

AGREEMENT

BETWEEN

THE AMERICAN INSTITUTE IN TAIWAN (AIT)

AND

**THE TAIPEI ECONOMIC AND CULTURAL REPRESENTATIVE OFFICE
IN THE UNITED STATES (TECRO)**

FOR JOINT RESEARCH ON

EARTHQUAKE AND BRIDGE ENGINEERING

Article I – Scope

This Agreement provides a framework by which AIT, acting through its designated representative, the National Aeronautics and Space Administration (NASA) and TECRO, acting through its designated representative, the National Central University (NCU) on Taiwan, will cooperate in areas of mutual interest in earthquake engineering and the study of the structure of the earth using seismological data.

Article II – Authorization

This Agreement is entered into pursuant to the Taiwan Relations Act of April 10, 1979, Public Law 96-8 (22 USC 3301 et seq.)

Article III – Objectives

Under this Agreement, AIT's designated representative, NASA, and TECRO's designated representative, NCU, will cooperate for the mutually beneficial goal of studying earth and bridge engineering, utilizing data sets collected from the Taiwan Strong Motion Network; conducting non-destructive test(s) for automatic structural health condition monitoring; and studying the structure of the earth using seismological data.

Article IV – Responsibilities

Given the mutual interest in earthquake engineering and study, AIT and TECRO agree to take steps to oblige their designated representatives NASA and NCU, respectively, to perform the obligations detailed below.

AIT's designated representative, NASA, will use reasonable efforts to:

- A. Provide NASA patented Hilbert-Huang Transform (HHT) software, under the software use provisions, at no charge to TECRO's designated representative, NCU, to conduct data analysis. The HHT software package includes the Empirical Mode Decomposition (EMD) Toolbox and ancillary programs to manipulate the output from the EMD Toolbox to complete the Hilbert Spectral Analysis;
- B. Provide NASA personnel to participate in the experiment test design, data collection, data analysis, and result interpretation, and provide instructions and technical advice on data analysis using the HHT software package to TECRO's designated representative, NCU, in the specified experiments;
- C. Invite faculty investigators from TECRO's designated representative, NCU, to attend workshops on the data analysis/results at the Goddard Space Flight Center; and
- D. Archive and make available to interested third parties a copy of all data and results obtained by the experiments.

TECRO's designated representative, NCU, will use reasonable efforts to:

- A. Participate in experiment design, data collection, data analysis and result interpretation including using AIT's designated representative, NASA-provided HHT software, and pursuant to the separate software use agreement. Conduct the experiments and collect the necessary data, at no cost to AIT's designated representative, NASA, that include the following items: (a) data from the Strong Motion Network of both free ground and building responses; (b) non-destructive tests data with transient loads on selected bridges, collecting data with proper sensors; (c) provide data from the global seismological network from the Taiwan Central Weather Bureau and make it available to AIT's designated representative NASA;
- B. Provide the data with complete ancillary records to AIT's designated representative, NASA. The data should include the earthquake response study: building types, structure description, exact locations of the sensors related to the building, and any damage scenarios after the earthquake. For the non-destructive test of bridges, data should include: under transient load, bridge type, exact location of sensors on the bridge, weight and speed of the transient load, visual description of the bridge condition and possible damage scenarios. The Strong Motion Network data should be provided within one year of the earthquake occurrences being studied and the non-destructive test data should be provided within two weeks of completing the experiment;
- C. Provide personnel and computation support for the data analysis and provide office, computer and accessories, E-mail, telephone for AIT's designated representative, NASA, in Taiwan for the mutually agreed study periods;

D. Participate in data workshops as invited by AIT's designated representative. NASA:
and

E. Participate with AIT's designated representative, NASA, in the submissions, analysis
and publication of the data and results obtained from this activity.

Article V - Points of Contact

The principal points of contact in conducting this collaborative activity are detailed
below:

For AIT's designated
representative, NASA

Dr. John LaBrecque
Manager
Solid Earth and Natural Hazards Program
NASA Headquarters, Code YS
300 E Street, SW
Washington, DC 20546
Phone: 202-358-1373
Email: jlabrecque@hq.nasa.gov

Dr. Norden E. Huang
Chief Scientist for Oceanography
and GSFC Senior Fellow
NASA Goddard Space Flight Center
Greenbelt, Md. 20771
Phone: 301 614-5713
Fax: 301-614-5644
Email: Norden.E.Huang.1@gsfc.nasa.gov
Website: <http://norden@neptune.gsfc.nasa.gov>

For TECRO's
designated representative, NCU

Dr. Chao-Han Liu
Professor
National Central University
Chungli, 32054, Taiwan
Phone: 886-3-425-3650
Fax: 886-425-4842
Email: 1341426@twncu865.ncu.edu.tw

Article VI - Consultation/Settlement of Disputes

AIT and TECRO (hereinafter referred to as "the Parties") authorize the Points of Contact
named above to resolve any question that arises concerning the implementation of this

Agreement. Should the Points of Contact be unable to come to agreement, then the issue will be referred to the Parties for consultation and resolution.

Article VII - Financial Arrangements

AIT's designated representative, NASA, and TECRO's designated representative, NCU, will each bear the costs of discharging their respective responsibilities, including travel and subsistence of personnel and transportation of all equipment and other items for which each is responsible. Further, it is understood that the ability of AIT's designated representative, NASA, and TECRO's designated representative, NCU, to carry out their obligations is subject to the availability of appropriated funds. Should any of the designated representatives named in this Agreement encounter budgetary problems which may affect the activities to be carried out under this Agreement, the designated representative encountering the problems will notify and consult with the other designated representatives as soon as possible.

Article VIII - Invention and Patent Rights/Joint Invention

Nothing in the Agreement shall be construed as granting or implying any rights to, or interest in, patents or inventions of the Parties or their designated representatives, or the contractors or subcontractors of the designated representatives.

In the event that an invention is jointly made by employees of AIT's designated representative, NASA, or TECRO's designated representative, NCU, or their contractors or subcontractors, during the implementation of this Agreement, the designated representatives of the Parties shall consult and agree as to the responsibilities and costs of actions to be taken to establish and maintain patent protection for such invention and on the terms and conditions of any license or other rights to be exchanged or granted by or between the designated representatives, contractors or subcontractors.

Article IX - Transfer of Goods and Technical Data

The Parties' designated representatives are obligated to transfer only those technical data (including software) and goods necessary to fulfill their respective responsibilities under this Agreement, in accordance with the following provisions:

1. Nothing in this article requires the Parties or their designated representatives to transfer goods or technical data contrary to applicable laws and regulations relating to export control or control of classified information.
2. The transfer of technical data for the purpose of discharging the responsibilities of the Parties or their designated representatives with regard to interface, integration, and safety shall normally be made without restriction, except as provided in paragraph 1 above.
3. All transfers of goods and proprietary or export-controlled technical data are subject to the following provisions. In the event a Party or its related entity (e.g., designated

representatives, contractor, subcontractor, grantee, cooperating entity) finds it necessary to transfer goods or to transfer proprietary or export-controlled technical data, for which protection is to be maintained, such goods shall be specifically identified and such proprietary or export-controlled technical data shall be marked. The identification for goods and the marking on proprietary or export-controlled technical data will indicate that the goods and proprietary or export-controlled technical data shall be used by the receiving Party or related entities only for the purposes of fulfilling the receiving Party's or related entity's responsibilities under this Agreement, and that the identified goods and marked proprietary technical data or marked export-controlled technical data shall not be disclosed or retransferred to any other entity without the prior written permission of the furnishing Party or its related entity. The receiving Party or related entity shall abide by the terms of the notice and protect any such identified goods and marked proprietary technical data or marked export-controlled technical data from unauthorized use and disclosure. The Parties to this Agreement will cause their related entities to be bound by the provisions of this Article related to use, disclosure, and retransfer of goods and marked technical data through contractual mechanisms or equivalent measures.

4. All goods exchanged in the performance of this Agreement shall be used by the receiving Party or related entity exclusively for the purposes of this Agreement. Upon completion of the activities under this Agreement, the receiving Party or related entity shall return or, at the request of the furnishing Party or its related entity, otherwise dispose of all goods and marked proprietary technical data or marked export-controlled technical data provided under this Agreement as directed by the furnishing Party or related entity.

5. There shall be no transfers of hardware under this Agreement.

Article X - Rights in Resulting Data

Data generated under this Agreement will be reserved to the Principal Investigators for scientific analysis and first publication rights for a period of time (generally not more than 1 year) beginning with receipt of the data and any associated data in a form suitable for analysis. AIT's designated representative, NASA, and TECRO's designated representative, NCU, may also have access to, and use of, the data and any associated data during the agreed-upon period, but such access and use will not prejudice the first publication rights of the investigators.

Final results of the experiments will be made available to the scientific community through publication in appropriate journals or other established channels as soon as practicable and consistent with good scientific practice. In the event such reports or publications are copyrighted, AIT's designated representative, NASA and TECRO's designated representative, NCU, shall have a royalty-free right under the copyright to reproduce, distribute, and use such copyrighted work for their purposes.

Article XI - Release of General Information to the Public

Releases may be made by AIT, TECRO, and their designated representatives for their own portion of the program/cooperation as desired. Insofar as participation of another entity is involved, the entity seeking to release information will seek to consult with the other prior to any releases, consistent with the laws and policies under which they operate.

Section XII - Personnel Exchange

AIT's designated representative NASA and TECRO's designated representative, NCU, shall facilitate the movement of persons and goods necessary to comply with this Agreement into and out of their facilities, subject to the laws and regulations under which they operate.

Subject to the laws and regulations under which it operates, NCU shall facilitate provision of the appropriate entry and residence documentation for the nationals of the territory represented by the other Party who sojourn to their facilities in order to carry out the activities under this Agreement

Article XIII - Disclaimer of Warranty

Neither AIT nor its designated representative, NASA, warrants the availability or suitability for any particular use of the information or data covered by this Agreement.

Article XIV - Liability

The Parties agree that, with respect to activities undertaken pursuant to this Agreement, neither Party, nor its designated representatives, shall make any claim against the other with respect to injury or death of its own or its contractors' or subcontractors' employees or with respect to damage of any kind to or loss of their own or their contractors' or subcontractors' or investigators' property caused by either Party, or the Party's designated representatives, contractors, subcontractors, or investigators, whether such injury, death, damage, or loss arises through negligence or otherwise, except in the case of willful misconduct. In the event of third Party claims for which the Parties or their designated representatives may be liable, the Parties or their designated representatives (as appropriate) will consult promptly to determine an appropriate and equitable apportionment of any liability and on the defense of any such claims.

This cross waiver of liability shall not be applicable to claims between a Party and its related entities (e.g. designated representatives, contractors and subcontractors), claims made by a natural person, or intellectual property claims.

Article XV - Customs/Taxes/Immigration

In accordance with the laws and regulations under which they operate, each Party, through its designated representative(s) shall facilitate free customs clearance and waiver of all applicable customs duties and taxes for the implementation of this Agreement. In the event that any customs duties or taxes of any kind are nonetheless levied, such customs duties or taxes shall be borne by the designated representative(s) of the Party representing the authorities of the territory levying such customs duties or taxes. The obligation of the Parties' designated representative(s) to ensure duty-free entry and exit of goods is fully reciprocal.

Each of the Parties' designated representative(s) shall facilitate the movement of persons and goods necessary to comply with this Agreement into and out of the territory the Party represents, subject to the laws and regulations of that territory.

Article XVI – Software License

AIT will ensure that its designated representative, NASA, grants to TECRO's designated representative, NCU, a nonexclusive, nontransferable, royalty-free license to the object code form of computer software entitled "Hilbert-Huang Transform (HHT), version 1." TECRO will ensure that its designated representative, NCU, only uses and copies the software for the purpose of meeting its obligations under this Agreement. TECRO will ensure that its designated representative, NCU, acknowledges that the HHT software is proprietary to AIT's designated representative, NASA, and that AIT's designated representative, NASA, retains all right, title and interest in and to the HHT software, including without limitation all copyrights and other proprietary rights.

TECRO will ensure that its designated representative, NCU, agrees not to reverse engineer, reverse compile, or otherwise disassemble the HHT software. TECRO will ensure that its designated representative, NCU, does not use, reproduce, sublicense, distribute or dispose of the HHT software, in whole or in part, other than as permitted under this Agreement.

AIT's designated representative, NASA, licenses the HHT software on an "AS IS" basis. Neither AIT nor its designated representative, NASA, MAKES ANY WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE REGARDING THE HHT SOFTWARE OR ITS USE OR OPERATION ALONE OR IN COMBINATION WITH OTHER COMPUTER PROGRAMS.

In no event shall AIT or its designated representative, NASA, be liable for special, incidental or consequential damages arising from the use of the HHT software by NCU or any third Party, whether under theory of contract, tort (including negligence), product liability or otherwise.

Neither AIT nor its designated representative, NASA, shall have any obligation to indemnify, defend or hold harmless NCU from and against any claim that the NASA HHT software infringes any third Party patent, copyright or other intellectual property right. TECRO's designated representative, NCU, shall promptly notify AIT's designated representative, NASA, of any such claim.

Article XVII - Choice of Law

U.S. Federal law governs this Agreement for all purposes, including, but not limited to, determining the validity of the Agreement, the meaning of its provisions, and the rights, obligations and remedies of the Parties.

Article XVIII - Term of Agreement

The term of this Agreement will be three years from the date of the last signature. This Agreement may be renewed or amended by mutual consent or it may be terminated by one Party providing written notice of its intention to the other Party and contemporaneously, to the other Party's designated representative, at least three months before the desired termination date.

Article XIX - Continuing Obligations

The obligations of the Parties and their designated representatives set forth in this Agreement concerning Articles VIII, IX, X, XIV, and XV shall continue to apply after the expiration or termination of this Agreement.

For the American Institute in Taiwan

For the Taipei Economic and Cultural
Representative Office in the United States

Burt S. Selig
Name

Lee Cha-hsiung
Name

Deputy Managing Director
Title

Deputy Representative
Title

7/24/03
Date

7/8/04
Date