I,	Seungwan Hong of 1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea,
08826	_, do hereby declare that the cryptosystem, reference implementation, or optimized
implen	nentations that I have submitted, known asLizard, is my own original work,
or if su	bmitted jointly with others, is the original work of the joint submitters.
I furthe	er declare that (check one):
	I do not hold and do not intend to hold any patent or patent application with a claim which may cover the cryptosystem, reference implementation, or optimized
	implementations that I have submitted, known as; OR (check one or both of the following):
	□ to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as, may be covered by the following U.S. and/or foreign patents: (describe and enumerate or state "none" if applicable);
	patents: (describe and enumerate or state "none" if applicable); I do hereby declare that, to the best of my knowledge, the following pending U.S. and/or foreign patent applications may cover the practice of my submitted cryptosystem, reference implementation or optimized implementations: PCT Application No., PCT/KR2017/013119

I do hereby acknowledge and agree that my submitted cryptosystem will be provided to the public for review and will be evaluated by NIST, and that it might not be selected for standardization by NIST. I further acknowledge that I will not receive financial or other compensation from the U.S. Government for my submission. I certify that, to the best of my knowledge, I have fully disclosed all patents and patent applications which may cover my cryptosystem, reference implementation or optimized implementations. I also acknowledge and agree that the U.S. Government may, during the public review and the evaluation process, and, if my submitted cryptosystem is selected for standardization, during the lifetime of the standard, modify my submitted cryptosystem's specifications (e.g., to protect against a newly discovered vulnerability).

I acknowledge that NIST will announce any selected cryptosystem(s) and proceed to publish the draft standards for public comment

I do hereby agree to provide the statements required by Sections 2.D.2 and 2.D.3 in the Call For Proposals for any patent or patent application identified to cover the practice of my cryptosystem, reference implementation or optimized implementations and the right to use such implementations for the purposes of the public review and evaluation process.

Signed: Shan

Title: Mr.
Date: April 9th, 2013

Place: Roul Natone | Univ.

I,	Yongso	o Song , o	of 1, Gwanak-ro	, Gwanak-gu, Se	oul, Republi	ic of Korea,	
08826	_, ao n	ereby aeciar	e that the cryptosyst	em, rejerence im	іріететано	n, or optimized	
			submitted, known a				
or if su	bmitted	jointly with o	others, is the origina	ıl work of the joi	nt submitter.	S.	
I furthe	er decla	re that (check	k one):				
	which	may cover th	o not intend to hold se cryptosystem, refe	rence implement	tation, or op	timized	
	implen	nentations the following):	at I have submitted,	known as	; 01	R (check one or both	2
		implementa as	of my knowledge, the tion, or optimized in , may be cov	aplementations to vered by the follo	hat I have si owing U.S. a	ubmitted, known and/or foreign	
	\checkmark	I do hereby and/or fore	(describe and endeclare that, to the ign patent application	best of my knowl ons may cover th	ledge, the fo e practice of	llowing pending U.S f my submitted	5.
			m, reference implemention No., PCT/KR2		nizea impien L	nemations:	

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Signed: YS
Title: Dr.
Date: APril 6th, 2018
Place: Sear Motional University

I, Seong-Min Hong, of 1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea,			
08826 , do hereby declare that the cryptosystem, reference implementation, or optimized			
implementations that I have submitted, known as Lizard, is my own original work,			
or if submitted jointly with others, is the original work of the joint submitters.			
I further declare that (check one):			
☐ I do not hold and do not intend to hold any patent or patent application with a claim which may cover the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as, OR (check one or both of the following):			
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Signed: Mong Title: Dr. Date: April 9th, 2018 Place: Seal National University

I,Jinsu Kim, of1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea, 08826, dereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known asLizard, is my own original work, or if submitted jointly with others, is the original work of the joint submitters.				
I furthe	I further declare that (check one):			
	which impler	of hold and do not intend to hold any patent or patent application with a claim may cover the cryptosystem, reference implementation, or optimized mentations that I have submitted, known as; OR (check one or both following):		
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Signed: NAM Title: Dr.
Date: April 6-th, 20/8
Place: Seoul National University

I,	Dongwoo Kim of 1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea,
08826	, do hereby declare that the cryptosystem, reference implementation, or optimized
implen	nentations that I have submitted, known asLizard, is my own original work,
or if si	ubmitted jointly with others, is the original work of the joint submitters.
I furth	er declare that (check one):
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	cryptosystem, reference implementation or optimized implementations:

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Signed: Jy Title: Mr.

Date: 2018, 04.06
Place: Seoul Northonal University

I,	Duhyeong Kim , of 1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea,
08826	_, do hereby declare that the cryptosystem, reference implementation, or optimized
	nentations that I have submitted, known asLizard, is my own original work,
or if su	bmitted jointly with others, is the original work of the joint submitters.
I furthe	er declare that (check one):
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Signed: On Title: Mr. Date: April 6th, 2018 Place: Seoul National University

		Lee, of1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea, 08826, lare that the cryptosystem, reference implementation, or optimized
implementations that I have submitted, known as <u>Lizard</u> , is my own original work, or if submitted jointly with others, is the original work of the joint submitters.		
I further	r decla	re that (check one):
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		PCT Application No. PCT/KR2017/013110

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Signed: Johne La

Title: Ms.

Date: April 6th, 2018.

Place: Seoul Nationed University

I, Sangje	oon Park , of 1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea,
<u>08826</u> , do	hereby declare that the cryptosystem, reference implementation, or optimized
implementatio	ons that I have submitted, known as <u>Lizard</u> , is my own original work,
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Signed: Portessor

Title: Visiting Professor

Date: April ob, 2018

Place: Seoul National University.

I,Jung Hee Cheon, of1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea,
08826 , do hereby declare that the cryptosystem, reference implementation, or optimized
implementations that I have submitted, known as Lizard, is my own original work,
or if submitted jointly with others, is the original work of the joint submitters.
I further declare that (check one):
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implementations that I have submitted, known as $____$; OR (check one or both of the following):
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PCT Application No., PCT/KR2017/013119

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Signed: Jo Ku Chewn Title: Professor Date: April 9th, 2018 Place: Seoul National Univ.

I,Ji	ieun Lee, of 6F, 9, Jinheung-gil, Naju-si, Jeollanam-do, Korea, 58324, do
hereby de	eclare that the cryptosystem, reference implementation, or optimized implementations
that I hav	re submitted, known as <u>Lizard</u> , is my own original work, or if submitted
jointly wi	th others, is the original work of the joint submitters.
I further o	declare that (check one):
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Signed: 0\ \(\mathbb{A}\)\\
Title: Mrs.

Date: April 6th 2018

Place: KISA

<i>I</i> ,	Jun-Sub Kim , of 6F, 9, Jinheung-gil, Naju-si, Jeollanam-do, Korea, 58324 , do		
hereby	declare that the cryptosystem, reference implementation, or optimized implementations		
that I i	that I have submitted, known as <u>Lizard</u> , is my own original work, or if submitted jointly with others, is the original work of the joint submitters.		
I furth	er declare that (check one):		
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Signed: JW

Title: Dr.

Date: April 6 2018

Place: KISA

I,Kimoo	n Kim, of6F, 9, Jinheung-gil, Naju-si, Jeollanam-do, Korea, 58324, de
hereby declare	that the cryptosystem, reference implementation, or optimized implementations
that I have sub	mitted, known as <u>Lizard</u> , is my own original work, or if submitted
jointly with oth	ners, is the original work of the joint submitters.
I further decla	re that (check one):
which implen	of hold and do not intend to hold any patent or patent application with a claim may cover the cryptosystem, reference implementation, or optimized nentations that I have submitted, known as; OR (check one or both following):
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Signed: kkM

Title: Mr

Date: April 6 20(8)

Place: kISk

I,Eunyoung Choi, of6F, 9, Jinheung-gil, Naju-si, Jeollanam-do, Korea, 58324				
do hereby declare that the cryptosystem, reference implementation, or optimized				
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Signed: 21207
Title: Dy.
Date: April 6th 2918
Place: KISA

I, <u>Haeryong Park</u> , of <u>6F, 9, Jinheung-gil, Naju-si, Jeollanam-do, Korea, 58324</u> , do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>Lizard</u> , is my own original work, or if submitted jointly with others, is the original work of the joint submitters. I further declare that (check one):				
	imple as _ / pater	e best of my knowledge, the practice of the cryptosystem, reference ementation, or optimized implementations that I have submitted, known, may be covered by the following U.S. and/or foreign ats: (describe and enumerate or state "none" if applicable); hereby declare that, to the best of my knowledge, the following pending U.S.		
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Signed: Helfs
Title: Dr

Date: April 6 2018

I, <u>Jeongsu Kim</u> , of <u>50, UNIST-gil, Ulsan 44919, Republic of</u> , do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>Lizard</u> , is my own original work, or if submitted jointly with others, is the original work of the joint submitters. I further declare that (check one):			
	to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as, may be covered by the following U.S. and/or foreign		
	/ patents: (describe and enumerate or state "none" if applicable); I do hereby declare that, to the best of my knowledge, the following pending U.S. and/or foreign patent applications may cover the practice of my submitted cryptosystem, reference implementation or optimized implementations: PCT Application No., PCT/KR2017/013119		

I do hereby acknowledge and agree that my submitted cryptosystem will be provided to the public for review and will be evaluated by NIST, and that it might not be selected for standardization by NIST. I further acknowledge that I will not receive financial or other compensation from the U.S. Government for my submission. I certify that, to the best of my knowledge, I have fully disclosed all patents and patent applications which may cover my cryptosystem, reference implementation or optimized implementations. I also acknowledge and agree that the U.S. Government may, during the public review and the evaluation process, and, if my submitted cryptosystem is selected for standardization, during the lifetime of the standard, modify my submitted cryptosystem's specifications (e.g., to protect against a newly discovered vulnerability).

I acknowledge that NIST will announce any selected cryptosystem(s) and proceed to publish the draft standards for public comment

I do hereby agree to provide the statements required by Sections 2.D.2 and 2.D.3 in the Call For Proposals for any patent or patent application identified to cover the practice of my cryptosystem, reference implementation or optimized implementations and the right to use such implementations for the purposes of the public review and evaluation process.

Signed: Jeongsu Kim Title: Mr. Date: April, 6, 2018 Place: UNIST

I, <u>Aaram Yun</u> , of <u>50, UNIST-gil, Ulsan 44919, Republic of</u> , do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>Lizard</u> , is my own original work, or if submitted jointly with others, is the original work of the joint submitters.				
I further declare that (check one):				
☐ I do not hold and do not intend to hold any patent or patent application with a claim which may cover the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as; OR (check one or both of the following):				
to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as may be covered by the following U.S. and/or foreign				
patents: (describe and enumerate or state "none" if applicable); I do hereby declare that, to the best of my knowledge, the following pending U.S. and/or foreign patent applications may cover the practice of my submitted cryptosystem, reference implementation or optimized implementations: PCT Application No., PCT/KR2017/013119				

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I do hereby agree to provide the statements required by Sections 2.D.2 and 2.D.3 in the Call For Proposals for any patent or patent application identified to cover the practice of my cryptosystem, reference implementation or optimized implementations and the right to use such implementations for the purposes of the public review and evaluation process.

Signed:

Title:

Date: April 6, 2018

Place:

2.D.2 Statement by Patent (and Patent Application) Owner(s)

If there are any patents (or patent applications) identified by the submitter, including those held by the submitter, the following statement must be signed by each and every owner, or each owner's authorized representative, of each patent and patent application identified.

I,Jung Hee Cheon, of 1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea,
08826 , am the owner or authorized representative of the owner of the following patent(s)
and/or patent application(s): PCT Application No., PCT/KR2017/013119, and do
hereby commit and agree to grant to any interested party on a worldwide basis, if the
cryptosystem known as Lizard is selected for standardization, in consideration of its
evaluation and selection by NIST, a non-exclusive license for the purpose of implementing the
standard (check one):

A	without compensation and under reasonable terms and conditions that are
	demonstrably free of any unfair discrimination, OR

□ under reasonable terms and conditions that are demonstrably free of any unfair discrimination.

I further do hereby commit and agree to license such party on the same basis with respect to any other patent application or patent hereafter granted to me, or owned or controlled by me, that is or may be necessary for the purpose of implementing the standard.

I further do hereby commit and agree that I will include, in any documents transferring ownership of each patent and patent application, provisions to ensure that the commitments and assurances made by me are binding on the transferee and any future transferee.

I further do hereby commit and agree that these commitments and assurances are intended by me to be binding on successors-in-interest of each patent and patent application, regardless of whether such provisions are included in the relevant transfer documents.

I further do hereby grant to the U.S. Government, during the public review and the evaluation process, and during the lifetime of the standard, a nonexclusive, nontransferrable, irrevocable, paid-up worldwide license solely for the purpose of modifying my submitted cryptosystem's specifications (e.g., to protect against a newly discovered vulnerability) for incorporation into the standard.

Signed: Jz Vl. Ch.
Title: Professor
Date: April 9th, 2018
Place: Seoul National Univ

2.D.2 Statement by Patent (and Patent Application) Owner(s)

by the submitter, the following statement must be signed by each and every owner, or each owner's authorized representative, of each patent and patent application identified.
I, <u>Joohee Lee</u> , of <u>1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea, 08826</u> , am the owner or authorized representative of the owner of the following patent(s) and/or patent application(s): <u>PCT Application No., PCT/KR2017/013119</u> , and do hereby commit and agree to grant to any interested party on a worldwide basis, if the cryptosystem known as
<u>Lizard</u> is selected for standardization, in consideration of its evaluation and selection by NIST, a non-exclusive license for the purpose of implementing the standard (check one):
without compensation and under reasonable terms and conditions that are demonstrably free of any unfair discrimination, OR
 under reasonable terms and conditions that are demonstrably free of any unfair discrimination.
I further do hereby commit and agree to license such narty on the same basis with respect to any

If there are any patents (or patent applications) identified by the submitter, including those held

I further do hereby commit and agree to license such party on the same basis with respect to any other patent application or patent hereafter granted to me, or owned or controlled by me, that is or may be necessary for the purpose of implementing the standard.

I further do hereby commit and agree that I will include, in any documents transferring ownership of each patent and patent application, provisions to ensure that the commitments and assurances made by me are binding on the transferee and any future transferee.

I further do hereby commit and agree that these commitments and assurances are intended by me to be binding on successors-in-interest of each patent and patent application, regardless of whether such provisions are included in the relevant transfer documents.

I further do hereby grant to the U.S. Government, during the public review and the evaluation process, and during the lifetime of the standard, a nonexclusive, nontransferrable, irrevocable, paid-up worldwide license solely for the purpose of modifying my submitted cryptosystem's specifications (e.g., to protect against a newly discovered vulnerability) for incorporation into the standard.

Signed: Jookel Lee

Title: Ms.

Date: 4/6/2018.
Place: Seoul National University

The following must also be included:

I, Jun-Sub Kim, of 6F, 9, Jinheung-gil, Naju-si, Jeollanam-do, Korea, 58324, am the owner or authorized representative of the owner (print full name, if different than the signer) of the submitted reference implementation and optimized implementations and hereby grant the U.S. Government and any interested party the right to reproduce, prepare derivative works based upon, distribute copies of, and display such implementations for the purposes of the postquantum algorithm public review and evaluation process, and implementation if the corresponding cryptosystem is selected for standardization and as a standard, notwithstanding that the implementations may be copyrighted or copyrightable.

Signed: DWW

Title: Dr.
Date: April 6 2017

Place: [CISA]

The following must also be included:

I, <u>Kimoon Kim</u>, of <u>6F, 9, Jinheung-gil, Naju-si, Jeollanam-do, Korea, 58324</u>, am the owner or authorized representative of the owner (print full name, if different than the signer) of the submitted reference implementation and optimized implementations and hereby grant the U.S. Government and any interested party the right to reproduce, prepare derivative works based upon, distribute copies of, and display such implementations for the purposes of the post-quantum algorithm public review and evaluation process, and implementation if the corresponding cryptosystem is selected for standardization and as a standard, notwithstanding that the implementations may be copyrighted or copyrightable.

Signed: KKM

Title: Mr

Date: April 6 2013

Place: ICISA

The following must also be included:

I, Jieun Lee, of 6F, 9, Jinheung-gil, Naju-si, Jeollanam-do, Korea, 58324, am the owner or authorized representative of the owner (print full name, if different than the signer) of the submitted reference implementation and optimized implementations and hereby grant the U.S. Government and any interested party the right to reproduce, prepare derivative works based upon, distribute copies of, and display such implementations for the purposes of the postquantum algorithm public review and evaluation process, and implementation if the corresponding cryptosystem is selected for standardization and as a standard, notwithstanding that the implementations may be copyrighted or copyrightable.

Signed: 01 21 2

Title: Mvs, Date: April 6th 2018

The following must also be included:

I, Eunyoung Choi, of 6F, 9, Jinheung-gil, Naju-si, Jeollanam-do, Korea, 58324, am the owner or authorized representative of the owner (print full name, if different than the signer) of the submitted reference implementation and optimized implementations and hereby grant the U.S. Government and any interested party the right to reproduce, prepare derivative works based upon, distribute copies of, and display such implementations for the purposes of the postquantum algorithm public review and evaluation process, and implementation if the corresponding cryptosystem is selected for standardization and as a standard, notwithstanding that the implementations may be copyrighted or copyrightable.

Signed: 31 2 9

Title: Dr.
Date: April 6+h 2018

The following must also be included:

I, <u>Haeryong Park</u>, of <u>6F, 9, Jinheung-gil, Naju-si, Jeollanam-do, Korea, 58324</u>, am the owner or authorized representative of the owner (print full name, if different than the signer) of the submitted reference implementation and optimized implementations and hereby grant the U.S. Government and any interested party the right to reproduce, prepare derivative works based upon, distribute copies of, and display such implementations for the purposes of the post-quantum algorithm public review and evaluation process, and implementation if the corresponding cryptosystem is selected for standardization and as a standard, notwithstanding that the implementations may be copyrighted or copyrightable.

Signed:

Title: Dr.

Date: April 6 2018

The following must also be included:

I, Yongsoo Song , of 1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea , am the owner or authorized representative of the owner (print full name, if different than the signer) of the submitted reference implementation and optimized implementations and hereby grant the U.S. Government and any interested party the right to reproduce, prepare derivative works based upon, distribute copies of, and display such implementations for the purposes of the postquantum algorithm public review and evaluation process, and implementation if the corresponding cryptosystem is selected for standardization and as a standard, notwithstanding that the implementations may be copyrighted or copyrightable.

Signed: YS

Signea:
Title: Dr.
Date: APril 6th, 2018
Place: Seoul National University

The following must also be included:

I, , Joohee Lee, of 1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea, am the owner or authorized representative of the owner (print full name, if different than the signer) of the submitted reference implementation and optimized implementations and hereby grant the U.S. Government and any interested party the right to reproduce, prepare derivative works based upon, distribute copies of, and display such implementations for the purposes of the postquantum algorithm public review and evaluation process, and implementation if the corresponding cryptosystem is selected for standardization and as a standard, notwithstanding that the implementations may be copyrighted or copyrightable.

Signed: Joohee Lee

Title: Ms.

Date: Apr. 6th, 2018 Place: Searl National University

The following must also be included:

I, , __Jung Hee Cheon___, of __1, Gwanak-ro, Gwanak-gu, Seoul, Republic o, owner or authorized representative of the owner (print full name, if different than the submitted reference implementation and optimized implementations and hereby U.S. Government and any interested party the right to reproduce, prepare derivative based upon, distribute copies of, and display such implementations for the purposes of . quantum algorithm public review and evaluation process, and implementation if the corresponding cryptosystem is selected for standardization and as a standard, notwithstana that the implementations may be copyrighted or copyrightable.

Signed: Ty Ne Ch.
Title: Professor
Date: April 9th, 2018
Place: Seal National Univ.

The following must also be included:

I, Duhyeong Kim, of 1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea, am the owner or authorized representative of the owner (print full name, if different than the signer) of the submitted reference implementation and optimized implementations and hereby grant the U.S. Government and any interested party the right to reproduce, prepare derivative works based upon, distribute copies of, and display such implementations for the purposes of the postquantum algorithm public review and evaluation process, and implementation if the corresponding cryptosystem is selected for standardization and as a standard, notwithstanding that the implementations may be copyrighted or copyrightable.

Signed:

Signed: UCL
Title: Mr.
Date: April 6th, 2018
Place: Seoul National University