a web browser [superblock application as defined in paragraph 0022 of the instant PCT application] on a client machine the user can access a web-based interface to create a web component, components such as video components are created from existing web pages with the help of a browser add-on [function block as defined in paragraph 0031 of the instant PCT application], the user clicks on the web browser's add-on button to enter the componentization mode [the request would be sent from the browser to the browser add-on, the browser and add-on would be stored in the client computer's memory], col. 7 lines 12-15, 42-50), wherein the function block is configured to provide a plurality of functions that are accessible to the superblock application (components are created from existing web pages with the help of a browser add-on, the components which will show up in a dashboard page a live are component 155 or video 153 or widget 158, the dashboard page is created to be rendered in the web browser, col. 7 lines 42-46, col. 9 lines 15-18), wherein the functions are provided within the superblock application itself and are accessible within the superblock application without switching context to another application on the mobile device (the content is rendered directly and visually right in the web browser as part of that containing web page occupying part of the real estate of the screen without the need to click and open it in another web page or external application, col. 2 lines 48-67, col. 6 lines 7-15), and wherein the superblock application cannot access at least one of the functions of the function block without providing an authorization code (the web browser's add-on includes a "Post" button captures metadata and communicates the metadata to the server, the server retrieves metadata including requesting user's permission to access the dashboard page, if the user has the right permission to access the dashboard page the corresponding server application components will generate a dashboard page to be rendered in the web browser [the metadata sent by the function block would be used to determine the superblock's authorization, the user data sent to the server to determine authorization functions as an authorization code], col. 7 lines 46-61, col. 8 lines 58-65, col. 9 lines 15-22); but lacks the teaching wherein the function block is configured to provide a plurality of functions that are accessible to the superblock application via an application programming interface (API) of the function block; and wherein the superblock application cannot access at least one of the functions of the function block without providing the function block with an authorization code. Chen is in the field of reconfiguring devices (title) and teaches wherein the function block is configured to provide a plurality of functions that are accessible to the superblock application via an application programming interface (API) of the function block (embedded control programs 620 are content specific processes that use the non-content specific control mechanisms 640 to control local application program interfaces 680 associated with the respective input/output devices 130 [where the superblock application is interpreted as a type of application, and the function block is interpreted as a type of stored instruction set], col. 5 lines 5-10); and wherein the superblock application cannot access at least one of the functions of the function block without providing the function block with an authorization code (the kiosk requests a PIN code from Mr. Smith [where the superblock application is interpreted as a type of application, and the function block is interpreted as a type of stored instruction set], col. 7 lines 4-8). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claims 2, 17, Yin lacks the teaching wherein the instructions further include determining, by the function block, whether the function block has the capability to provide the A/V call. Chen is in the field of reconfiguring devices (title) and teaches wherein the instructions further include determining, by the function block, whether the function block has the capability to provide the A/V call (applications files 175 are used to query which input/output devices 130 are installed or operational in a given kiosk, in this way server 195 can determine which other application files 175 to send to the kiosk to enable the installed or operational input/output devices 130 and not to enable the uninstalled or faulty devices [where the function block is interpreted as a type of instruction set and the A/V call is interpreted as a type of functionality], col. 7 lines 34-40, col. 13 lines 4-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2014/039777

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Regarding claims 3, 16, Yin lacks the teaching wherein the instructions further include determining, by the function block, whether the function block has the capability to render the A/V call. However, Yin teaches rendering video (each component is dynamically rendered in the dashboard framework, col. 8 lines 48-52). Chen is in the field of reconfiguring devices (title) and teaches wherein the instructions further include determining, by the function block, whether the function block has the capability to render the A/V call (applications files 175 are used to query which input/output devices 130 are installed or operational in a given kiosk, in this way server 195 can determine which other application files 175 to send to the kiosk to enable the installed or operational input/output devices 130 and not to enable the uninstalled or faulty devices [where the function block is interpreted as a type of instruction set and rendering the A/V call is interpreted as a type of functionality], col. 7 lines 34-40, col. 13 lines 4-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claims 4, 19, Yin lacks the teaching wherein the instructions further include determining, by the function block, whether the superblock has the capability to render the A/V call. However, Yin teaches rendering video (each component is dynamically rendered in the dashboard framework, col. 8 lines 48-52). Chen is in the field of reconfiguring devices (title) and teaches wherein the instructions further include determining, by the function block, whether the superblock has the capability to render the A/V call (applications files 175 are used to query which input/output devices 130 are installed or operational in a given kiosk, in this way server 195 can determine which other application files 175 to send to the kiosk to enable the installed or operational input/output devices 130 and not to enable the uninstalled or faulty devices [where the function block is interpreted as a type of instruction set, the superblock is interpreted as a type of application, and rendering the A/V call is interpreted as a type of functionality], col. 7 lines 34-40, col. 13 lines 4-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claim 5, Yin lacks the teaching wherein the instructions further include determining, by the function block, that the resource is currently available prior to establishing the A/V call. Chen is in the field of reconfiguring devices (title) and teaches wherein the instructions further include determining, by the function block, that the resource is currently available prior to establishing the A/V call (applications files 175 are used to query which input/output devices 130 are installed or operational in a given kiosk, in this way server 195 can determine which other application files 175 to send to the kiosk to enable the installed or operational input/output devices 130 and not to enable the uninstalled or faulty devices [where the function block is interpreted as a type of instruction set and resources are interpreted as input/output devices], col. 7 lines 34-40, col. 13 lines 4-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claims 6, 20, Yin teaches wherein the instructions further include initializing the function block, by the superblock application, when the superblock application is loaded into the memory and executed (a browser add-on is installed [the add-on would be initialized by the browser when the browser is run], col. 7 lines 32-33).

Regarding claims 7, 21, Yin lacks the teaching wherein the request is an application programming interface (API) call from the superblock application to the function block. Chen is in the field of reconfiguring devices (title) and teaches Chen is in the field of reconfiguring devices (title) and teaches (embedded control programs 620 are content specific processes that use the non-content specific control mechanisms 640 to control local application program interfaces 680 associated with the respective input/output devices 130 [where the superblock application is interpreted as a type of application, and the function block is interpreted as a type of stored instruction set], col. 5 lines 5-16). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claims 8, 22, Yin lacks the teaching wherein the instructions further include enabling, by the function block, a user of the device to collaborate on at least one of a document, a file, or an application with a user on another device. However, Yin teaches at least one of a document, a file, or an application (components include office documents, col. 6 lines 25-26). Chen is in the field of reconfiguring devices (title) and teaches wherein the instructions further include enabling, by the function block, a user of the device to collaborate with a user on another device (a real-time collaborative session is started with video, audio, shared screen and remote device control functions [where the function block is interpreted as a type of instruction set], col. 18 lines 48-53). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claim 10, Yin teaches wherein the plurality of functions includes access to an external service not present on the mobile device (components are created from existing web pages, the server application components are used to generate the dashboard page to be rendered in the web browser, col. 7 lines 42-43, col. 9 lines 15-18).

Regarding claim 13, Yin teaches wherein the instructions further include providing, by the function block, video data to the superblock application for rendering by the superblock application (the web browser's add-on includes a "Post" button captures metadata and communicates the metadata to the server [the video is provided by the function block], the content is rendered directly and visually right in the web browser as part of that containing web page occupying part of the real estate of the screen without the need to click and open it in another web page or external application, for "component 1" its source is from "web site 1" so the Ajax-based Dashboard Page will make a HTTP request to the specific web component and display it in the visual area of "component 1" [depicted as a video window], fig. 1c, col. 6 lines 7-15, col. 7 lines 46-61, col. 9 lines 25-30), wherein the superblock application renders the video data in a video window that is superimposed on a display of the superblock application, and wherein both the video window and at least a portion of the display of the superblock application are simultaneously viewable (the content is rendered directly and visually right in the web browser as part of that containing web page occupying part of the real estate of the screen without the need to click and open it in another web page or external application, for "component 1" its source is from "web site 1" so the Ajax-based Dashboard Page will make a HTTP request to the specific web component and display it in the visual area of "component 1" [depicted as a video window, would be displayed simultaneously], fig. 1c, col. 6 lines 7-15, col. 9 lines 25-30).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2014/039777

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Regarding claim 14, Yin lacks the teaching wherein the video window is associated with an audio/video (A/V) call session, and wherein the function block communicates with an external service to support the A/V call session. Chen is in the field of reconfiguring devices (title) and teaches wherein the video window is associated with an audio/video (A/V) call session (the user may select a video phone call or even a video conferencing call with application sharing if the other end has the same facility, then the control program embedded in the HTML application will invoke API functions to initiate a video conferencing function, a collaborative session includes video and audio, col. 15 lines 8-13, 48-53), and wherein the function block communicates with an external service to support the A/V call session (a user selects an application for which the kiosk is to be configured and browser 160 interacts with one or more servers 165 to fetch one or more configuration sets 175, by selecting a second application the kiosk is again reconfigured for the second application [it would be determined that a new configuration set is needed, where the function block is interpreted as a type of stored instruction set], col. 5 lines 46-51, col. 6 lines 1-2). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Chen to incorporate the above features in the invention of Yin. The motivation would have been to increase flexibility (Chen, col. 2 lines 51-57).

Regarding claim 15, Yin teaches wherein the superblock application is not authorized to use at least one of the functions of the function block (the web browser's add-on includes a "Post" button captures metadata and communicates the metadata to the server, the server retrieves metadata including requesting user's permission to access the dashboard page, if the user has the right permission to access the dashboard page the corresponding server application components will generate a dashboard page to be rendered in the web browser [the metadata sent by the function block would be used to determine the superblock's authorization, were the browser to fail the authentication challenge the function would be unauthorized], col. 7 lines 46-51, col. 8 lines 58-65, col. 9 lines 15-22).

Claims 11-12 lack an inventive step under PCT Article 33(3) as being obvious over Yin in view of Chen, and further in view of Miura.

Regarding claim 11, Yin as modified lacks the teaching wherein the instructions further include providing an event notification by the function block to the superblock application when the function block receives a message from the external service. Miura is in the field of video phones (abstract) and teaches wherein the instructions further include providing an event notification by the function block to the superblock application when the function block receives a message from the external service (control unit 10 determines whether an incoming call from a called party is a request for call using the video phone function or a request for audio communication only [the control unit would receive notification of an incoming call; where the function block is interpreted as a type of instruction set and the superblock application as a type of application], para. 0079). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Miura to incorporate the above features in the invention of Yin. The motivation would have been to smoothly perform communication (Miura, para. 0008).

Regarding claim 12, Yin lacks the teaching wherein the instructions further include receiving, by the function block, a response to the event notification from the superblock application. Miura is in the field of video phones (abstract) and teaches wherein the instructions further include receiving, by the function block, a response to the event notification from the superblock application (control unit 10 starts communication using the video phone function with a called party [the control unit would provide an indication of acceptance of the call; where the function block is interpreted as a type of instruction set and the superblock application as a type of application], para. 0096). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Miura to incorporate the above features in the invention of Yin. The motivation would have been to smoothly perform communication (Miura, para. 0008).

Claims 1-22 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)
(PCT Rule 44bis.1(c))

To:

BLISS, Timothy, F.
Howison & Arnott, L.L.P.
P.O. Box 741715
Dallas, TX 75374-1715
ETATS-UNIS D'AMERIQUE

Date of mailing (<i>day/month/year</i>) 28 April 2016 (28.04.2016)		
Applicant's or agent's file reference DAMA-32203		IMPORTANT NOTICE
International application No. PCT/US2014/039782	International filing date (<i>day/month/year</i>) 28 May 2014 (28.05.2014)	
		Priority date (<i>day/month/year</i>) 18 October 2013 (18.10.2013)
Applicant DAMAKA, INC.		

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer El Mostafa Moussaid
Facsimile No. +41 22 338 82 70	e-mail: pt03.pct@wipo.int

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DAMA-32203	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2014/039782	International filing date (<i>day/month/year</i>) 28 May 2014 (28.05.2014)	Priority date (<i>day/month/year</i>) 18 October 2013 (18.10.2013)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DAMAKA, INC.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).																								
2.	This REPORT consists of a total of 8 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">☒</td> <td style="width: 30%;">Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	☒	Box No. I	Basis of the report	☐	Box No. II	Priority	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	☐	Box No. IV	Lack of unity of invention	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	☐	Box No. VI	Certain documents cited	☐	Box No. VII	Certain defects in the international application	☒	Box No. VIII	Certain observations on the international application
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☐	Box No. VI	Certain documents cited																							
☐	Box No. VII	Certain defects in the international application																							
☒	Box No. VIII	Certain observations on the international application																							
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																								

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Date of issuance of this report 19 April 2016 (19.04.2016)</td> </tr> <tr> <td style="padding: 2px;"> Authorized officer <div style="text-align: center; font-weight: bold;">El Mostafa Moussaid</div> </td> </tr> </table> e-mail: pt03.pct@wipo.int	Date of issuance of this report 19 April 2016 (19.04.2016)	Authorized officer <div style="text-align: center; font-weight: bold;">El Mostafa Moussaid</div>
Date of issuance of this report 19 April 2016 (19.04.2016)			
Authorized officer <div style="text-align: center; font-weight: bold;">El Mostafa Moussaid</div>			

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: TIMOTHY F. BLISS
HOWISON & ARNOTT, L.L.P.
P.O. BOX 741715
DALLAS, TX 75374-1715

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year)

17 OCT 2014

Applicant's or agent's file reference
DAMA-32203

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/US 14/39782

International filing date (day/month/year)
28 May 2014 (28.05.2014)

Priority date (day/month/year)
18 October 2013 (18.10.2013)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 9/46 (2014.01)
CPC - G06F 9/4881

Applicant DAMAKA, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 bis(b) that written opinions of this International Searching Authority will not be so considered:

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-3201

Date of completion of this opinion

08 September 2014 (08.09.2014)

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US 14/39782

Box No. 1 Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:
- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. ☐ This opinion has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a)).
3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
- a. (means)
- ☐ on paper
- ☐ in electronic form
- b. (time)
- ☐ in the international application as filed
- ☐ together with the international application in electronic form
- ☐ subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US 14/39782

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement			
1. Statement				
Novelty (N)	Claims	6, 16-20		YES
	Claims	1-5, 7-15		NO
Inventive step (IS)	Claims	NONE		YES
	Claims	1-20		NO
Industrial applicability (IA)	Claims	1-20		YES
	Claims	NONE		NO
2. Citations and explanations:				
<p>Claims 1-5 and 7-15 lack novelty under PCT Article 33(2) as being anticipated by US 2010/0174783 A1 (Zarom).</p> <p>Regarding claim 1, Zarom teaches a method comprising: receiving, by a first device of a plurality of devices involved in a collaboration session that uses a shared resource, first input from a second device of the plurality of devices, wherein the first input represents a request to take control of the shared resource (user computer B, 150 sends a request for lock-in / control rights to edit a collaborative shared session document to a document serving / coordinating device 110; Fig. 1, 3; para [0052], [0060], [0062]-[0065], [0102], [0126]); determining, by the first device, that a third device of the plurality of devices is currently in control of the shared resource (coordinating device designates exclusive rights and lock-in control to device user A, 140; para [0040], [0057], [0060], [0063]); starting a timer, by the first device, wherein control of the shared resource will automatically pass from the third device to the second device when a time period defined by the timer expires (control is shared / switched or given up to the second device based on time count, cycle numbers, number / times of occurrence, etc.; para [0054]-[0057], [0063], [0065], [0066]); executing, by the first device, second input received from the third device after the timer has been started and before the time period expires, wherein the second input represents at least one action to be taken using the shared resource (execute the third devices commands during its temporary lock-in period; para [0061], [0063], [0065], [0066]); sending, by the first device, a result obtained by executing the at least one action represented by the second input to each of the plurality of devices (para [0069]-[0072]); buffering, by the first device, third input received from the second device after the timer has been started and before the time period expires, wherein the third input represents at least one action to be taken using the shared resource (the coordinating device accepts buffered local stored version inputs / commands submitted by the second device during the lock-out period of the second device; para [0052], [0061], [0067]-[0070]); and executing, by the first device, the at least one action represented by the third input after control is passed from the third device to the second device (submit / accept the commands for merging and integration after the lock-period for the second device is over; para [0070]); and sending, by the first device, a result obtained by executing the at least one action represented by the third input to each of the plurality of devices (para [0070]-[0072]).</p> <p>Regarding claim 2, Zarom teaches receiving, by the first device, fourth input from the second device, wherein the fourth input is received before the first input and while the third device is in control of the shared resource, and wherein the fourth input represents at least one action to be taken using the shared resource (rejected commands are submitted by the third device during the second devices lock-out period and before requesting / submitting the control requests; para [0057], [0060], [0061]); and ignoring, by the first device, the fourth input (rejected non-entered commands; para [0057], [0060], [0061]).</p> <p>Regarding claim 3, Zarom teaches determining, by the first device, whether the second input includes a restricted action, wherein the restricted action is ignored and not executed (restricted lock-out modifications are blocked / discarded; para [0057], [0059]-[0061]).</p> <p>Regarding claim 4, Zarom teaches the first device is sharing the shared resource (coordinating sharing; abstract, para [0020], [0038], [0050]), the method further comprising taking control of the shared resource from any other device of the plurality of devices that currently has control (para [0040], [0053], [0065]).</p> <p>Regarding claim 5, Zarom teaches sending, by the first device, a message to the plurality of devices to inform the plurality of devices that the second device is now in control of the shared resource (para [0061], [0063]).</p> <p>Regarding claim 7, Zarom teaches receiving, by the first device, a message from the third device indicating that the third device relinquishes control to the second device prior to the expiration of the time period (manual command / message to remove the lock; para [0062], [0065]).</p> <p>Regarding claim 8, Zarom teaches the shared resource is user-controllable and wherein the first, second, and third input correspond to user input (para [0043], [0051], [0052]).</p>				
--CONTINUED IN SUPPLEMENTAL BOX--				

Form PCT/ISA/237 (Box No. V) (July 2011)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US 14/39782

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 9 depends from itself. Therefore, this Authority has interpreted claim 9 to instead depend from claim 1.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US 14/39782

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Box No. V. 2. Citations and explanations:

Regarding claim 9, Zarom teaches the shared resource includes a user interface device (Fig. 2, 4, 5; para [0043], [0051], [0052]).

Regarding claim 10, Zarom teaches receiving, by the first device, a locked indicator prior to starting the timer, wherein the locked indicator signifies that control cannot be transferred from the third device (lock-out messages displayed before / during controlling user's editing period; para [0061], [0063], [0065], [0066]); and receiving, by the first device, an unlocked indicator following the receipt of the locked indicator (para [0065]), wherein the unlocked indicator signifies that control can be transferred from the third device and wherein the timer is started after receiving the unlocked indicator (para [0063], [0065], [0066]).

Regarding claim 11, Zarom teaches taking control of the shared resource, by the first device, after control is passed from the third device to the second device and the second device leaves the collaboration session without passing control to another device of the plurality of devices (the coordinating devices automatically takes and transfer control in absence of locking inputs for a session / editing sequence, e.g., when the user leaves or is disconnected from the session; para [0038], [0059], [0065], [0067], [0125]).

Regarding claim 12, Zarom teaches receiving, by the first device, fourth input from the third device, wherein the fourth input represents a request to take control of the shared resource after control of the resource has passed to the second device (a command to override or give up the temporary control rights from the second device; para [0060], [0063], [0066]); and determining whether a cooling off period has expired, wherein the second device cannot gain control of the shared resource until the cooling off period has expired (the device cannot gain control until the temporary lock-out, i.e., cooling, period has passed; para [0060], [0063], [0065], [0066]).

Regarding claim 13, Zarom teaches the cooling off period is applied to each of the plurality of devices (temporary lock-out period feature provided equally / proportionately to all devices; para [0040], [0065], [0066]).

Regarding claim 14, Zarom teaches the cooling off period is applied only to the second device (weighted or prioritized access and lock-out is given to select computers, e.g., only the second device is selected; para [0040], [0060], [0062], [0065]).

Regarding claim 15, Zarom teaches access to the shared resource by the first device is handled by the first device in an identical manner as access by any other device of the plurality of devices (equal and proportionate access is given by the coordinating device; para [0040], [0061], [0065]).

Claim 6 lacks an inventive step under PCT Article 33(3) as being obvious over Zarom in view of US 2007/0294626 A1 to Fletcher et al. (hereinafter 'Fletcher').

Regarding claim 6, Zarom teaches sending, by the first device, a message to the third device (indicating temporary access commands are integrated / locked-out or not; para [0061], [0065], [0066], [0075], [0095]), but fails to disclose indicating that the third device will lose control of the shared resource when the time period expires. Fletcher teaches indicating that the third device will lose control of the shared resource when the time period expires (to indicated request and control changes to inform all users; para [0018]-[0020], [0040], [0041], [0067], [0071]). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method of Zarom to include indicating that the third device will lose control of the shared resource when the time period expires as taught by Fletcher for the advantage of providing enhanced information and change identification.

—CONTINUED IN NEXT SUPPLEMENTAL BOX—

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US 14/39782

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:
Box No. V. 2. Citations and explanations:

Claims 16, 17, 19 and 20 lack an inventive step under PCT Article 33(3) as being obvious over Zarom in view of US 2004/0249885 A1 to Petropoulakis et al. (hereinafter 'Petropoulakis').

Regarding claim 16, Zarom teaches a method comprising: monitoring, by a first device of a plurality of devices involved in a collaboration session that uses a shared resource (Fig. 1, 3; para [0052], [0060], [0062]-[0065], [0102], [0126]), a state of each of the plurality of devices as one of an owner state (locked in exclusive rights; para [0063], [0066]), a not owner state (lock-out state of control / ownership; para [0065], [0066]), a gaining ownership state, and a losing ownership state; receiving, by the first device, first input from a second device of the plurality of devices, wherein the first input represents a request to take control of the shared resource (user computer B, 140 sends a request for lock-in / control rights to edit a collaborative shared session document to a document serving / coordinating device 110; Fig. 1, 3; para [0052], [0060], [0062]-[0065], [0102], [0126]); identifying, by the first device, that the second device is in the not owner state and that a third device of the plurality of devices is currently in the owner state, wherein the not owner state indicates that the second device is currently not in control of the shared resource and wherein the owner state indicates that the third device is currently in control of the shared resource (coordinating device designates exclusive rights and lock-in control to device user A, 140; para [0040], [0057], [0060], [0063]); starting a timer, by the first device, wherein control of the shared resource will automatically pass from the third device to the second device when a transition period defined by the timer expires (control is shared / switched or given up to the second device based on time count, cycle numbers, number / times of occurrence, etc.; para [0054]-[0057], [0063], [0065], [0066]); modifying, by the first device, the state of the second device from the not owner state to the gaining ownership state (give permission / rights to another computer changing from lock-out to locked-in; para [0059], [0060], [0063], [0066]), wherein second input received from the second device is buffered by the first device as the second input is received and not sent to each of the plurality of devices, wherein the second input represents at least one action to be taken using the shared resource (the coordinating device accepts buffered local stored version inputs / commands submitted by the second device to a queue / list during the lock-out period of the second device; para [0052], [0061], [0067]-[0070], [0091]); modifying, by the first device, the state of the third device from the owner state, wherein third input received from the third device is executed by the first device as the third input is received and a result obtained by executing the third input is sent to each of the plurality of devices, wherein the third input represents at least one action to be taken using the shared resource (the coordinating device with lock-in rights / status sends shared document commands / edit modifications to each device for integration through the coordinating device; para [0061], [0063], [0065], [0066], [0069]-[0072]); modifying, by the first device, the state of the third device to the not owner state upon expiration of the timer (para [0054]-[0057], [0063], [0065], [0066]); modifying, by the first device, the state of the second device to the owner state upon expiration of the timer (para [0061], [0063], [0065], [0066], [0070]); executing, by the first device, the second input once the second device is in the owner state (para [0061], [0063], [0065], [0066], [0070]); and sending, by the first device, a result obtained by executing the second input to each of the plurality of devices (para [0070]-[0072]), but fails to specifically disclose second input received from the second device while in the gaining ownership state; to the losing ownership state; while in the losing ownership state; from the losing ownership state to the not owner state; from the gaining ownership state to the owner state. Petropoulakis teaches second input received from the second device while in the gaining ownership state (transition / change state flags indicating the relinquishing and taking control commands in a collaboration session; para [0233], [0250], [0251], [0274]-[0276]); to the losing ownership state (indicate lose state to switch control to another user to receive supervision and assistance; para [0242], [0246], [0274], [0275]); while in the losing ownership state (labels indicating changing from the active to the passive mode / lose state to avoid relinquishing control to another user before a control task / operation is complete; para [0206], [0266], [0274], [0328]); from the losing ownership state to the not owner state (relinquishing control to a passive state / mode; para [0246], [0274]-[0278]); from the gaining ownership state to the owner state (gaining control and changing from a passive mode to an active mode; para [0274]-[0278]). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method of Zarom to include second input received from the second device while in the gaining ownership state; to the losing ownership state; while in the losing ownership state; from the losing ownership state to the not owner state; from the gaining ownership state to the owner state as taught by Petropoulakis for the advantage of providing change indications so that the current task can be completed and so that the next controlling user is prepared to continue where the last user left off.

Regarding claim 17, Zarom teaches receiving, by the first device, fourth input from a fourth device of the plurality of devices, wherein the fourth input represents at least one action to be taken using the shared resource (rejected commands are submitted by the another device during the second devices lock-out period and before requesting / submitting the control requests; para [0057], [0060], [0061]); identifying, by the first device, that the fourth device is not in either the owner state (para [0059], [0061]) or the gaining ownership state; identifying, by the first device, that the fourth input does not represent a request to take control of the shared resource (non-submitted edits for local usage only; para [0061], [0070]); and ignoring the fourth input (rejected / discarded commands; para [0057], [0060], [0061], [0095]).

Regarding claim 19, Zarom teaches determining, by the first device, that the second device is no longer part of the collaboration session but is currently listed as being in the owner state (the coordinating devices automatically takes and transfers control in absence of locked-in inputs, e.g., when the user leaves / ends a sequence or is disconnected from the session; para [0038], [0059], [0065]-[0067], [0125]); and modifying, by the first device, the state of the first device from the not owner state to the owner state without passing through the gaining ownership state (the coordinating device can automatically take control / transfer rights after the time-out periods or session leaving / ended, to control and transfer the commands and rights to the other computers; para [0065], [0067], [0068], [0125]). It would have been obvious to prevent locking-out all user's when a controlling device is disconnected from the collaboration session.

—CONTINUED IN NEXT SUPPLEMENTAL BOX—

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US 14/39782

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:
Box No. V. 2. Citations and explanations:

Regarding claim 20, Zarom teaches device comprising: a network interface; a processor coupled to the network interface; and a memory coupled to the processor and configured to store a plurality of instructions executable by the processor (Fig. 1, 3; para [0052], [0060], [0062]-[0065], [0102], [0126]), the instructions including instructions for: monitoring a state of each of a plurality of devices as one of an owner state (locked in exclusive rights; para [0063], [0066]), a not owner state (lock-out state of control / ownership; para [0065], [0066]), a gaining ownership state, and a losing ownership state, wherein the plurality of devices are involved in a collaboration session that uses a shared resource being shared by the device, receiving first input from a second device of the plurality of devices via the network interface, wherein the first input represents a request to take control of the shared resource (user computer B, 140 sends a request for lock-in / control rights to edit a collaborative shared session document to a document serving / coordinating device 110; Fig. 1, 3; para [0052], [0060], [0062]-[0065], [0102], [0126]); identifying that the second device is in the not owner state and that a third device of the plurality of devices is currently in the owner state, wherein the not owner state indicates that the second device is currently not in control of the shared resource and wherein the owner state indicates that the third device is currently in control of the shared resource (coordinating device designates exclusive rights and lock-in control to device user A, 140; para [0040], [0057], [0060], [0063]); starting a timer, wherein control of the shared resource will automatically pass from the third device to the second device when a transition period defined by the timer expires (control is shared / switched or given up to the second device based on time count, cycle numbers, number / times of occurrence, etc.; para [0054]-[0057], [0063], [0065], [0066]); modifying the state of the second device from the not owner state, wherein second input received via the network interface from the second device is buffered by the first device as the second input is received and not sent to each of the plurality of devices, wherein the second input represents at least one action to be taken using the shared resource (the coordinating device accepts buffered local stored version inputs / commands submitted by the second device to a queue / list during the lock-out period of the second device; para [0052], [0061], [0067]-[0070], [0091]); modifying the state of the third device from the owner state, wherein third input received via the network interface from the third device is executed by the first device as the third input is received and a result obtained by executing the third input is sent to each of the plurality of devices, wherein the third input represents at least one action to be taken using the shared resource (the controlling device with lock-in rights / status sends shared document commands / edit modifications to each device for integration through the coordinating device; para [0061], [0063], [0065], [0066], [0069]-[0072]); modifying the state of the third device to the not owner state upon expiration of the timer (para [0054]-[0057], [0063], [0065], [0066]); modifying the state of the second device to the owner state upon expiration of the timer (para [0061], [0063], [0065], [0066], [0070]); executing the second input once the second device is in the owner state (para [0061], [0063], [0065], [0066], [0070]); and sending a result obtained by executing the second input to each of the plurality of devices (para [0070]-[0072]), but fails to specifically disclose second input received from the second device while in the gaining ownership state; to the losing ownership state; while in the losing ownership state; from the losing ownership state to the not owner state; from the gaining ownership state to the owner state. Petropoulakis teaches second input received from the second device while in the gaining ownership state (transition / change state flags indicating the relinquishing and taking control commands in a collaboration session; para [0233], [0250], [0251], [0274]-[0276]); to the losing ownership state (indicate lose state to switch control to another user to receive supervision and assistance; para [0242], [0246], [0274], [0275]); while in the losing ownership state (labels indicating changing from the active to the passive mode / lose state to avoid relinquishing control to another user before a control task / operation is complete; para [0206], [0266], [0274], [0328]); from the losing ownership state to the not owner state (relinquishing control to a passive state / mode; para [0246], [0274]-[0278]); from the gaining ownership state to the owner state (gaining control and changing from a passive mode to an active mode; para [0274]-[0278]). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of Zarom to include second input received from the second device while in the gaining ownership state; to the losing ownership state; while in the losing ownership state; from the losing ownership state to the not owner state; from the gaining ownership state to the owner state as taught by Petropoulakis for the advantage of providing change indications so that the current task can be completed and so that the next controlling user is prepared to continue where the last user left off.

Claim 18 lacks an inventive step under PCT Article 33(3) as being obvious over Zarom in view of Petropoulakis and Fletcher.

Regarding claim 18, Zarom teaches receiving, by the first device, a cursor position for each of the plurality of devices including the second and third devices (para [0061]); and sending, by the first device, cursor information for each of the plurality of devices to each of the other devices (cursor editing sharing; para [0061]), wherein the cursor information includes the cursor position (para [0061]) and Petropoulakis further teaches the cursor belonging to whichever device of the plurality of devices currently in the owner state and the losing ownership state (para [0242], [0246], [0274], [0275], [0353]-[0355]), however the combination fails to disclose a cursor type identifier, wherein the cursor type identifier distinguishes the cursor belonging to whichever device of the plurality of devices currently in the owner state and the losing ownership state, and wherein the cursor information is sent regardless of the state of the device from which the cursor position was received. Fletcher teaches a cursor type identifier, wherein the cursor type identifier distinguishes the cursor belonging to whichever device of the plurality of devices currently in the owner state and the losing ownership state (identify multiple cursor pointers for controlling and control requesting devices; para [0038], [0039]), and wherein the cursor information is sent regardless of the state of the device from which the cursor position was received (all cursors are transmitted / shared; para [0038], [0039]). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method of Zarom in view of Petropoulakis to include a cursor type identifier, wherein the cursor type identifier distinguishes the cursor belonging to whichever device of the plurality of devices currently in the owner state and the losing ownership state, and wherein the cursor information is sent regardless of the state of the device from which the cursor position was received as taught by Petropoulakis for the advantage of providing additional participation information and functionality.

Claims 1-20 have industrial applicability as defined by PCT Article 33(4), because the subject matter can be made or used in industry.

Electronic Acknowledgement Receipt	
EFS ID:	27320522
Application Number:	15297328
International Application Number:	
Confirmation Number:	6761
Title of Invention:	SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER
First Named Inventor/Applicant Name:	SIVAKUMAR CHATURVEDI
Customer Number:	25883
Filer:	Keith D. Harden
Filer Authorized By:	
Attorney Docket Number:	DAMA-33216
Receipt Date:	25-OCT-2016
Filing Date:	
Time Stamp:	18:41:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>									

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**CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION
UNDER 37 CFR 1.102(e)** (Page 1 of 1)

First Named Inventor:	Sivakumar CHATURVEDI	Nonprovisional Application Number (if known):	
Title of Invention:	SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER		

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	/Keith D. Harden, Reg. #74472/	Date	October 19, 2016
Name (Print/Typed)	Keith D. Harden	Practitioner Registration Number	74,472
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 <u>ONE</u> 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:		SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER		
First Named Inventor/Applicant Name:		Sivakumar Chaturvedi		
Filer:		Keith D. Harden		
Attorney Docket Number:		DAMA-33216		
Filed as Small 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 FILING FEE (ELECTRONIC FILING)	4011	1	70	70
UTILITY SEARCH FEE	2111	1	300	300
UTILITY EXAMINATION FEE	2311	1	360	360
REQUEST FOR PRIORITIZED EXAMINATION	2817	1	2000	2000
Pages:				
Claims:				
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.	2830	1	70	70
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				2800

Electronic Acknowledgement Receipt	
EFS ID:	27257927
Application Number:	15297328
International Application Number:	
Confirmation Number:	6761
Title of Invention:	SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER
First Named Inventor/Applicant Name:	Sivakumar Chaturvedi
Customer Number:	25883
Filer:	Keith D. Harden
Filer Authorized By:	
Attorney Docket Number:	DAMA-33216
Receipt Date:	19-OCT-2016
Filing Date:	
Time Stamp:	12:03:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$2800
RAM confirmation Number	101916INTEFSW00009297200780
Deposit Account	200780
Authorized User	Keith Harden
<p>The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:</p> <p>37 CFR 1.16 (National application filing, search, and examination fees)</p> <p>37 CFR 1.17 (Patent application and reexamination processing fees)</p>	

37 CFR 1.21 (Miscellaneous fees and charges)					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	DAM33216ADS.pdf	1823708	no	9
			da7e55e5602e85908727e366394ec02554174f43		
Warnings:					
Information:					
2	Oath or Declaration filed	DAM33216ASSMTDECCHATUR VEDIEXE.pdf	76113	no	1
			ffed81f7f2b422e9c6acbb199797c47a922e4628		
Warnings:					
Information:					
3	Oath or Declaration filed	DAM33216ASSMTDECGUNDAB ATHULAEXE.pdf	76094	no	1
			ed191d4b941c65f03ed87ae7f841a0d52d31279		
Warnings:					
Information:					
4	Oath or Declaration filed	DAM33216ASSMTDECHIREMAT HEXE.pdf	74967	no	1
			a88b81eedc1a7633bbd74c3f2d8e86369ee2272		
Warnings:					
Information:					
5		DAM33216CONTAPP.pdf	171649	yes	36
			9d65b4ad9763d2e452ddfc658961c4b07e00986b		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	30	
	Claims		31	35	
	Abstract		36	36	

Warnings:					
Information:					
6	Drawings-only black and white line drawings	DAM33216FRMLDWGS.pdf	46873	no	12
			c32271b67a180dd0ab05b9f1838474fcb8c1674e		
Warnings:					
Information:					
7	TrackOne Request	DAM33216Track1Request.pdf	131654	no	2
			7cff06864d6520104db387b58f5029906f5924c6		
Warnings:					
Information:					
8	Fee Worksheet (SB06)	fee-info.pdf	40220	no	2
			f78a0aa255353b9a76521c20822cfbb050d965a8		
Warnings:					
Information:					
Total Files Size (in bytes):			2441278		
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DAMA-33216
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER		
<p>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.</p> <p>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.</p>			

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		
	SIVAKUMAR		CHATURVEDI			
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service						
City	ALLEN	State/Province	TX	Country of Residence	US	
Mailing Address of Inventor:						
Address 1	1210 Cordova Drive					
Address 2						
City	Allen	State/Province	TX			
Postal Code	75013	Country i	US			
Inventor	2				Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	SATISH		GUNDABATHULA			
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service						
City	IRVING	State/Province	TX	Country of Residence	US	
Mailing Address of Inventor:						
Address 1	1235 Nocona Drive					
Address 2						
City	Irving	State/Province	TX			
Postal Code	75063	Country i	US			
Inventor	3				Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	RASHMI		HIREMATH			
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service						

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number		DAMA-33216	
		Application Number			
Title of Invention	SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER				
City	ALLEN	State/Province	TX	Country of Residence	US
Mailing Address of Inventor:					
Address 1	700 Longwood Drive				
Address 2					
City	Allen	State/Province	TX		
Postal Code	75013	Country	US		
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.					<input type="button" value="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	25883		
Email Address	ADMIN@DALPAT.COM	<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>

Application Information:

Title of the Invention	SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER		
Attorney Docket Number	DAMA-33216	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)		Suggested Figure for Publication (if any)	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

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.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DAMA-33216
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER		

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.			
Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	25883		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

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		15/049891	2016-02-22	
Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15/049891	Continuation of	14/690619	2015-04-20	9270744	2016-02-23
Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14/690619	Continuation of	14/024027	2013-09-11	9027032	2015-05-05
Prior Application Status		Expired		Remove	
Application Number	Continuity Type		Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)	
14/024027	Claims benefit of provisional		61/846958	2013-07-16	
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.					Add

Foreign Priority Information:

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DAMA-33216
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER		

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).

			Remove
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

[Add](#)

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.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DAMA-33216
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER		

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)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

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.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DAMA-33216
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER		

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:			
<div></div>			
Name of the Deceased or Legally Incapacitated Inventor: <div></div>			
If the Applicant is an Organization check here. ☒			
Organization Name		DAMAKA, INC.	
Mailing Address Information For Applicant:			
Address 1		2460 N. CENTRAL EXPRESSWAY, #202	
Address 2			
City		RICHARDSON	State/Province TX
Country US		Postal Code	75080
Phone Number		Fax Number	
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button. Add			

Assignee Information including Non-Applicant Assignee 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.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DAMA-33216
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER		

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.				
				<input type="button" value="Remove"/>
If the Assignee or Non-Applicant Assignee is an Organization check here.				☐
Prefix	Given Name	Middle Name	Family Name	Suffix
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1		<input type="text"/>		
Address 2		<input type="text"/>		
City	<input type="text"/>	State/Province	<input type="text"/>	
Country i	<input type="text"/>	Postal Code	<input type="text"/>	
Phone Number	<input type="text"/>	Fax Number	<input type="text"/>	
Email Address	<input type="text"/>			
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				<input type="button" value="Add"/>

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).

This Application Data Sheet must be signed by a patent practitioner if one or more of the applicants is a juristic entity (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, all joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of all joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Keith D. Harden, Reg. #74472/		Date (YYYY-MM-DD)	2016-10-19
First Name	Keith	Last Name	Harden	Registration Number
				74472
Additional Signature may be generated within this form by selecting the Add button.				<input type="button" value="Add"/>

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DAMA-33216
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER		

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.**

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 records.
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.

ASSIGNMENT AND DECLARATION UNDER 37 C.F.R. § 1.63

(For Use with Signed Application Data Sheet)

SYSTEM AND METHOD FOR PROVIDING ADDITIONAL

Title of Invention: FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER

This assignment and declaration are directed to (check one):

- ☐ the attached application;
☒ the application identified by the attorney docket no. and title of invention given above;
☐ United States Application or PCT International Application No. _____, filed _____.

ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, as a below-named inventor I have sold and assigned, and by these presents hereby sell and assign, unto:

Name of Assignee: DAMAKA, INC.**Address of Assignee:** 2460 N. CENTRAL EXPRESSWAY, #202, RICHARDSON, TX 75080

(hereinafter ASSIGNEE) all my right, title and interest in and to the above-identified invention in any form or embodiment thereof, in the United States and all foreign countries, including applications for patents in the United States and all countries of the world and through the Patent Cooperation Treaty and/or the European Patent Convention, including any and all applications claiming priority thereto such as divisions or continuations thereof, and in and to any and all patents granted in the United States and all countries of the world that may issue on any such applications or for said invention, including any and all reissues or extensions thereof, to be held and enjoyed by said ASSIGNEE, its successors, or assigns to the full end of the term or terms for which any and all such patents may be granted as fully and entirely as would have been held and enjoyed by me had this Assignment not been made.

I hereby authorize and request the Director of the U.S. Patent and Trademark Office to issue any and all Letters Patent of the United States to said ASSIGNEE, its successors, or assigns in accordance herewith.

I warrant and covenant that I have the full and unencumbered right to sell and assign the interests herein sold and assigned and that I have not executed and will not execute any document or instrument in conflict herewith.

I further covenant and agree that I will communicate to said ASSIGNEE, its successors, legal representatives, or assigns all information known to me relating to said invention or patent application and that I will execute and deliver any papers, make all rightful oaths, testify in any legal proceedings, and perform all other lawful acts deemed necessary or desirable by said ASSIGNEE, its successors, legal representatives, or assigns to perfect title to said invention, to said application including divisions and continuations thereof and to any and all patents that may be granted therefor or thereon, including reissues or extensions, in said ASSIGNEE, its successors, or assigns, or to assist said ASSIGNEE, its successors, legal representatives, or assigns in obtaining, reissuing, or enforcing patents for said invention.

DECLARATION

As a below-named inventor, I hereby declare that:

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.

Signature:

Sivakumar CHATURVEDI

DATE

Inventor:

ASSIGNMENT AND DECLARATION UNDER 37 C.F.R. § 1.63

(For Use with Signed Application Data Sheet)

Title of Invention: SYSTEM AND METHOD FOR PROVIDING ADDITIONAL
FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED
MANNER

This assignment and declaration are directed to (check one):

- ☐ the attached application;
☒ the application identified by the attorney docket no. and title of invention given above;
☐ United States Application or PCT International Application No. _____, filed _____

ASSIGNMENT

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Address of Assignee: 2460 N. CENTRAL EXPRESSWAY, #202, RICHARDSON, TX 75080

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DECLARATION

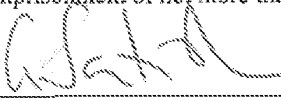
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Signature:


Satish GUNDABATHULA

Inventor:

DATE

9/10/2013

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Signature: _____

Rashmi HIREMATH

Inventor: _____

DATE

ea/10/2013

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
APPLICATION FOR UNITED STATES PATENT**

**SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO
EXISTING SOFTWARE IN AN INTEGRATED MANNER**

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**SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO
EXISTING SOFTWARE IN AN INTEGRATED MANNER**

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Application No. 15/049,891, filed on February 22, 2016, entitled SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER (Atty. Dkt. No. DAMA-32977), which published as U.S. Patent Application Publication No. 2016-0173577 on June 16, 2016. U.S. Application No. 15/049,891 is a continuation of U.S. Application No. 14/690,619, filed April 20, 2015, entitled SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER (Atty. Dkt. No. DAMA-32579), which published as U.S. Patent Application Publication No. 2015-0229706 on August 13, 2015, now U.S. Patent No. 9,270,744, issued on February 23, 2016. U.S. Application No. 14/690,619 is a continuation of U.S. Application No. 14/024,027, filed on September 11, 2013, entitled SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER (Atty. Dkt. No. DAMA-31813), published as U.S. Application Publication No. 2015-0026700 on January 22, 2015, now U.S. Patent No. 9,027,032, issued on May 5, 2015. U.S. Application No. 14/024,027 claims the benefit of U.S. Provisional Application No. 61/846,958, filed on July 16, 2013, entitled SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER (Atty. Dkt. No. DAMA-31812). U.S. Application Nos. 15/049,891, 14/690,619, 14/024,027 and 61/846,958, U.S. Application Publication Nos. 2016-0173577, 2015-0229706 and 2015-0026700, and U.S. Patent Nos. 9,270,744 and 9,027,032 are incorporated by reference herein in their entirety.

BACKGROUND

[0002] The manner in which functionality is accessed in certain environments, such as mobile device environments, may impact performance and/or battery life. Accordingly, what is needed are a system and method that addresses these issues.

BRIEF DESCRIPTION OF THE DRAWINGS

[0003] For a more complete understanding, reference is now made to the following description taken in conjunction with the accompanying Drawings in which:

[0004] FIG. 1 illustrates one embodiment of a device having a memory and a superblock stored within the memory;

[0005] FIG. 2A illustrates one embodiment of the device of FIG. 1 with the addition of a function block;

[0006] FIG. 2B illustrates one embodiment of the device of FIG. 2A with a superblock application displayed simultaneously with the additional functionality provided by a function block;

[0007] FIG. 3A illustrates one embodiment of the function block of FIG. 2 incorporated into the superblock;

[0008] FIG. 3B illustrates one embodiment of the superblock of FIG. 3A nested within another superblock;

[0009] FIG. 3C illustrates one embodiment of the function block of FIG. 2 incorporated into the superblock in multiple parts;

[0010] FIG. 4 illustrates one embodiment of a timeline showing the execution of superblock and function block instructions;

[0011] FIG. 5 illustrates a sequence diagram of one embodiment of a process that may be executed to access the functionality provided by the function block of FIG. 2;

[0012] FIG. 6A illustrates a flow chart of one embodiment of a process by which the function block may determine the services that can be provided to the superblock during the process of FIG. 5;

[0013] FIG. 6B illustrates one embodiment of a diagram showing a source and a sink coupled by the function block of FIG. 2;

[0014] FIG. 6C illustrates a more detailed embodiment of the diagram of FIG. 6B;

[0015] FIG. 7 illustrates a sequence diagram of one embodiment of a process that may be executed by the function block of FIG. 2 to respond to a service request from the superblock;

[0016] FIG. 8 illustrates a flow chart of one embodiment of a process by which the function block may determine whether to provide external services in responding to the service request of FIG. 7;

[0017] FIG. 9 illustrates a sequence diagram of one embodiment of a process that may be executed by the function block of FIG. 2 to respond to a notification from an external service;

[0018] FIG. 10 illustrates a flow chart of one embodiment of a process by which the function block may determine how to handle the notification of FIG. 9;

[0019] FIG. 11 illustrates one embodiment of a system that may be used for the device of FIG. 1; and

[0020] FIG. 12 illustrates one embodiment of the function block of FIG. 2.

DETAILED DESCRIPTION

[0021] It is understood that the following disclosure provides many different embodiments or examples. Specific examples of components and arrangements are described below to simplify the present disclosure. These are, of course, merely examples and are not intended to be limiting. In addition, the present disclosure may repeat reference numerals and/or letters in the various examples. This repetition is for the purpose of simplicity and clarity and does not in itself dictate a relationship between the various embodiments and/or configurations discussed.

[0022] Referring to FIG. 1, in one embodiment, a device 100 includes a memory 102. The memory 102 stores a superblock 104, which may be a set of executable instructions used to perform one or more functions via the device 100. For example, the device 100 may be a mobile device and the superblock 104 may be an application (the “superblock application”) on the mobile device. The instructions of the superblock 104 enable a user of the mobile device to perform one or more actions, such as communications, data manipulation, and/or data management. However, the functionality of the superblock application is constrained to some degree by the device 100 and by the instructions of the superblock itself.

[0023] With respect to the device 100, the amount of available memory, how the memory 102 is structured (e.g., segment sizes), and how the memory is managed (e.g., how much memory is allocated to the superblock 104, how swapping occurs when another application needs physical memory, and how multiple applications are handled) are generally outside of the control of the superblock 104. However, mobile devices frequently provide a separate memory space for each application that is being run and so must keep track of the memory boundaries for each application. This tracking requires resources, such as processing time and power.

[0024] Furthermore, as a user switches between applications (e.g., switches contexts), the device 100 may have to swap instructions into and out of physical memory, which impacts performance and battery life. While context switching occurs in other devices, such as desktop and laptop computers, the resource impact used for those context switches is generally lower due to the greater amount of resources available for such devices compared to mobile devices. For example, as mobile devices generally have a smaller memory footprint compared to larger

devices such as desktop and laptop computers, not only will a mobile device likely need to swap files in and out of memory when a context switch occurs, but the processor load and battery life will likely be negatively impacted on the mobile device more than would occur on larger devices having more resources. In addition, while a single application may use multi-threading and therefore require the allocation of processor time for different threads, swapping between applications is generally a more resource intensive task for a mobile device.

[0025] With respect to the instructions of the superblock 104, additional functionality may be desired for the superblock application that is not provided by the instructions. For example, the superblock application may not currently support a particular type of data and/or operation (e.g., audio, video, email, and/or file transfer) and it may be desirable for the superblock application to do so. To provide such additional functionality, instructions would have to be added to the superblock 102 to give the superblock application the ability to support the data type and/or operation. This process typically entails reworking the superblock application to include the desired functionality and then releasing the updated version of the superblock application for use. Depending on the complexity and nature of the superblock application and the desired functionality, this process may take a substantial amount of time, effort, and/or expense.

[0026] One alternative is to use another application to provide the desired functionality, but this may not be a satisfactory solution. For example, assume the superblock 102 provides a superblock application that needs email functionality. On current mobile devices, a user would typically select a link in the superblock application, such as an email address. Selection of the link would launch an email application (or switch context to an email application if one is already running), which removes the user from the superblock application and places the user in the email application. The user would then compose and send the email before switching back to the superblock application. This process of leaving the superblock application, performing some other function, and then returning to the superblock application is currently a common occurrence for mobile device users.

[0027] However, this process is disruptive, difficult to manage, and pulls the user away from the superblock application while the provider of the superblock application may want the user to continue to stay in their application. Furthermore, the functions of the superblock application are

not available while in the other application, and so the user may have to switch back and forth between the superblock application and the other application in order to interact with both applications. This is inefficient and frustrating for the user, and may also increase the number of errors in the text of the email since both applications are not simultaneously available for reference.

[0028] Another example is a video window for a phone call. Assume a user is in the superblock application and has a question about data that the superblock application is displaying. In order to call and visually interact with someone about the question and still have access to the data, the user has to conduct the call while switching back and forth between the video window of the call and the superblock application. This is extremely disruptive to the user and limits the benefits of the video call, which include the ability to interact with someone on a visual basis rather than just an audio basis.

[0029] Yet another example is a user walking around a shop floor, engaged in his or her duties. In order to join a virtual meeting, the user will have to exit the superblock application, find and/or enter the meeting information using another application, and join the meeting using the other application. As with the preceding example, this is extremely disruptive to the user, wastes time, and lowers productivity.

[0030] Referring to FIGS. 2A and 2B, in another embodiment, the superblock 104 of FIG. 1 is illustrated with a function block 200 attached via a glue point 202 (FIG. 2A). It is understood that FIG. 2A is for purposes of illustration and may not represent an actual arrangement of the superblock 104 and function block 200 in the memory 102.

[0031] The function block 200 includes instructions for providing the superblock 104 with one or more functions (e.g., capabilities) that are not otherwise possessed by the superblock 104. Such functions are illustrated in part with respect to FIG. 12, and may include instant messaging, presence (e.g., online, offline, and away), audio, video, collaboration (e.g., sharing of applications, documents, and/or files), whiteboard, file transfer, email, backgrounding, push notifications, conferencing, meetings, and/or other functions. Continuing the previous examples, the function block 200 may provide email or video capabilities for the superblock 104 and does

so by providing those capabilities within the superblock application. Although the functions need not be provided visually as shown in FIG. 2B (e.g., in the case of playing an audio file), visual functions may also be presented without leaving the superblock application display. In other words, there is no need to switch context to an email application or to any other application in order to access the additional functionality provided by the function block 200.

[0032] To accomplish this, the function block 200 may be provided as a set of instructions that are included in the superblock 104. For example, the function block 200 may be provided as a software developer's kit (SDK) or as an otherwise independent module by a developer unrelated to the superblock 104. The developer of the superblock 104 may then compile or otherwise include the function block instructions in the superblock 104. This ensures that the function block 200 will occupy the same memory space as the superblock 104 unless otherwise placed elsewhere by the mobile device 100. For example, as the superblock 104 likely has little or no control over how the mobile device 100 handles memory management, the mobile device may actually separate some or all of the instructions making up the superblock 104 and the function block 200. However, by including the instructions for the function block 200 within the instructions for the superblock 104, the likelihood that the instructions will be separated may be minimized. The independent nature of the function block 200 means that the developer of the superblock 104 needs little information about the operation of the function block 100 other than how to access the services.

[0033] Furthermore, the function block 200 may be handled by developers as a single block of instructions or as multiple blocks depending on the operating system environment. For example, the function block 200 may be handled as a single block in an environment such as iOS (a mobile operating system developed and distributed by Apple Inc. of Cupertino, California), while the function block 200 may be handled as multiple blocks in an environment such as Android (a mobile operating system released as open source by Google Inc. of Mountain View, California).

[0034] The function block 200 may be configurable after being distributed as part of the superblock application. For example, the function block 200 may provide access to certain

parameters, such as network address information of a server for the external services 204. Other parameters, such as call parameters (e.g., payload size) may also be configurable.

[0035] The function block 200 may provide services in a self-contained manner (e.g., internal services that may be provided without needing support outside of the device 100) or may use one or more external services 204. The external services 204 may be provided via a server, a peer-to-peer endpoint, and/or by any other source with which the function block 200 is able to communicate. For example, the function block 200 may be able to provide audio/video playback services for a file stored in the memory 102 without needing anything outside of the device 100, assuming the device 100 includes a screen for displaying the video and speakers and/or a headset for sound output.

[0036] However, for an audio/video call session, the function block 200 needs to connect to another device in order to establish the session, even though it can play audio/video locally. In order to connect to the other device, the function block 200 may use the services 204. Accordingly, how the function block 200 handles a particular service request from the superblock 104 may depend on the specific service and the resource needs of that service. From the point of view of the superblock 104, whether the function block 200 uses local and/or external services does not matter as the superblock 104 is simply requesting the service from the function block 200. In embodiments that use an external service 204, the function block 200 is the entity between the superblock 104 and the external service 204, but does not control either the superblock 104 or the external service 204.

[0037] In the case of a request from the external services 204 (e.g., an incoming file transfer or phone call), the handling performed by the function block 200 may also depend on the specific service and the resource needs of that service. For example, the function block 200 may send a notification to the superblock 104 and wait for a response, or may handle the externally initiated request according to defined parameters.

[0038] Returning to the previous examples, the function block 200 may provide the superblock application with email functionality that enables a user to receive notifications, check email, and compose/edit/send/manage email without leaving the superblock application. For the audio/video phone call, the function block 200 may provide a video window for the phone call

within the display of the superblock application, enabling a user to simultaneously see the video window and the superblock application. The video window may be resizable and/or movable. For the user walking around on the shop floor, the function block 200 may enable the user to receive a meeting notification, accept the meeting, and enter the meeting, all within the superblock application. To accomplish this, the function block 200 may hook into the meeting information (e.g., on a server) and render this in the superblock application.

[0039] Referring to FIG. 3A, one embodiment of the superblock 104 illustrates the role of the glue point 202 in enabling the superblock 104 to interact with the function block 200. For example, the glue point 202 may be an application programming interface (API) and the superblock 104 may make API calls to the function block 200 to access the function block's capabilities. The function block 200 then provides services to the superblock 104 in response to the API calls. In some embodiments, the function block 200 may also provide notifications to the superblock 104 in response to events triggered by the external services 204.

[0040] In the present example, the set of instructions that make up the function block 200 may be used with many different applications and on many different platforms and accessed via the API 202, although some customization may be performed if needed or desired. The function block 200 may be viewed as a set of instructions providing intelligence needed to perform the tasks described herein, and that set of instructions may be compiled or otherwise incorporated into the instructions of the superblock 104. As the instructions can be incorporated into many different applications to satisfy many different needs, some of the capabilities provided by the function block 200 may not be used by a particular application, but may still be present. In other embodiments, functionality that is not desired may be removed to minimize the footprint of the function block 200.

[0041] One embodiment of a header for the function block 200 (referred to in the header text as the Amadeo block) may be as follows:

```
#ifndef AMADEOBLOCK_H
#define AMADEOBLOCK_H
#include <string>
#include <list>
```

```
#include "AmadeoBlockConfig.h"
#include "AmadeoBlockCB.h"
class AmadeoBlock
{
public:
    static AmadeoBlock& instance();
    static bool UnlockSDK( const std::string& key );
    virtual bool Initialize( const AmadeoBlockConfig& config,
AmadeoBlockCB* callback ) = 0;
    virtual bool Finalize() = 0;
    virtual bool Activate() = 0;
    virtual bool Deactivate() = 0;
    virtual bool SetPresence( const std::string& presence, const std::string&
text ) = 0;
    virtual bool AddContact( const std::string& contact, const std::string&
displayname, const std::string& group ) = 0;
    virtual bool DeleteContact( const std::string& contact, const std::string&
group ) = 0;
    virtual bool MoveContact( const std::string& contact, const std::string&
fromgroup, const std::string& togroup, const std::string& nickname ) = 0;
    virtual bool CopyContact( const std::string& contact, const std::string&
newgroup, const std::string& nickname ) = 0;
    virtual bool AuthorizeContact( const std::string& contact, const
std::string& group ) = 0;
    virtual bool RejectContact( const std::string& contact ) = 0;
    virtual bool BlockContact( const std::string& contact ) = 0;
    virtual bool UnblockContact( const std::string& contact ) = 0;
    virtual bool AddGroup( const std::string &group ) = 0;
    virtual bool DeleteGroup( const std::string& group ) = 0;
    virtual bool RenameGroup( const std::string& oldgroup, const std::string&
newgroup ) = 0;
```

```
virtual bool Search( const std::string& searchstring ) = 0;
virtual bool SendIM( const std::string& who, const std::string& msg ) = 0;
virtual bool StartIMConf( std::string& roomid, const
std::list<std::string>& contacts, const std::string& subject ) = 0;
virtual bool EndIMConf( const std::string& roomid ) = 0;
virtual bool AcceptIMConf( const std::string& roomid ) = 0;
virtual bool SendConfIM( const std::string& roomid, const std::string&
msg ) = 0;
virtual bool AddPartyIMConf( const std::string& roomid, const
std::string& invitee ) = 0;
virtual bool StartFT( std::string& sessionid, const std::string& to, const
std::string& filename ) = 0;
virtual bool AcceptFT( const std::string& sessionid, const std::string&
pathtosave ) = 0;
virtual bool CancelFT( const std::string& sessionid ) = 0;
virtual bool DeclineFT( const std::string& sessionid ) = 0;
virtual bool CallStart( const std::string& calledparty, std::string& callid,
bool startvideo ) = 0;
virtual bool CallAccept( const std::string& callid, bool startvideo ) = 0;
virtual bool CallEnd( const std::string& callid ) = 0;
virtual bool CallHold( const std::string& callid ) = 0;
virtual bool CallUnhold( const std::string& callid ) = 0;
virtual bool CallMute( const std::string& callid ) = 0;
virtual bool CallUnmute( const std::string& callid ) = 0;
virtual bool AddVideo( const std::string& callid ) = 0;
virtual bool RemoveVideo( const std::string& callid ) = 0;
virtual bool CallTransfer( const std::string& callid, const std::string&
transferparty ) = 0;
virtual bool CallForward( const std::string& callid, const std::string&
forwardparty ) = 0;
virtual bool CallPark( const std::string& callid ) = 0;
```

```

        virtual bool CallPickup( const std::string& slotid ) = 0;
        virtual bool CallVoicemail( const std::string& callid ) = 0;
        virtual bool CallMerge( const std::string& callid, const std::string&
othercallid ) = 0;

        virtual bool CallUnmerge( const std::string& callid ) = 0;
        virtual bool SendDTMF( const std::string& callid, char digit ) = 0;
        virtual bool Escalate( const std::string& callid, const
std::list<std::string>& targets ) = 0;
        virtual bool Deescalate( const std::string& callid, const
std::list<std::string>& targets ) = 0;
        virtual bool VMRefresh() = 0;
        virtual bool VMFetch( const std::string& itemid ) = 0;
        virtual bool VMDelete( const std::string& itemid ) = 0;
        virtual bool VMPlay( const std::string& itemid ) = 0;
        virtual bool SharingStart( const std::string& callid ) = 0;
        virtual bool SharingStop( const std::string& callid ) = 0;
        virtual bool WBStart( const std::string& target, const std::string& wbid ) =
0;

        virtual bool WBEnd( const std::string& wbid ) = 0;
        virtual bool WBSend( const std::string& wbid, const std::string& wldata )
= 0;

        virtual bool Logging(bool enable) = 0;
        virtual bool GoToBackground() = 0;
        virtual bool MonitorNetwork( bool checknetwork ) = 0;
protected:
        AmadeoBlock();
private:
        AmadeoBlock(const AmadeoBlock&);
        const AmadeoBlock& operator=(const AmadeoBlock&);
};
#endif // AMADEOBLOCK_H

```

[0042] Referring to FIG. 3B, another embodiment illustrates the superblock 104 as being part of another superblock 206. It is understood that any number of nested superblocks may be present. The function block 200 may be accessible to only the superblock 104, or may be accessible to one or more of the other superblocks (e.g., the superblock 206), either directly or via the superblock 104. For example, the superblock 206 may be able to make an API call directly to the function block 200 in some embodiments, or may only be able to make a call through the superblock 104 in other embodiments (e.g., the superblock 206 may call the superblock 104 for a service, and the superblock 104 may in turn make an API call to the function block 200 for that service).

[0043] Referring to FIG. 3C, as previously stated, it is understood that the function block 200 need not be a single block in memory. As illustrated by blocks 200a and 200b, the function block 200 may be separated into different parts automatically (e.g., due to the operation of the operating system and how it handles memory allocation) or may be handled as separate parts during integration into the superblock application (e.g., by the developer of the superblock application).

[0044] Referring to FIG. 4, one embodiment of a timeline 400 illustrates the simultaneous operation of the superblock 104 and function block 200 when the instructions of the function block 200 are being executed to provide one or more services to the superblock application. The timeline 400 moves from left to right and includes five specific times t_1 - t_5 . At time t_1 , the superblock instructions (as indicated by line 402) are being executed, but the function block 200 instructions are not. In other words, the superblock application is in use and has not called the function block API to provide any services. It is understood that the function block 200 may be in a waiting state at time t_1 and instructions of the function block 200 may be executed to maintain the waiting state, but the function block 200 is not actively providing services.

[0045] At time t_2 , the superblock application calls the function block API or an external service contacts the function block 200, and the function block 200 instructions (as indicated by line 404) are executed to provide the service requested by the API call or handle the contact from the external service 204. The instructions for the superblock 104 and function block 200 are executed from time t_2 until time t_3 , at which time the function block 200 is no longer needed and

is shut down (although this may include going into the waiting state for purposes of example). The superblock instructions are executed from time t_3 until time t_4 , at which time the function block 200 is again called (as indicated by line 406). The instructions for the superblock 104 and function block 200 are executed from time t_4 until time t_5 , at which time the function block 200 is no longer needed and is shut down (although this may include going into the waiting state for purposes of example) while the superblock instructions continue being executed.

[0046] Accordingly, while two different applications on a mobile device would not typically execute concurrently, the execution of the instructions for the superblock 104 and function block 200 as shown in FIG. 4 allows the function block 200 to provide additional capabilities to the superblock 104 through the use of API calls. By providing an interface for the function block 200 such as an API, the instructions of the superblock 104 may require minimal modification to access the capabilities provided by the function block 200.

[0047] Referring to FIG. 5, a sequence diagram 500 illustrates one embodiment of a process that may be executed to access the functionality provided by the function block 200. The superblock 104 may use the function block 200 under a static model or a dynamic model. In the static model, the superblock 104 calls for a specific function (e.g., video), the function block 200 provides the requested function (if available), the superblock 104 consumes the services provided, and the function block 200 is shut down. In the dynamic model, the function block 200 may enter a waiting state and wait for a request from the superblock 104 and/or a request or another event trigger from the external services 204 (e.g., an incoming call, email, or file transfer), handle the request, and then resume the waiting state.

[0048] In step 502, the superblock 104 unlocks the function block 200. For example, the unlock process may indicate that the superblock 104 is authorized to unlock some or all of the functionality provided by the function block 200 by providing a key or other authorization indicator. This step may not only limit the superblock 104 to authorized functionality, but may also insure that other applications cannot access the function block's capabilities. In step 504, the function block 200 is initialized. It is noted that these steps may occur during initialization of the superblock 104 or may occur later, such as when the superblock 104 calls the function block 200 for a particular function. For example, steps 502 and 504 may occur when the superblock

application is launched and may not be repeated while the superblock application remains open, may occur each time the superblock application calls the function block API for a service, may occur only for particular services, may occur for defined periods of time (e.g., the function block 200 may lock every half hour), and/or using other parameters. It is understood that steps 502 and 504 may be reversed in some embodiments.

[0049] During initialization or at another time, policies may be applied. For example, a cost policy may require that any available Wi-Fi network is used before a 3G network. A security policy may require that a virtual private network (VPN) be used whenever available. Backgrounding may be selected as an option when available to allow the superblock application to run in the background. Accordingly, the function block 200 may be configured to provide for specific behavior if desired and this behavior may in turn limit or enhance the capabilities of the superblock 104.

[0050] In steps 506 and 508, the superblock 104 may provide login information to the function block 200, and the function block 200 may use this information to access the external services 204. For example, if the function block 200 needs authentication credentials to access the external services 204, steps 506 and 508 may be used to gain access to those external services. In some embodiments, steps 506 and/or 508 may be combined with step 502 and the unlocking of the function block 200 may include logging into whatever external services are authorized and/or available.

[0051] In step 510, the function block 200 and the superblock 104 may perform a capability exchange. More specifically, the function block 200 may determine whether (1) the function block 200 has a particular capability, (2) whether the function block 200 can render that capability, and (3) whether the superblock 104 can render that capability. For example, the function block 200 may determine that the function block 200 has the capability to capture audio and play that captured audio through a speaker.

[0052] Next, the function block 200 may determine whether it can render that capability by checking, for example, to see whether there is an available microphone (mic) input and an available speaker output. If one or both of the mic and speaker are not present, then the function block 200 has the capability to handle the audio, but not the capability to render the audio. The

superblock 104 is not involved in this process as it is not needed to render the audio, so the third determination may not be made. Although the superblock 104 is not involved in rendering the audio, it is understood that the superblock 104 may visually represent the audio, such as by means of an icon, one or more control buttons (e.g., play and stop), and/or other visual representations.

[0053] In another example, the superblock 104 may desire to display video. Again, the function block 200 may determine that the function block 200 has the capability to handle the video. Next, the function block 200 may determine whether it can render that capability by checking, for example, to see whether there is an available screen. If a screen is not present, then the function block 200 has the capability to handle the video, but not the capability to render the video. In this example, the superblock 104 is involved in this process as it is needed to provide a video window to render the video (e.g., the function block 200 may provide the video data to be rendered and the superblock 104 may place that video data in a video window), so the third determination is made.

[0054] By making such determinations, the function block 200 is able to notify the superblock 104 of the available functions. If a function needs the external services 204, lack of a connection may prevent the function block 200 from delivering external services to the superblock 104, but local services may still be provided. It is understood that while a screen, speaker, or other destination (e.g., a sink) may not be available, the function block 200 may handle some services using a secondary sink, such as a memory to which the video or audio is stored for later use.

[0055] With additional reference to FIG. 6A, a flow chart 600 illustrates one embodiment of a process for the capability exchange of step 510 of FIG. 5. In step 602, the function block 200 may be initialized (in embodiments where the capability exchange is performed on initialization) or the function block 200 may receive a request for service (in embodiments wherein the capability exchange occurs when a service is requested).

[0056] In step 604, a determination is made as to whether the function block 200 has the particular capability. For example, whether the function block 200 has the capability to support an audio/video call. If the determination of step 604 is that the function block 200 does not have

the particular capability, the method 600 moves to step 606 and the capability is indicated as not being available. It is noted that if a particular capability has not been unlocked, the function block 200 may indicate the capability is not available even if the function block 200 can actually provide the capability. If the determination of step 604 is that the function block 200 does have the particular capability, the method 600 moves to step 608.

[0057] In step 608, a determination is made as to whether the function block 200 can render the capability as described previously. This step may determine whether the device 100 supports the needed functionality (e.g., has a microphone if audio input is needed or a speaker if audio output is needed). If the determination of step 608 is that the function block 200 cannot render the capability, the method 600 moves to step 606 and the capability is indicated as not being available. If the determination of step 608 is that the function block 200 does have the capability, the method 600 moves to step 610.

[0058] In step 610, a determination is made as to whether an external service 204 is needed to provide the capability. If the determination of step 610 is that an external service 204 is not needed, the method 600 moves to step 614. If the determination of step 610 is that an external service 204 is needed, the method 600 moves to step 612.

[0059] In step 612, a determination is made as to whether a needed external service 204 is available. For example, the external service 204 may be offline (e.g., a server used to provide the service may be non-responsive or the device 100 may have minimal or no network connectivity). This step may also determine whether the superblock application is authorized to access the external service 204 (e.g., whether the external service will allow access by the superblock application). If the determination of step 612 is that the needed external service 204 is not available, the method 600 moves to step 606 and the capability is indicated as not being available. If the determination of step 612 is that the needed external service 204 is available, the method 600 moves to step 614.

[0060] In step 614, a determination is made as to whether the superblock 104 is needed to render the capability as described previously. If the determination of step 614 is that the superblock 104 is not needed to render the capability, the method 600 moves to step 618 and the service is indicated as available (e.g., a capability list is updated and/or the service is provided).

If the determination of step 614 is that the superblock 104 is needed to render the capability, the method 600 moves to step 616.

[0061] In step 616, a determination is made as to whether the superblock 104 can render the capability as described previously. If the determination of step 616 is that the superblock 104 cannot render the capability, the method 600 moves to step 606 and the capability is indicated as not being available. If the determination of step 616 is that the superblock 104 does have the capability, the method 600 moves to step 618.

[0062] The superblock 104 and/or function block 200 may use a table or other structure for listing available capabilities. For example, a table may identify a particular service, whether the superblock 104 is authorized to access the service, whether the function block 200 can support the service, whether the function block 200 can render the service, whether the superblock 104 is needed to render the service, and whether the superblock 104 can render the service if needed. It is understood that this information may not be provided in detail in all embodiments, but may be condensed to a simple indication of whether the service is available or not. However, by providing additional levels of detail, more useful indicators may be provided. For example, the superblock application may be able to indicate that a particular service is not authorized or that speakers are not available, rather than simply indicating that audio service is not available.

[0063] Table 1 illustrates one embodiment of a mapping table that may be used to track the capabilities that the function block 200 can provide to the superblock 104 on the device 100. It is understood that the mapping table may vary for the same function block 200, superblock 104, and device 100 in different scenarios, such as whether the device 100 has network access or not when needed for a particular service. For purposes of illustration, the first column lists services supported by the function block 200, the second column identifies whether that service is supported by the device (e.g., whether the function block 200 can render the service), the third column identifies whether the superblock application can render the service (if needed), the fourth column identifies whether the external services 204 support the service (if needed), and the fifth column identifies where the superblock application has authorization rights to that service.

[0064] In some embodiments, the service column may be limited to services that the superbloc application is authorized to access. For example, if function block 200 supports instant messaging but the superbloc application 104 is not authorized to use this feature, the service may or may not show up in the mapping table depending on the particular implementation. An additional column may be used to identify whether a needed external service is currently available or the fourth column may be used to show this information.

SERVICE	DEVICE	SUPERBLOCK	EXTERNAL SERVICE	AUTH?
In app video from file	Yes	Yes	N/A	Y
Audio – local file	Yes	N/A	N/A	Y
Audio - streaming	Yes	N/A	Yes	Y
Sharing	Yes	Yes	No	Y
Instant messaging	Yes	No	Yes	Y
Whiteboard	N/A	N/A	N/A	N

Table 1

[0065] For purposes of example, the first service involves playing a video from a file and is supported by both the device 100 and the superbloc 104. The external services 204 are not needed and are marked as not applicable. The second service involves playing a local audio file and is supported by the device 100. The superbloc 104 and external services 204 are not needed and are marked as not applicable. The third service involves playing a streaming audio file and is supported by the device 100 and the external services 204. The superbloc 104 is not needed and is marked as not applicable. The fourth service involves content sharing and is supported by the device 100 and the superbloc 104, but not the external services 204. As the external services 204 are needed for sharing in this example, this service is not available to the superbloc application. The fifth service involves instant messaging and is supported by the device 100 and the external services 204, but not the superbloc 104.

[0066] The sixth service involves a whiteboard, but the superbloc 104 is not authorized to access this service, and so the capabilities are not checked. In other embodiments, capabilities for unauthorized services may be checked and, if supported, the superbloc application may

notify the user that the service is not authorized. In such embodiments, a dialog or other option may appear to allow the user to subscribe or otherwise gain access to the service if allowed.

[0067] With additional reference to FIG. 6B, a diagram 630 provides a visual illustration of the process of FIG. 6A from a source/sink perspective. For the function block 200 to successfully bridge a source 632 and a sink 634 to provide a service, both the source 632 and the sink 634 must be present and available to the function block 200 as indicated by lines 636 and 638, respectively. The source 632 may be the superblock 104, the external services 204, and/or a component of the device 100 such as a wireless interface, a microphone, a camera, and/or any other component capable of providing input to the function block 200. The sink 632 may be the superblock 104, the external services 204, and/or a component of the device 100 such as a wireless interface, a speaker, a display screen, and/or any other component capable of receiving output from the function block 200. In some cases, the lack of availability of a sink may result in the use of a dummy sink (e.g., writing audio to memory when there is no available speaker).

[0068] It is understood that the source/sink model provided by the source 632 and sink 634 may be viewed as generic. For example, at the device level, the source 632 and sink 634 operate to read/send data. At the network interface level, each side acts as both source/sink because network interfaces allow for read/write simultaneously in most modern devices. In contrast, a microphone is a source and a speaker is a sink. A speaker may serve as a sink for multiple data in some cases, such as if multiple audio sources are mixed into the single speaker. In this scenario, the source for rendering audio data may be a microphone, network audio encoded data, a music file on the device, and/or other sources. The source/sink model can also be considered for service level consumer/producer models. For example, the function block 200 may be viewed as a source for presenting client side capabilities to a server and at the same time may be viewed as a sink for rendering capabilities presented by the server.

[0069] With additional reference to FIG. 6C, a diagram 640 provides a more detailed illustration of FIG. 6B. Source 642 is a microphone and the function block 200 is to send the audio captured from the microphone to sink 644 representing an external service 204 (e.g., as outbound audio for a telephone call). For the function block 200 to successfully bridge the source 642 and the sink 644, both the source 642 and the sink 644 must be present and available

to the function block 200 as indicated by lines 646 and 648, respectively, and the source 642, sink 644, and function block 200 must be capable of handling the service. If the function block 200 is thought of as providing services via a series of switches, lines 646 and 648 must both be closed to connect the source 642 and sink 644. Accordingly, the process of FIG. 6A may be executed to ensure that the function block 200 can render the audio input and that the connection to the external service is valid (e.g., that the switches can be closed).

[0070] In the present example, one or more additional flow layers represented by line 650 may also present. For example, line 650 may represent whether an audio hold exists. If the audio has been placed on hold, the function block 200 will notify the audio pipeline to stop (e.g., the switch will be opened). The audio capture may continue, but it will not be rendered (e.g., sent to the external services represented by sink 644) as the circuit formed by the function block 200 will no longer be complete.

[0071] Referring again to FIG. 5, in step 512, the function block 200 may shut down if operating under the static model or may enter a wait mode if operating under the dynamic model. In step 514, the function block 200 may provide one or more services to the superblock 104 if requested by the superblock 104 or an external service 204. It is understood that steps 512 and 514 may repeat any number of times while the superblock application is running. If no services are requested, step 514 would not be executed.

[0072] In steps 516 and 518, the superblock 104 may finalize any service requests and shutdown the function block 200. For example, if the superblock application is closing, the superblock 104 may use one or more API calls to the function block 200 to notify the function block 200 that the function block 200 should close any open ports (e.g., with an external service 204) and close down any running processes.

[0073] Referring to FIG. 7, a sequence diagram 700 illustrates one embodiment of a process that may be executed in order to provide a service by the function block 200 in response to a service request by the superblock 104. This present example may operate under either the static model or the dynamic model. The process begins with step 512 of FIG. 5, which is not described in detail in the present example.

[0074] In step 702, the superblock 104 issues a request for a service to the function block 200 using an API call or another suitable method. In step 704, the function block 200 obtains any needed support from the external services 204. In step 706, the function block 200 provides the service to the superblock 104. In step 708, the function block 200 may repeat step 512 and either shut down or enter the wait mode depending on whether the function block 200 is operating under the static model or the dynamic model.

[0075] Referring to FIG. 8, a flow chart 800 illustrates one embodiment of a process for accessing an external service 204, such as may occur with respect to step 704 of FIG. 7. In step 802, the function block 200 receives a request from the superblock 104 (as occurs in step 702 of FIG. 7). In step 804, a determination is made as to whether the function block 200 needs to use an external service to handle the request. If the determination of step 804 indicates that no external service is needed, the method 800 moves to step 806. In step 806, the service is provided by the function block 200. If the determination of step 804 indicates that an external service is needed, the method 800 moves to step 808.

[0076] In step 808, a determination is made as to whether the external service is available. If the determination of step 808 indicates that the external service is available, the method 800 moves to step 810, where any parameters needed for communications and/or service provision may be negotiated between the function block 200 and external service 204. Such parameters may include both signaling and media parameters such as bandwidth, codecs, and/or similar information, and would typically depend on the particular service.

[0077] The method 800 then moves to step 806 where the service is provided by the function block 200. If the determination of step 808 indicates that the external service is not available, the method 800 moves to step 812. In step 812, the function block 200 may indicate that the service is not available. For example, the function block 200 may indicate that the server is not responding or that there is no network connectivity for the device 100.

[0078] Referring to FIG. 9, a sequence diagram 900 illustrates one embodiment of a process that may be executed in order to provide a service by the function block 200 in response to a notification from an external service 204. This present example may operate under the dynamic model as the function block 200 is in listening mode to receive notifications from the external

services 204. The process begins with step 512 of FIG. 5, which is not described in detail in the present example.

[0079] In step 902, an external service 204 issues a notification to the function block 200 that the external service 204 has something for the superblock 104. In step 904, the function block 200 may pass the notification to the superblock 104. It is understood that step 904 may not actually pass on the notification, but that the notification of step 902 may trigger functionality within the function block 200 that serves to notify the superblock 104. For example, if the notification of step 902 is about an incoming phone call, the function block 200 may receive the notification, initiate a phone response display (e.g., a display with options for accepting or rejecting the call), and provide the information to the superblock 104 in that manner. In another example, the notification of step 902 may be a presence change (e.g., a user changes status from offline to online), and the function block 200 may update a presence indicator within the superblock application's display. In still another example, the function block 200 may use an event system and send event notifications to the superblock 104. Accordingly, some notifications may require action on the part of a user of the superblock application, while other notifications may not.

[0080] In the present example, the notification requires a response and the superblock 104 responds in step 906 by requesting and/or accepting the service (e.g., a phone call). In step 908, the function block 200 handles services between the superblock 104 and the external service 204. In other words, the function block 200 serves as an interface between the external service 204 and the superblock 104. For example, the function block 200 may bridge the phone call, handle call waiting and other call features, and otherwise provide support for the superblock application. In step 910, the function block 200 may enter wait mode after the services have been provided.

[0081] Referring to FIG. 10, a flow chart 1000 illustrates one embodiment of a process for execution by the function block 200 with respect to an external service 204, such as may occur with respect to FIG. 9. In step 1002, the function block 200 receives a notification from the external service 204. In step 1004, a determination is made as to whether the function block 200 needs instructions from the superblock 104. If the determination of step 1004 indicates that instructions are needed, the method 1000 moves to step 1006. In step 1006, the function block

200 indicates to the superblock 104 that service is requested. The method 1000 then moves to step 1008.

[0082] In step 1008, a determination is made as to whether the service request has been approved by the superblock 104. If the determination of step 1008 indicates that the request has not been approved, the method 1000 moves to step 1010, where the notification may be rejected, ignored, or otherwise handled. It is understood that the actual response of the function block 200 in step 1010 may vary depending on the notification type. For example, the function block 200 may indicate to the external service 204 that the call is rejected. If the determination of step 1008 indicates that the request has been approved, the method 1000 moves to step 1012, where the function block 200 may handle the service provision.

[0083] Returning to step 1004, if the determination of step 1004 indicates that instructions are not needed, the method 1000 moves to step 1014. In step 1014, a determination is made as to whether the superblock 104 is to be updated based on the notification. If the determination of step 1014 indicates that the superblock 104 is not to be updated, the method 1000 moves to step 1010, where the notification may be rejected, ignored, or otherwise handled. If the determination of step 1014 indicates that the superblock 104 is to be updated, the method 1000 moves to step 1016, where the update may be performed. For example, another user's presence status may be updated from online to offline or vice versa.

[0084] Referring again to FIG. 1, embodiments of the device 100 include cellular telephones (including smart phones), personal digital assistants (PDAs), netbooks, tablets, laptops, desktops, workstations, telepresence consoles, and any other computing device that can communicate with another computing device using a wireless and/or wireline communication link. Such communications may be direct (e.g., via a peer-to-peer network, an ad hoc network, or using a direct connection), indirect, such as through a server or other proxy (e.g., in a client-server model), or may use a combination of direct and indirect communications. Although not shown, in other embodiments, the device 100 may be an application specific integrated circuit (ASIC), a processor, or another device within which the function block 200 may be embedded. In some embodiments, external access may not be needed. Accordingly, the function block 200 may be

implemented in many different ways and in many different types of systems, and may be customized as needed to operate within a particular environment.

[0085] Referring to FIG. 11, one embodiment of a system 1100 is illustrated. The system 1100 is one possible example of a device such as the device 100 of FIG. 1. The system 1100 may include a controller (e.g., a central processing unit (“CPU”)) 1102, a memory unit 1104, an input/output (“I/O”) device 1106, and a network interface 1108. The components 1102, 1104, 1106, and 1108 are interconnected by a transport system (e.g., a bus) 1110. A power supply (PS) 1112 may provide power to components of the computer system 1100, such as the CPU 1102 and memory unit 1104, via a power system 1114 (which is illustrated with the transport system 1110 but may be different). It is understood that the system 1100 may be differently configured and that each of the listed components may actually represent several different components. For example, the CPU 1102 may actually represent a multi-processor or a distributed processing system; the memory unit 1104 may include different levels of cache memory, main memory, hard disks, and remote storage locations; the I/O device 1106 may include monitors, keyboards, and the like; and the network interface 1108 may include one or more network cards providing one or more wired and/or wireless connections to a network 1116. Therefore, a wide range of flexibility is anticipated in the configuration of the computer system 1100.

[0086] The system 1100 may use any operating system (or multiple operating systems), including various versions of operating systems provided by Microsoft (such as WINDOWS), Apple (such as Mac OS X), UNIX, and LINUX, and may include operating systems specifically developed for handheld devices, personal computers, servers, and embedded devices depending on the use of the system 1100. The operating system, as well as other instructions (e.g., for the superblock 104 and function block 1100), may be stored in the memory unit 1104 and executed by the processor 1102. For example, if the system 1100 is the device 100, the memory unit 1104 may include instructions for performing some or all of the message sequences and methods described herein.

[0087] Referring to FIG. 12, in one embodiment, the function block 200 may contain functionality similar to that of an endpoint as described in detail in U.S. Patent No. 7,656,870, filed on March 15, 2005, and entitled SYSTEM AND METHOD FOR PEER-TO-PEER

HYBRID COMMUNICATIONS and hereby incorporated by reference in its entirety. In such an embodiment, the graphical user interface (GUI) of the endpoint may be replaced with the API 202 of FIG. 2, and some functionality may be removed if not needed for a particular implementation of the function block 200. Other functionality that is not necessarily in the described endpoint, such as mobile device management (MDM) functionality, may be included in the function block 200. Accordingly, the basic functionality of the described endpoint may exist as logic embodied in the instruction set of the function block 200.

[0088] For purposes of example, the function block 200 may be accessed by the API 202 and may communicate with an operating system 1204 of the device 100 of FIG. 1. The API 202 provides access to the capabilities of the function block 200 for the superblock 104, while the operating system 1204 provides underlying functionality, as is known to those of skill in the art. Although shown as separate from the function block 200 for purposes of illustration, it is understood that the API 202 may be part of the function block 200 in some embodiments.

[0089] The function block 200 may include multiple components and layers that support the functionality required to perform the operations requested by the superblock 104. For example, the function block 200 may include a softswitch 1206, a management layer 1208, an encryption/decryption module 1210, a feature layer 1212, a protocol layer 1214, a speech-to-text engine 1216, a text-to-speech engine 1218, a language conversion engine 1220, an out-of-network connectivity module 1222, a connection from other networks module 1224, a p-commerce (e.g., peer commerce) engine 1226 that includes a p-commerce agent and a p-commerce broker, and a cellular network interface module 1228.

[0090] Each of these components/layers may be further divided into multiple modules. For example, the softswitch 1206 may include a call control module, an instant messaging (IM) control module, a resource control module, a CALEA (Communications Assistance to Law Enforcement Act) agent, a media control module, a peer control module, a signaling agent, a fax control module, and a routing module.

[0091] The management layer 1208 may include modules for presence (i.e., network presence), peer management (detecting peers and notifying peers of being online), firewall management (navigation and management), media management, resource management, profile

management, authentication, roaming, fax management, and media playback/recording management.

[0092] The encryption/decryption module 1210 may provide encryption for outgoing packets and decryption for incoming packets. In the present example, the encryption/decryption module 1210 provides application level encryption at the source, rather than at the network. However, it is understood that the encryption/decryption module 1210 may provide encryption at the network in some embodiments.

[0093] The feature layer 1212 may provide support for various features such as voice, video, IM, data, voicemail, file transfer, file sharing, class 5 features, short message service (SMS), interactive voice response (IVR), faxes, and other resources. The protocol layer 1214 may include protocols supported by the function block 200, including SIP, HTTP, HTTPS, STUN, RTP, SRTP, and ICMP. It is understood that these are examples only, and that fewer or more protocols may be supported.

[0094] The speech-to-text engine 1216 converts speech received by the function block 200 (e.g., via a microphone or network) into text, the text-to-speech engine 1218 converts text received by the function block 200 into speech (e.g., for output via a speaker), and the language conversion engine 1220 may be configured to convert inbound or outbound information (text or speech) from one language to another language. The out-of-network connectivity module 1222 may be used to handle connections between the function block 200 and the external services 204, and the connection from other networks module 1224 handles incoming connection attempts from the external services 204. The cellular network interface module 1228 may be used to interact with a wireless network.

[0095] While the preceding description shows and describes one or more embodiments, it will be understood by those skilled in the art that various changes in form and detail may be made therein without departing from the spirit and scope of the present disclosure. For example, various steps illustrated within a particular flow chart or sequence diagram may be combined or further divided. In addition, steps described in one flow chart or diagram may be incorporated into another flow chart or diagram. Furthermore, the described functionality may be provided by hardware and/or software, and may be distributed or combined into a single platform.

Additionally, functionality described in a particular example may be achieved in a manner different than that illustrated, but is still encompassed within the present disclosure. Therefore, the claims should be interpreted in a broad manner, consistent with the present disclosure.

WHAT IS CLAIMED IS:

1. A computer program product in a non-transitory computer readable medium for use in a data processing system that comprises a processor coupled to a network interface, the computer program product holding computer program instructions that comprise a function block, the function block having audio/video (A/V) call functionality, the function block operative when
5 executed by the processor to:
 - receive from a superblock application a request for an audio/video (A/V) service;
 - determine that the superblock application is authorized to access the A/V service functionality;
 - determine that the A/V service requires access to a resource that is external to the
10 data processing system;
 - establish the A/V service between the superblock application and the resource via the network interface, wherein establishing is not otherwise supported by the superblock application;
 - provide video output for the A/V service to a video window within a display
15 window associated with the superblock application, the video window displayable simultaneously with the display window of the superblock application; and
 - provide audio for the A/V service.
2. The computer program product of claim 1 wherein the function block is further operative when executed by the processor to operate as a bridge between the superblock application and the external resource.
3. The computer program product of claim 1 wherein the request is an application programming interface (API) call from the superblock application to the function block.
4. The computer program product of claim 1 wherein the superblock is configured to initialize the function block when the superblock application is loaded and executed.

5. The computer program product of claim 1 wherein the function block is further operative when executed by the processor to determine that the superblock application is authorized to access functionality provided by the function block for the A/V service.
6. The computer program product of claim 1 wherein the function block is further operative when executed by the processor to enable a user of the data processing system to collaborate on at least one of a document, a file, or an application with a user on another data processing system.
7. A computer program product in a non-transitory computer readable medium for use in a data processing system that comprises a processor coupled to a network interface, the computer program product holding computer program instructions that comprise a function block, the function block having audio/video (A/V) call functionality, the function block operative when
5 executed by the processor to:
- receive from a superblock application a request for a communication session, wherein the function block is configured to provide functionality for the communication session to the superblock application;
 - 10 notify the superblock application that the communication session is being requested;
 - establish a connection with an external device via the network interface to support the communication session; and
 - 15 provide the communication session to the superblock application, wherein the steps of receiving, notifying, establishing, and providing are performed without switching context from the superblock application to another application on the data processing system.
8. The computer program product of claim 7 wherein the function block is further operative when executed by the processor to determine whether the function block has a capability to perform any rendering needed by the communication session.
9. The computer program product of claim 7 wherein the function block is further operative when executed by the processor to determine whether the superblock has a capability to perform any rendering needed by the communication session.

10. The computer program product of claim 7 wherein the function block is further operative when executed by the processor to determine that the superblock application is authorized to access functionality provided by the function block for the communication session.

11. The computer program product of claim 7 wherein the function block is further operative when executed by the processor to enable a user of the data processing system to collaborate on at least one of a document, a file, or an application with a user on another data processing system.

12. A method implemented in a function block associated with a computing entity having a network interface, comprising:

- 5 receiving from a superblock application a request for a communication session, wherein the function block is configured to provide functionality for the communication session to the superblock application;
- notifying the superblock application that the communication session is being requested;
- establishing a connection with an external device via a network interface of the computing entity to support the communication session; and
- 10 providing the communication session to the superblock application, wherein the steps of receiving, notifying, establishing, and providing are performed without switching context from the superblock application to another application associated with the computing entity.

13. The method of claim 12 wherein providing the communication session includes operating as a bridge between the superblock application and the external device.

14. The method of claim 12 wherein the request is an application programming interface (API) call from the superblock application to the function block.

15. The method of claim 12 further comprising determining whether the function block has a capability to provide the communication session.

16. The method of claim 12 further comprising determining whether the function block has a capability to perform any rendering needed by the communication session.

17. The method of claim 12 further comprising determining whether the superblock has a capability to perform any rendering needed by the communication session.

18. The method of claim 12 further comprising initializing the function block when the superblock application is loaded and executed.

19. The method of claim 12 further comprising determining that the superblock application is authorized to access functionality provided by the function block for the communication session.

20. The method of claim 12 further comprising providing at least one configuration parameter for the function block, wherein the configuration parameter enables the function block to be configured after the function block is distributed as part of the superblock application.

21. The method of claim 12 further comprising enabling, by the function block, a user of the computing entity to collaborate on at least one of a document, a file, or an application with a user on another computing entity.

22. A method implemented in a function block associated with a computing entity having a network interface, comprising:

receiving from a superblock application a request for an audio/video (A/V) service;

5 determining that the superblock application is authorized to access the A/V service functionality;

determining that the A/V service requires access to a resource that is external to the computing entity;

10 establishing the A/V service between the superblock application and the resource via the network interface, wherein establishing is not otherwise supported by the superblock application;

providing video output for the A/V service to a video window within a display window associated with the superblock application, the video window displayable simultaneously with the display window of the superblock application; and
15 providing audio for the A/V service.

23. The method of claim 22 further comprising operating as a bridge between the superblock application and the external resource.

24. The method of claim 22 further comprising initializing the function block when the superblock application is loaded and executed.

25. The method of claim 22 further comprising determining that the superblock application is authorized to access functionality provided by the function block for the A/V service.

26. The method of claim 22 further comprising providing at least one configuration parameter for the function block, wherein the configuration parameter enables the function block to be configured after the function block is distributed as part of the superblock application.

27. The method of claim 22 further comprising determining whether the function block has a capability to perform any rendering needed by the A/V service.

28. The method of claim 22 further comprising determining whether the superblock has a capability to perform any rendering needed by the communication session.

29. The method of claim 22 further comprising providing at least one configuration parameter for the function block, wherein the configuration parameter enables the function block to be configured after the function block is distributed as part of the superblock application.

30. The method of claim 22 further comprising enabling, by the function block, a user of the computing entity to collaborate on at least one of a document, a file, or an application with a user on another computing entity.

ABSTRACT

An improved system and method are disclosed for improving functionality in software applications. In one example, the method includes a computing entity having a network interface, a processor, and a memory configured to store a plurality of instructions. The instructions include instructions for a superblock application having instructions for a function block included therein. The function block is configured to provide functions that are accessible to the superblock application via an application programming interface (API). The functions are provided within the superblock application itself and are accessible within the superblock application without switching context to another application on the computing entity.

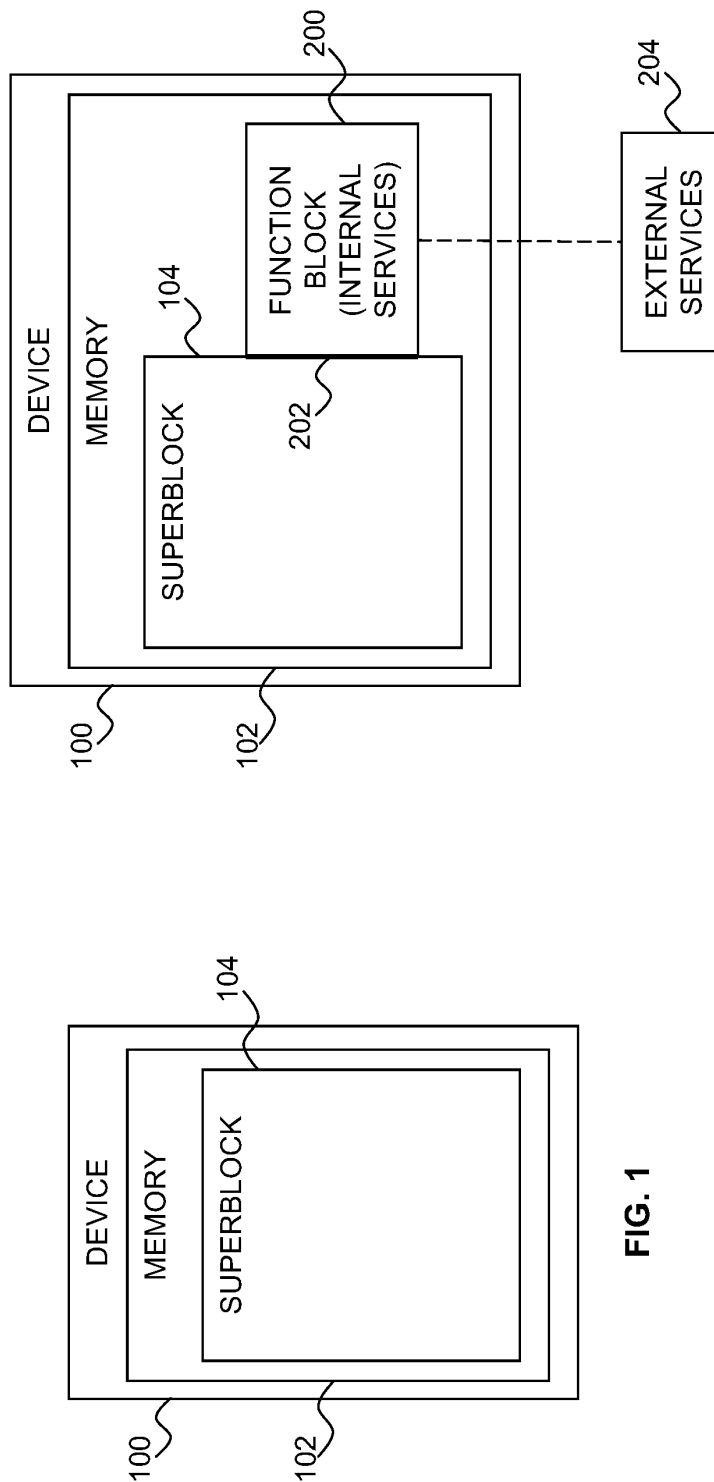
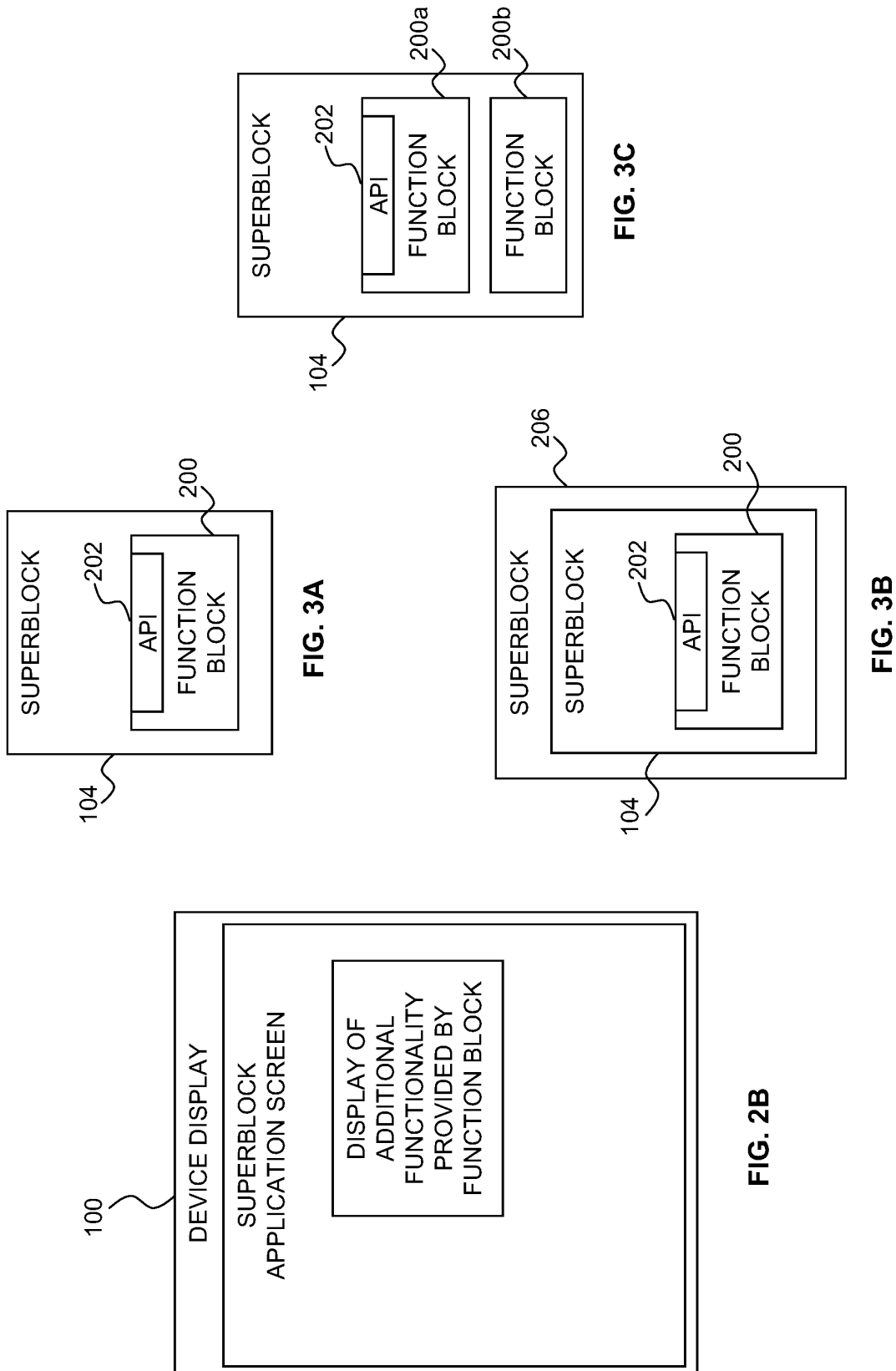


FIG. 2A

FIG. 1



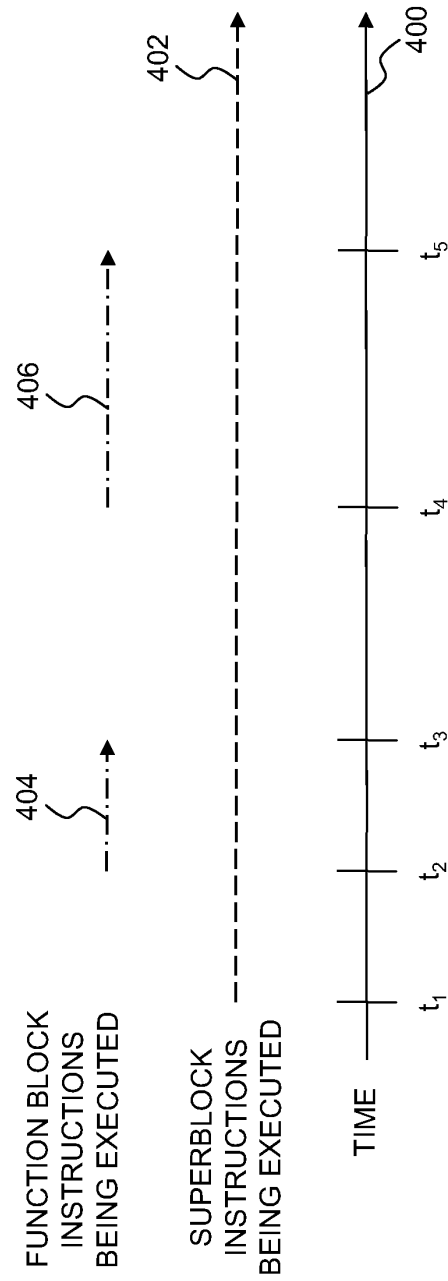


FIG. 4

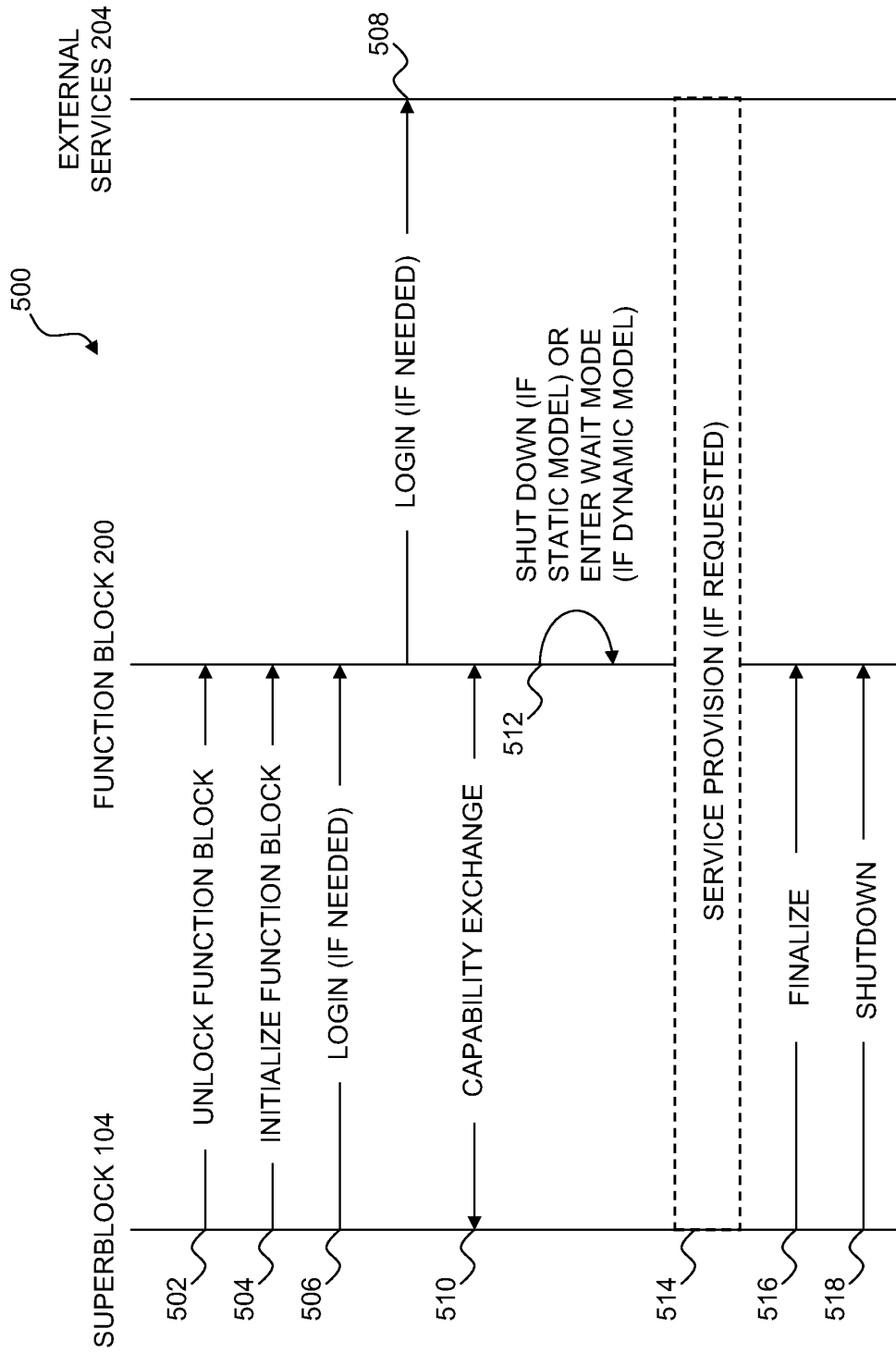


FIG. 5

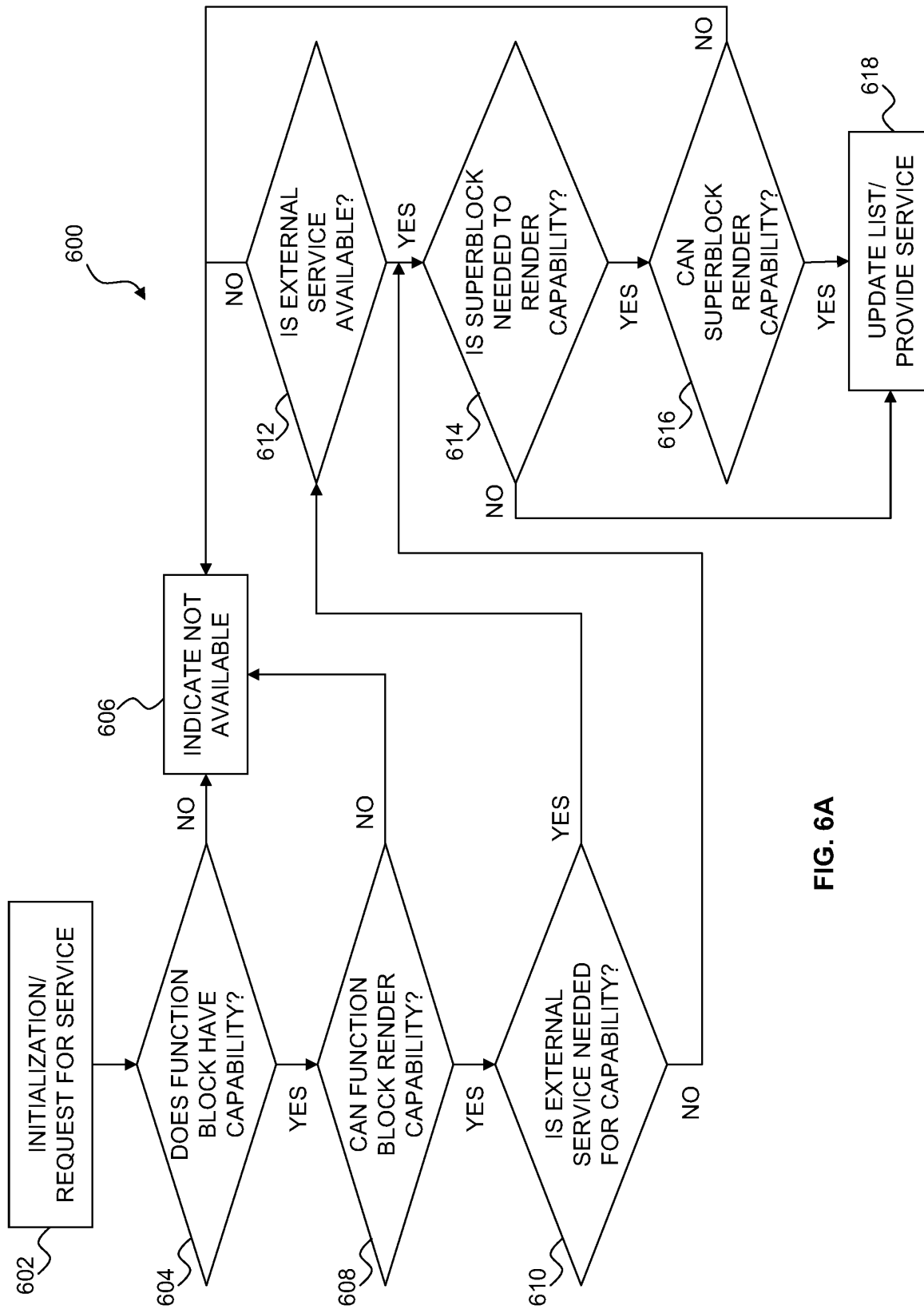


FIG. 6A

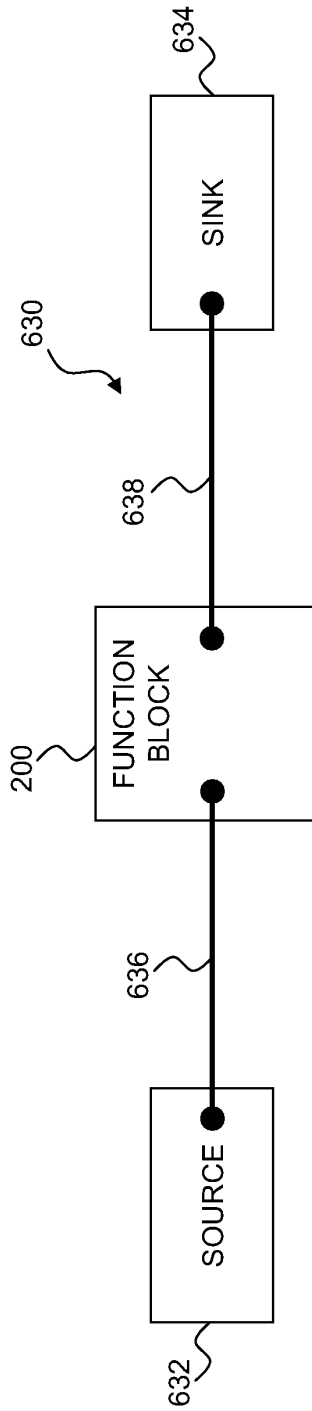


FIG. 6B

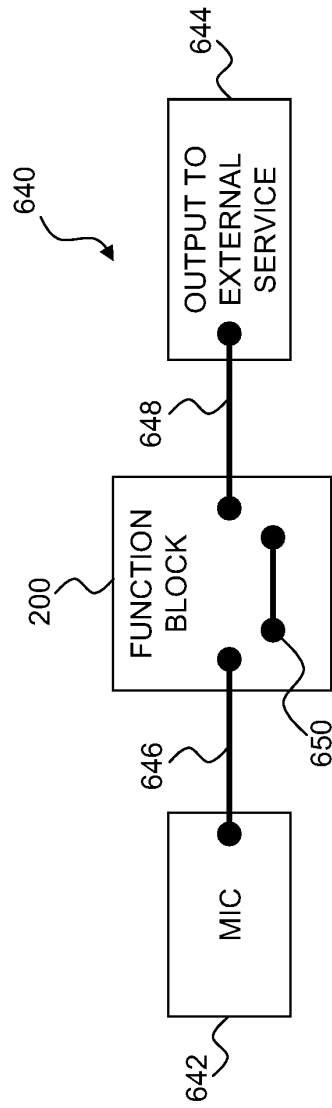


FIG. 6C

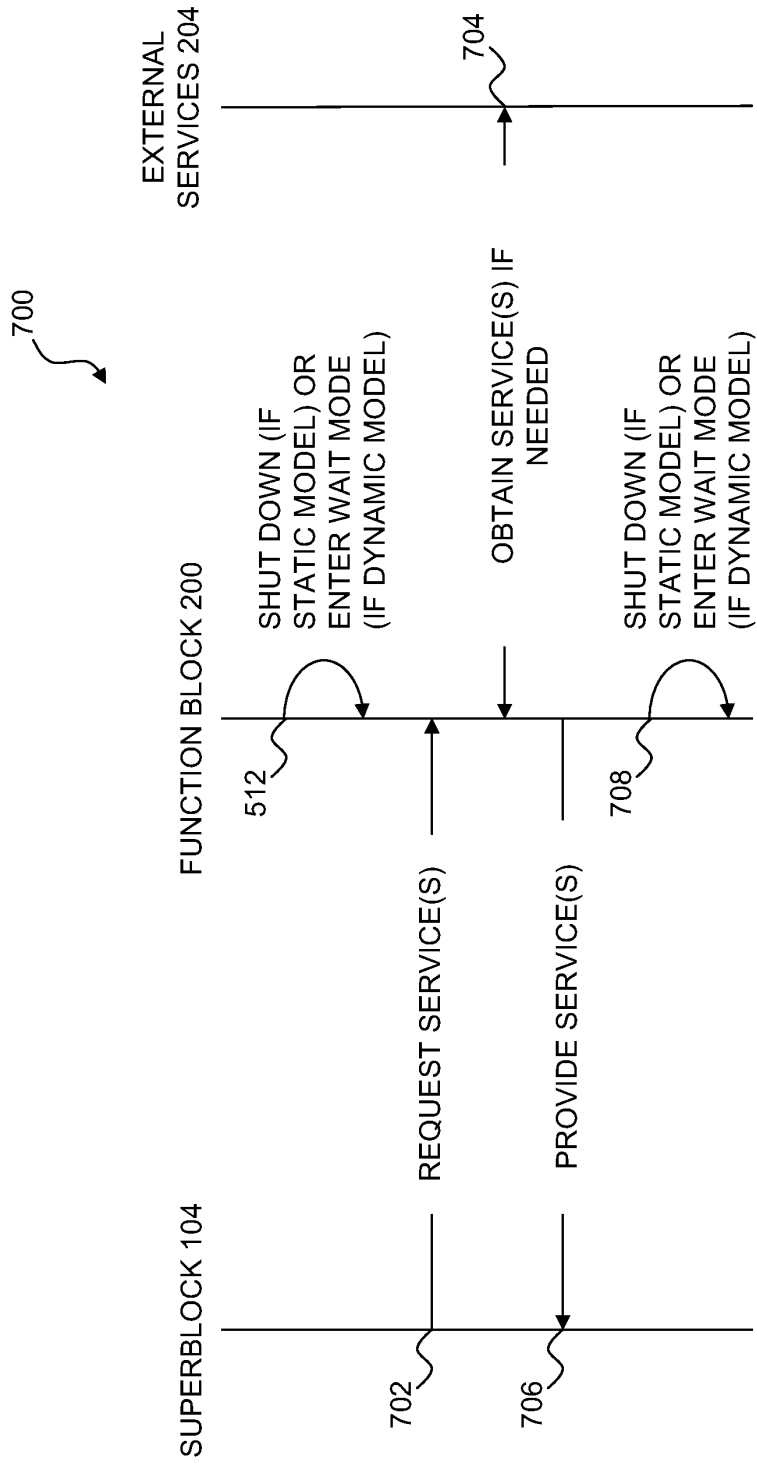


FIG. 7

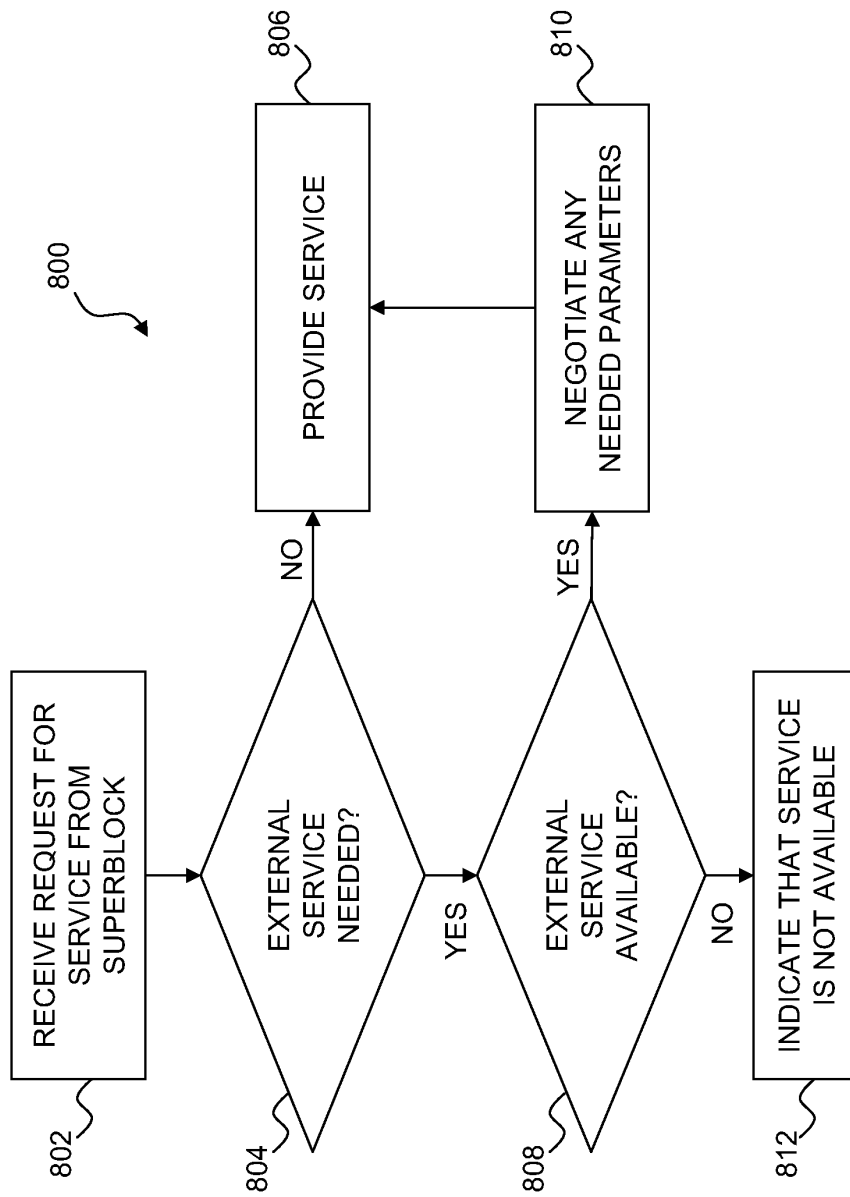


FIG. 8

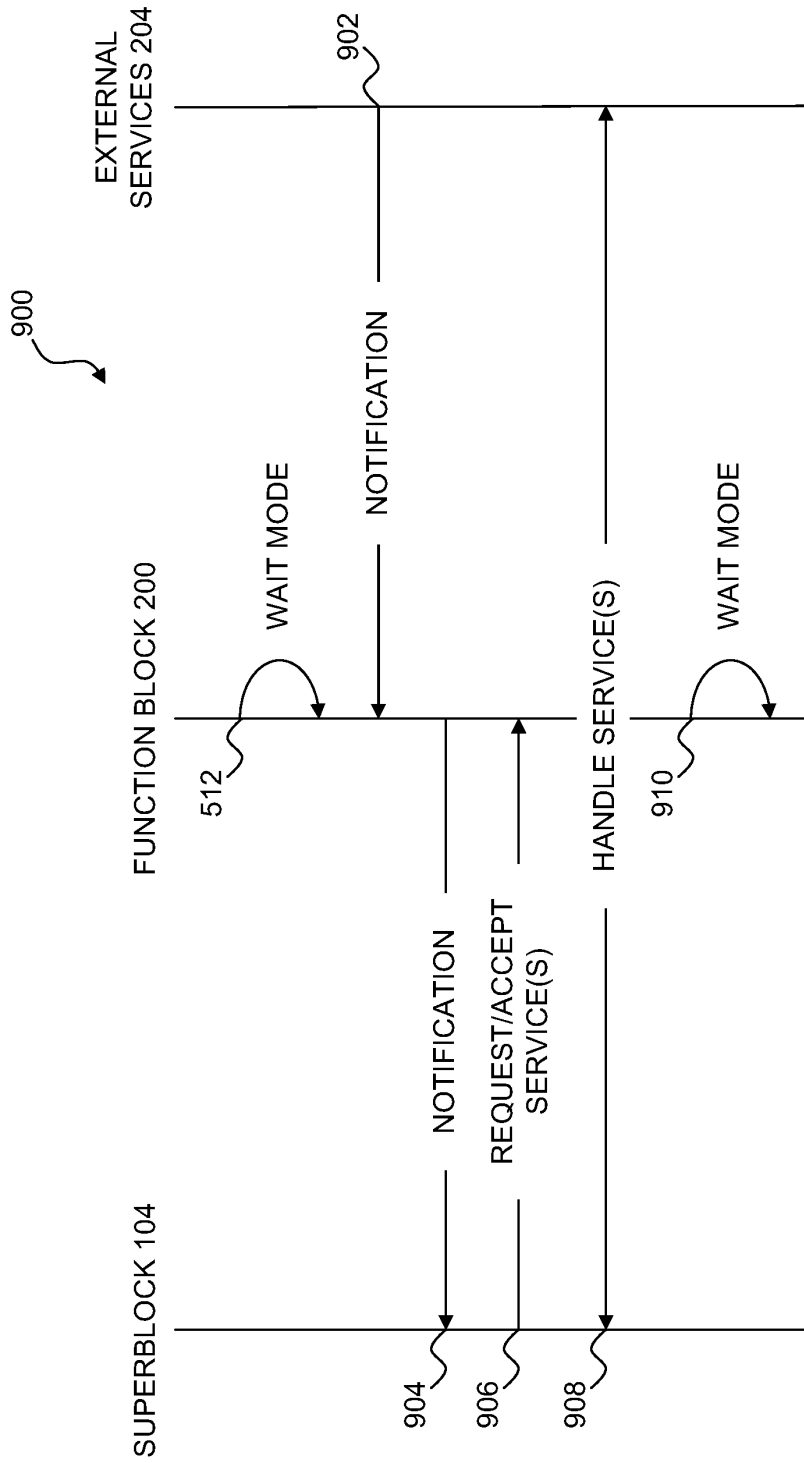


FIG. 9

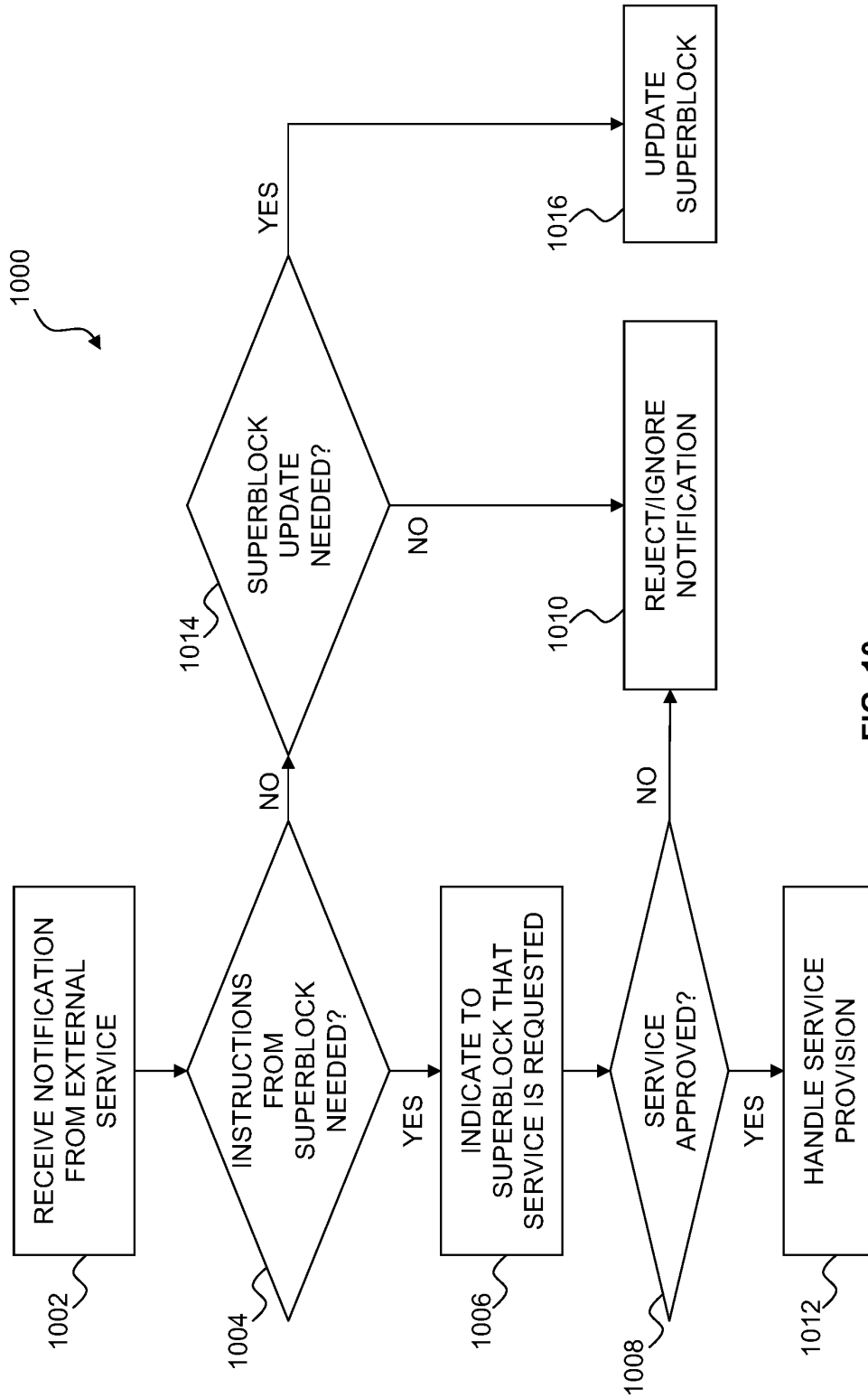


FIG. 10

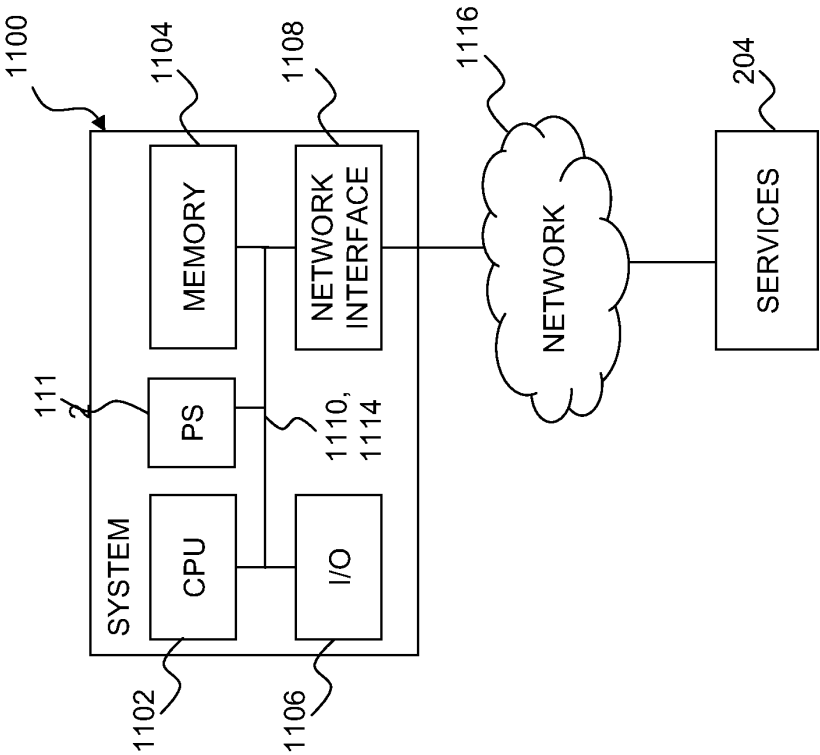


FIG. 11

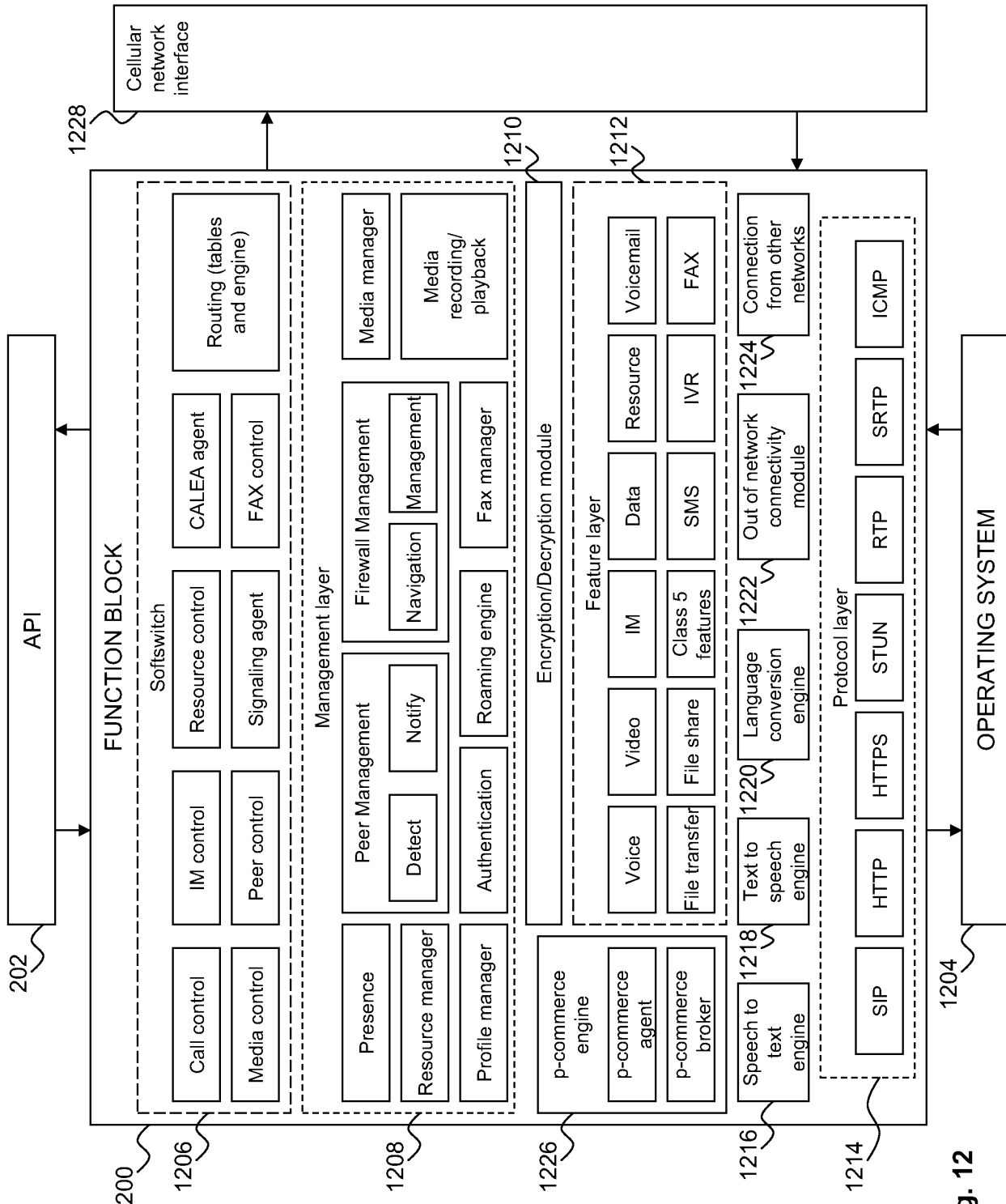


Fig. 12

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	15/297,328
Filing Date	October 19, 2016
First Named Inventor	CHATURVEDI, SIVAKUMAR
Title	SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER
Art Unit	
Examiner Name	
Attorney Docket Number	DAMA-33216

SIGNATURE of Applicant or Patent Practitioner

Signature	/Keith D. Harden, Reg. #74472/	Date (Optional)	
Name	Keith D. Harden	Registration Number	74472
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.



*Total of ONE 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.

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

(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:

25883

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

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I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

DAMAKA, INC.

☐ Inventor or Joint Inventor (title not required below)

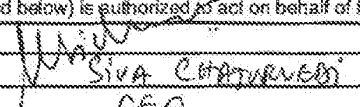
☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☒ 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		Date (Optional)
Name	SIVA CHATURVEDI	
Title	CEO	

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 1 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 5 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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Electronic Acknowledgement Receipt	
EFS ID:	27258215
Application Number:	15297328
International Application Number:	
Confirmation Number:	6761
Title of Invention:	SYSTEM AND METHOD FOR PROVIDING ADDITIONAL FUNCTIONALITY TO EXISTING SOFTWARE IN AN INTEGRATED MANNER
First Named Inventor/Applicant Name:	SIVAKUMAR CHATURVEDI
Customer Number:	25883
Filer:	Keith D. Harden
Filer Authorized By:	
Attorney Docket Number:	DAMA-33216
Receipt Date:	19-OCT-2016
Filing Date:	
Time Stamp:	12:13:16
Application Type:	Utility under 35 USC 111(a)

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	DAM33216POAEXE.pdf	856628	no	2
			b6344eab21d2fc301c1f7a17a425f7e9eeda8945		

Warnings:

Information:	
Total Files Size (in bytes):	856628
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>	