I, <u>Tetsu Iwata</u>, of <u>Nagoya University</u>, Furo-cho, Chikusa-ku, Nagoya 464-8603, Japan, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>Remus</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 at least one of the following):

- ✓ 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 <u>Remus;</u>
- \Box to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>Remus</u>, may be covered by the following U.S. and/or foreign patents: <u>none</u>;
- □ 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: <u>none</u>.

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 2.4.2 and 2.4.3, 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 lightweight crypto 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 2.4.1, 2.4.2 and 2.4.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed: To A H Jeter Justa Dr. Eng March 1st, 2019 Nagoya, Japan Title: Date: Place:

Statement by Reference/Optimized/Additional Implementations' Owner(s)

I, <u>Tetsu Iwata</u>, of Nagoya University, Furo-cho, Chikusa-ku, Nagoya 464-8603, Japan, am the owner or authorized representative of the owner of the submitted reference implementation, optimized and additional 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 lightweight cryptography 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.

THE ALS Jeten Junta Pr. Eng. March 1 st, 2019 Nagoya, Japan Signed: Title: Date: Place:

I, <u>Thomas Peyrin</u>, of <u>SPMS</u>, <u>Nanyang Technological University</u>, 21 Nanyang Link, Singapore 637371, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>Remus</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 at least one of the following):

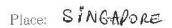
- ✓ I do not hold and do not intend to hold any patent or patent application with a claim which may cover the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>Remus</u>;
- □ to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>Remus</u>, may be covered by the following U.S. and/or foreign patents: <u>none</u>;
- □ 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: <u>none</u>.

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 2.4.2 and 2.4.3, 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 lightweight crypto 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 2.4.1, 2.4.2 and 2.4.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed: Title: Dr Date: 08/03/2019



Statement by Reference/Optimized/Additional Implementations' Owner(s)

I, Thomas Peyrin, of SPMS, Nanyang Technological University, 21 Nanyang Link, Singapore 637371, am the owner or authorized representative of the owner _ of the submitted reference implementation, optimized and additional 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 lightweight cryptography 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: 08/03/2019 SINGAPORE Place:

I, <u>Mustafa Mahmoud Mohammed Kairallah</u>, of <u>21 Nanyang Link</u>, <u>Singapore 637371</u>, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>Remus</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 at least one of the following):

- 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 <u>Remus;</u>
- \Box to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>Remus</u>, may be covered by the following U.S. and/or foreign patents: <u>none</u>;
- □ 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: <u>none</u>.

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 cryptosystems 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 2.4.2 and 2.4.3, 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 lightweight crypto 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 2.4.1, 2.4.2 and 2.4.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed: Mustafa Khairallah (Mustafa Mahmoud Mohammed Kairallah) Title: Mr Date: 12/02/2019 Place: Sing a pore

Statement by Reference/Optimized/Additional Implementations Owner(s)

I, <u>Mustafa Mahmoud Mohammed Kairallah</u>, of <u>21 Nanyang Link</u>, <u>Singapore 637371</u>, am the owner or authorized representative of the owner _ of the submitted reference implementation, optimized and additional 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 lightweight cryptography 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: Mustafa Khairallah (Mustafa Mahmoual Mohammed Kairallah) Title: Mr Date: 12/02/2019 Place: Singapore

I, <u>Kazuhiko Minematsu</u>, of 1753 Shimonumabe, Nakahara-Ku, Kawasaki Kanagawa 211-8666 Japan, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>Remus</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 at least one of the following):

- 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 <u>Remus;</u>
- \Box to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>Remus</u>, may be covered by the following U.S. and/or foreign patents: <u>none</u>;
- □ 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: <u>none</u>.

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 cryptosystems 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 2.4.2 and 2.4.3, 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 lightweight crypto 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 2.4.1, 2.4.2 and 2.4.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed: Kuyihh him -1

Title: Principal Researcher

Date: February 27, 2019

Place: Kawasaki, Kanagawa