I, Nicolas Aragon, of University of Limoges, 123 avenue Albert Thomas, 87060 Limoges Cedex, FRANCE, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as BIKE, 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 BIKE; **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 \_\_\_\_\_ (print name of cryptosystem)\_\_\_\_, 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: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

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, below, 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.

I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate. Signed: Nicolas Aragon

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Title: Ph. D. Student Date: April the 3<sup>rd</sup>, 2018 Place: Limoges

I, Edoardo Persichetti, of Florida Atlantic University, Department of Mathematical Sciences, 777 Glades Rd, Boca Raton 33431 FL, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as BIKE, 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 BIKE; 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 \_\_\_\_\_(print name of cryptosystem)\_\_\_\_\_, 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: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

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.

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Signed:

Title: Assistant Professor Date: 11/27/17 Place: Boca Raton

I, Edoardo Persichetti, of Florida Atlantic University, Department of Mathematical Sciences, 777 Glades Rd, Boca Raton 33431, FL, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as BIKE, 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 \_\_\_\_\_ (print name of cryptosystem)\_\_\_\_; 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 \_\_\_\_\_(print name of cryptosystem)\_\_\_\_\_, 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: \_\_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_\_.

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, below, 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.

I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

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Signed:

Title: Assistant Professor Date: 11/23/17 Place: Boca Raton, FL

I, PAULO SERGIO LICCIARDI MESSEDER BARRETO, of the Institute of Technology - University of Washington Tacoma - Campus Box 358426 - 1900 Commerce Street - Tacoma WA 98402-3100, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as BIKE – BIt-flipping Key Encapsulation, 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 **BIKE – BIt-flipping Key Encapsulation**; **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 \_\_\_\_\_ (print name of cryptosystem) , 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: (describe and enumerate or state "none" if applicable)

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.

I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3 of the Call For Proposals, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed: Bon Tu

Title: Prof. Dr., PhD Date: 11/19/2017 Place: Tacoma, WA, USA

*I*, *Slim* Bettaieb, of Worldline, Zone Industrielle A, rue de la Pointe, 59113 Seclin, FRANCE, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as BIKE, 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 BIKE; **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 BIKE, 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: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

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, below, 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.

I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate. Signed: Slim Bettaieb

Title: Research Engineer, Ph.D. Date: April the 3<sup>rd</sup>, 2018 Place: Seclin, France I, Olivie Blazy of University of Limoges, 123 Av. Albert Thomas, 87000 timoges do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I Frence have submitted, known as BIKE , 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 BTKE; **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 \_\_\_\_\_ (print name of cryptosystem)\_\_\_\_\_, 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: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

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, below, 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.

I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed: Olivier Alazy Title: Assistant Brof Date: November 28, 2017 Place: Umoges, France

I, Loïc Thierry Bidoux, of Worldline, Zone Industrielle A, rue de la Pointe, 59113 Seclin, FRANCE, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as BIKE, 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 BIKE; **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 BIKE, 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: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

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, below, 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.

I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate. Signed: Loïc Bidoux

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Title: Research Engineer, Ph.D. Date: April the 3<sup>rd</sup>, 2018 Place: Seclin, France

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*I*, Jean-Christophe Deneuville, of INSA-CVL, 88 boulevard Lahitolle, 18000 Bourges, FRANCE, and University of Limoges, 123 avenue Albert Thomas, 87060 Limoges Cedex, FRANCE, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as BIKE, 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 BIKE; **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 \_\_\_\_\_ (print name of cryptosystem)\_\_\_\_, 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: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

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, below, 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.

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Title: Ph.D. post-doc Date: April the 3<sup>rd</sup>, 2018 Place: Bourges

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do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as , 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):

 $\Box$  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 \_\_\_\_\_ (print name of  $\beta N \varepsilon$ cryptosystem)\_\_\_\_, may be covered by the following U.S. and/or foreign patents: \_\_\_\_\_\_ (describe and enumerate or state "none" if applicable)\_\_\_\_\_;  $0 \le 0 \le 341$  (b)  $\beta 2$  and F R  $0 \le 51100$ 

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: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

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I do hereby agree to provide the statements required by Sections 2.D.2 and 2.D.3, below, 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.

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Signed: Title: Date: Place:

I, Carlos AGUILAR MELCHOR ENSEEIHT 2rue Charles Comichel 31000 Toulouse

do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I FRANCE have submitted, known as BIXE, 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  $\underline{BKE}$  (print name of cryptosystem), may be covered by the following U.S. and/or foreign patents: \_\_\_\_ (describe and enumerate or state "none" if applicable) US\_9094189B2 and FR 10/51190

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: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

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, below, 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.

I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed Title: Associated Brofessor Date: Place: Nov, 2, 2017 Taulouse FRANCE

I, **RAFAEL MISOCZKI**, of Intel Corporation, 2111 NE 25<sup>th</sup> Avenue, Hillsboro, Oregon, 97124, USA, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as **BIKE – Bit Flipping Key Encapsulation**, 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 BIKE – Bit Flipping Key Encapsulation; 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 \_\_\_\_\_(print name of cryptosystem)\_\_\_\_\_, 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: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

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, below, 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.

I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed: Rafael Misoczki Title: Dr. Date: Nov. 28, 2017 Place: Hillsboro, Oregon, USA

I, SHAY GUERON, of UNIVERSITY of HAIFA, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as BIKE, 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 \_\_\_\_\_()  $\beta \mathcal{D} \ltimes \mathcal{E}$  of cryptosystem; \_\_\_\_; **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 \_\_\_\_\_\_(prim\_name\_of cryptosystem) \_\_\_\_\_, 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: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

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, below, 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.

I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

finte Signed: Title: PROFESSOR Date: APRIL 12 2018 Place: FORT LAVDERDALE

I. Tim Güneysu, of Ruhr-Universität Bochum, Universitätsstr. 150, 44780 Bochum, GERMANY, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as **BIKE – Bit Flipping Key Encapsulation**, 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):

**X** 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 **BIKE** – **Bit Flipping Key Encapsulation**; **OR** (check one or both of the following):

- □ 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: \_\_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_\_.

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, below, 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.

I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed: Tim Güneysu Title: Prof. Dr.-Ing. Date: Nov 23, 2017 Place: Bochum, Germany

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I, Nicolas Sendrier, of Inria de Paris, 2 rue Simone Iff, CS 42112, 75589 Paris Cedex 12, France, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as **BIKE**, 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 **BIKE**;

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, below, 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.

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enderin Signed: Title:

Date: November 28, 2017 Place: Paris, France

I, <u>Tean-Pierre Tillich</u>, of <u>Inria</u>, 2 rue Simore <u>Ill</u> Paris 7502, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>Bike-Bilfliping</u> Key Encapsulation, 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 \_\_\_\_\_(print name of cryptosystem) ; 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 \_\_\_\_\_\_(print\_name of cryptosystem) \_\_\_\_\_, 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: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

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).

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I do hereby agree to provide the statements required by Sections 2.D.2 and 2.D.3, below, 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.

I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Jean-Pierre Tilli CH Signed: Title: Dr Date: 28 November 2017 *Place*: Paris

I, Gilles ZEMOR, of Institut de Mathématiques, université de Bordeaux, UMR 5251, 351 cours de la Libération, 33400 Talence, France, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as **BIKE – Bit** *Flipping Key Encapsulation*, 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):

**X** 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 **BIKE** – **Bit Flipping Key Encapsulation**; **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 \_\_\_\_\_\_ (print name of cryptosystem)\_\_\_\_\_, 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: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

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.

I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3 of the Call For Proposals, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed.\* am Title: Professor Date: November 24, 2017 Place: Talence, France

cnrs

Délégation Centre Limousin Poitou-Charentes

www.cnrs.fr

3ε avenue de la Recherche Scientifique CS 10065 45071 Orléans Cedex 2

1. 02 38 25 52 00 F 02 38 69 70 31 Statement by Patent Owner

I, Marion Blin, interim Regional Delegate of CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE, 3 rue Michel Ange, 75794 PARIS cedex 16 FRANCE, am the authorized representative of the owner of the following patent(s) and/or patent application(s):

 French Priority Patent: Procédé cryptographique de communication d'une information confidentielle, FR 10/51190, February 18th, 2010, and its validated extensions in France, in Germany, in Swiss, in United Kingdom, United States, and in Japan,

and do hereby commit and agree to grant to any interested party on a worldwide basis, if the cryptosystem known as BIKE 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):

 $\sqrt{}$  without compensation and under reasonable terms and conditions that are demon- strably free of any unfair discrimination, OR

□ under reasonable terms and conditions that are demonstrably free of any unfair dis- crimination.

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 in- tended by me to be binding on successors-ininterest 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.

Sigped: le (la) Président(e) du CNRS et par délégation, La Décruée Regionale par intérim Marion BLIN

Title: Regional Delegate

Date: 20.11. 2017

•

Place: Orléans, France

# I, Philippe GABORIS, elluiversity of hunger, 123 aur. A. Thomas, 87000 Linings France

am the owner of the following patents and/or patent applications: "Cryptographic method for communicating confidential information" US9094189 B2, and "Procédé cryptographique de communication d'une information confidentielle" FR 10/51190, and do hereby commit and agree to grant to any interested party on a worldwide basis, if the cryptosystem known as,  $B \times C$ , 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):

 $\square$  without compensation and under reasonable terms and conditions that are demonstrably free of any unfair discrimination, **OR** 

 $\Box$  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:

Title: Date: Place: I, Carles AGUILAR MELCHOR of ENSEE IHT 2 rue Clarles Camidal 31000 TOLOUSE am the owner of the following patents and/or patent applications: "Cryptographic method for FRANCE communicating confidential information" US9094189 B2, and "Procédé cryptographique de communication d'une information confidentielle" FR 10/51190, and do hereby commit and agree to grant to any interested party on a worldwide basis, if the cryptosystem known as, NNCE, is selected for standardization, in consideration of its evaluation and selection by NIST, a nonexclusive license for the purpose of implementing the standard (check one):

 $\checkmark$  without compensation and under reasonable terms and conditions that are demonstrably free of any unfair discrimination, **OR** 

 $\Box$  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.

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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:

RAL

Title: Associated Brofessor Date: Nov, 2,2017 Place: Toulouse, FRANCE

I, Nicolas Aragon, of University of Limoges, 123 avenue Albert Thomas, 87060 Limoges Cedex, FRANCE, am the owner 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: Nicolas ARAGON

Title: Ph. D. Student Date: April the 3<sup>rd</sup>, 2018 Place: Limoges

I, Slim Bettaieb, of Worldline, Zone Industrielle A, rue de la Pointe, 59113 Seclin, FRANCE, am the owner 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: Slim BETTAJEB

Title: Research Engineer, Ph.D. Date: April the 3<sup>rd</sup>, 2018 Place: Seclin I, Loïc Thierry Bidoux, of Worldline, Zone Industrielle A, rue de la Pointe, 59113 Seclin, FRANCE, am the owner 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: Loïc BIDOUX

Title: Research Engineer, Ph.D. Date: April the 3<sup>rd</sup>, 2018 Place: Seclin

1, Olivier Blazy, University of limoges, 123 Av. Albert Thomas,

\$7000 images, France, am the owner of the submitted reference implementation \$FKE 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: Olivier Blang Title: Arwiltant Prof Date: November 28, 2017 Place: Limogos, France

I, Jean-Christophe Deneuville, of INSA-CVL Bourges, 88 boulevard Lahitolle, 18000 Bourges, FRANCE, and University of Limoges, 123 avenue Albert Thomas, 87060 Limoges Cedex, FRANCE, am the owner 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: Jean-Christophe DENEUVILLE

ou

Title: Ph. D. post-doc Date: April the 3<sup>rd</sup>, 2018 Place: Bourges

#### 2.D.3 Statement by Reference/Optimized Implementations' Owner(s)

The following must also be included:

I, <u>Mir Deacker</u>, <u>WIRCE</u>, <u>And</u>, <u>an</u>

Signed: Title: Mt Date: AFLT Place: PORT LAUDERDALE

I, Philipe GABORIT, University of Linage, 123 as. A. Thomas, Stoos Comage, France

, am the owner of the submitted reference implementation  ${
m BWE}$  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: P. MBon A Title: P. of. Date: Vo and W Libross Place:

#### 2.D.3 Statement by Reference/Optimized Implementations' Owner(s)

The following must also be included:

I, <u>SHAY GUERON</u>, <u>UNIVERSITY OF HAIFA</u> am the owner or authorized representative of the owner (minimum of different times and 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: PROFECSDA

Signed: Title: PROFECSDR Date: AYRJL Place: FORT LANDERDALE I, Carlos AGUILAR MELCHOR of ENSEEIHT, 2rwe Charles Camichel, 31000 Toulouse, FRANCE, am the owner of the submitted reference implementation BIKE 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: Associate Brofessor Date: November 2, 2017 Place: Toulouse, FRANCE

## 2.D.3 Statement by Reference/Optimized Implementations' Owner(s)

The following must also be included:

I, **Rafael Misoczki**, 260 NE 66<sup>th</sup> Avenue, Hillsboro, OR, 97124, USA, 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: Rafoul Mm/K. Title: Doctor, Research Scientist Date: 05/22/2017 Place: HILLSBORD, OR, USA.

# 2.D.3 Statement by Reference/Optimized Implementations' Owner(s)

The following must also be included:

I, Sridhar Iyengar, of Intel Corporation, 2111 NE 25<sup>th</sup> Avenue, Hillsboro, Oregon, 97124, am an authorized representative of Intel Corporation, the owner of the submitted reference implementation and optimized implementations, which hereby grants 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.

Intel Corporation

By: Srithan Lycy Name: Sridhar Iyengar

Name: Sridhar Iyengar T Title: Vice President, Intel Labs; Director, Security and Privacy Research Date: September 29, 2017 Place: Hillsboro, Oregon

I, Valentin Vasseur, of Inria de Paris, 2 rue Simone Iff, CS 42112, 75589 Paris Cedex 12, France and Université Paris Descartes, Sorbonne Paris Cité, 12 rue de l'École de Médecine, 75270 Paris Cedex 06, France, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as **BIKE**, is my own original work, or if submitted jointly with others, is the original work of the joint submitters.

*I further declare that:* 

• 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 **BIKE**.

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.

I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3 of the Call For Proposals, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed: Title: Date: March 28, 2019 Place: Paris, France

I, \_\_\_\_\_Santosh Ghosh \_\_\_\_\_, of \_\_\_\_7638 NE Prefontaine St, Hillsboro, 97124, OR, US\_\_\_\_\_\_, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as \_\_\_\_\_\_BIKE - Bit Flipping Key Encapsulation \_\_\_\_\_\_, 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 \_\_\_\_\_ BIKE - Bit Flipping Key Encapsulation \_\_\_\_\_; 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 \_\_\_\_\_ (print name of cryptosystem) \_\_\_\_\_, 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: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

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, below, 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. I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed: Santachhorh Title: PhD Date: 8/7/2020 Place: Hillsborco, OR, 97124, US I, Jan Richter-Brockmann, of Ruhr-University Bochum, Universitaetstrasse 150, 44801 Bochum, Germany , do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as BIKE, 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 BIKE; 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 BIKE, 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: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

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).

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I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed: J-K Title: MSc. Date: 26.05.2021 Place: Bochum