I, <u>Avik Chakraborti</u>, of 3-9-11 Midori-cho, Musashino-shi, Tokyo 180-8585, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>GIFT-COFB</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):

- \checkmark 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>GIFT-COFB</u>;
- □ to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>GIFT-COFB</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.

Avik Cluke abouti Signed: Der. 4th Marich, 2019 Title: Date: Place: Tokyo, Japan

I, Subhadeep Banik, of Ecole Polytechnique Fédérale de Lausanne, INF 239, Station 14, CH-1015 Lausanne, Switzerland, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>GIFT-COFB</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 GIFT-COFB;
- ☑ to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>GIFT-COFB</u>, may be covered by the following U.S. and/or foreign patents: none;
- ☑ 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: none.

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may be withdrawn by the submitter(s) and owner(s), as appropriate. Signed: Suthadle Sunth Title: DR. SUBHADEEP BANIK 13 FEB 2019 Date: LAUSANNE, SWITZERLAND Place:

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

I, <u>Subhadeep Banik</u>, of <u>Ecole Polytechnique Fédérale de Lausanne, INF 239</u>, Station 14, CH-1015 Lausanne, Switzerland, 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: Juliadup Brill Title: DR. SUBHADEEP BANK Date: 13 FEB 2019 Place: LAUSANNE, SWITZERLAND.

I, <u>Tetsu Iwata</u>, of <u>Nagoya University</u>, Furo-cho, Chikusa-ku, <u>Nagoya 464-8603</u>, Japan, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>GIFT-COFB</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 GIFT-COFB;
- □ to the best of my knowledge, the practice of the cryptosystem, reference implementation, or . optimized implementations that I have submitted, known as <u>GIFT-COFB</u>, may be covered by the following U.S. and/or foreign patents: none;
- □ 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: none.

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.

TO HI I' Jeler guata Signed: Pr. Eng. March 1 st, 2019 Nagoya, Japan Title: Date: Place:

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

I, Tetsu Iwata, 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.

第日 指 Jun Junta Pr. Eng. March 1st, 2019 Nagoya Japan Signed: Title: Date: Place:

I, Kazuhiko Minematsu, 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 **GIFT-COFB**, 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):

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

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: Knzdich Minuto Title: Principal Researcher

Date: February 27, 2019 Place: Kawasaki, Kanagawa Japan

I, <u>Mridul Nandi</u>, of <u>Indian Statistical Institute</u>, 203 B. T. Road, Kolkata 700108, India, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>GIFT-COFB</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>GIFT-COFB</u>;
- □ to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>GIFT-COFB</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.

Signed:	mandi
Title:	Mr.
Date:	March 07, 2019
Place:	Kolkata, India

I, Thomas Peyrin, of SPMS, Nanyang Technological University, 21 Nanyang Link, Singapore 637371, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as GIFT-COFB, 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 GIFT-COFB;
- □ to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as **GIFT-COFB**, may be covered by the following U.S. and/or foreign patents: none;
- □ 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: none.

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, 1 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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Signed: Dr Title: Date: 08/03/2019 Place: SINGAPORE

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: OB(03/2019 Place: SINGAPORE

I, Yu Sasaki, of 3-9-11 Midori-cho Musashino-shi Tokyo 180-8585 Japan, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>GIFT-COFB</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 GIFT-COFB;
- □ to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>GIFT-COFB</u>, 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 cryptosystems specifications (e.g., to protect against a newly discovered vulnerability).

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Yn Jasanh. Dr. 28 Feb. 2019 Tokyo Japan Signed: Title: Date: Place:

I, Siang Meng Sim, of 21 Nanyang Link, Singapore 637371, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as GIFT-COFB, 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):

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

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Signed: Title: Dr Date: 25 Feb 2019 Place: Singapore, Singapore

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

I, Siang Meng Sim, of 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: 25 Feb 2019 Place: Singapore, Singapore.

I, <u>Yosuke Todo</u>, of 3-9-11, Midori-cho, Musashino-shi, Tokyo 180-8585 Japan, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as <u>GIFT-COFB</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>GIFT-COFB</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>GIFT-COFB</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>.

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Signed: 藤堂 译句 Title: Ph.D. in Engineering Date: 11 Feb. 2019 Place: Tokyo, JAPAN

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

I, <u>Yosuke Todo</u>, of <u>3-9-11</u>, Midori-cho, Musashino-shi, Tokyo 180-8585 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.

Signed:藤堂俳句 Title: Ph.D. in Engineering Date: 11 Feb. 2019 Place: Tokyo, JAPAN