

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year)	06.02.2018
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Applicant's or agent's file reference 16P31-PCT	FOR FURTHER ACTION See paragraph 2 below
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International application No. PCT/JP2017/041723	International filing date (day/month/year) 20.11.2017	Priority date (day/month/year) 30.11.2016
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International Patent Classification (IPC) or both national classification and IPC
H04W28/18 (2009.01) i, H04L1/00 (2006.01) i, H04L1/16 (2006.01) i, H04W24/08 (2009.01) i

Applicant
SILEX TECHNOLOGY, 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 66.1bis(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/JP	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

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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 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 13*ter*.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 13*ter*.1(a)).
 - on paper or in the form of an image file (Rule 13*ter*.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:

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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
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1. Statement			
Novelty (N)		Claims <u>1-6</u>	YES
		Claims _____	NO
Inventive step (IS)		Claims <u>1-6</u>	YES
		Claims _____	NO
Industrial applicability (IA)		Claims <u>1-6</u>	YES
		Claims _____	NO

2. Citations and explanations:	
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Document 1: JP 2005-039722 A (NIPPON TELEGRAPH AND TELEPHONE CORP.) 10 February 2005 (Family: none)

Document 2: JP 2007-306423 A (MITSUBISHI ELECTRIC CORP.) 22 November 2007 (Family: none)

Document 3: JP 2010-098739 A (SUMITOMO ELECTRIC INDUSTRIES, LTD.) 30 April 2010 & US 2010/0128705 A1

Document 4: JP 2009-049829 A (NIPPON TELEGRAPH AND TELEPHONE CORP.) 05 March 2009 (Family: none)

Document 5: WO 2016/156766 A1 (TOSHIBA CORP.) 06 October 2016 & JP 2017-526274 A

The invention as in claims 1-6 is not disclosed in any of the documents cited in the international search report, is novel, and involves an inventive step. Specifically, none of the documents discloses a configuration which "calculates a transmission success probability, which is the probability of receiving an acknowledgement frame from another wireless communication

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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

device within a pre-set first reference time period following transmission of a first frame when the first frame is transmitted multiple times to the other wireless communication device, calculates the number of times it is possible to attempt transmission of the first frame during a second reference time period, calculates a timeout occurrence rate, which is the probability of not receiving an acknowledgement frame from the other wireless communication device even when the first frame is repeatedly transmitted the number of times it is possible to attempt transmission during the second reference time period, on the basis of the transmission success probability and the number of times it is possible to attempt transmission, and selects an encoding/modulation method to be used in communication with the other wireless communication device according to whether or not the timeout occurrence rate is equal to or less than a pre-set occurrence rate threshold.”
Furthermore, a person skilled in the art could not easily conceive of this configuration.