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The Honorable Olin E. Teague Chairman, Committee on Science and Astronautics House of Representatives

Dear Mr. Chairman:

In accordance with the request of the Executive Director, Committee on Science and Astronautics, we are forwarding our comments on H.R. 14242, 93d Congress, a bill which, if enacted, would be cited as the "International Science and Technology Transfer Act of 1974."

H.R. 14242 would establish an institute to be known as the International Science and Technology Transfer Institute (Institute), under the permanent chairmanship of the Nations Science Foundation (NSF), to facilitate the transfer of developments in science and technology between the United States and certain less developed countries.

The term "science and technology" is used throughout the bill but it is not defined. This terminology is very broad and could be interpreted to include the social sciences, such as economics, geography, and sociology, in addition to the environmental sciences, biological and medical sciences, engineering, and mathematical and physical sciences. As the terminology goes to the essence of the proposed bill, we believe theCommittee should consider a definition.

Section 2, in stating the purpose of the bill, refers to the transfer of "developments" in science and technology. Section 7(a) provides for the Director of the Institute to establish procedures to monitor on an ongoing basis "discoveries, inventions, and research developments" in science and technology, and to obtain by purchase or gift information pertaining to such discoveries, inventions, and developments, in orderto respond to requests for information. It is not clear whether the intent of these sections is to limit transfers solely to new developments to science and technology (i.e., after the date of enactment), or to also include prior developments. We believe this matter should be clarified.

Section 3 establishes the Institute and section 4 prescribes the membership of the Council of the Institute. Most Council members appear to represent agencies having science and technology related programs. However, several agencies heavily involved with such programs, such as the Departments of Transportation, Interior, and Defense are not included.

In the absence of criteria concerning selection of Council members, we question

the exclusion of these departments, since they should have expertise in their respective research and development areas and should be in a position to provide beneficial contributions.

Section 5(b) authorizes the Director of the Institute to appoint and fix the pay of such personnel as he deems desirable to carry out the operations of the Institute. Section 5(c) provides that the Director and staff of the Institute may be appointed without regard to title 5 of the United States Code, governing appointments in the competitive service, and such staff may be paid without regard to the provisions of chapter 51and subchapter III of chapter 53 of such title relating to classification and General Schedule pay rates. We are not aware of the need to exempt technical and professional personnel from these provisions. Generally, there should be some ceiling on salaries and it should be possible to obtain qualified technical and professional personnel within the structure of the General Schedule.

Section 6(a)(4) directs the establishment of procedures for using the Institute's communication center to "provide support for" the transfer of science, technology, and "culture" to "researchers and institutions" in the United States. The Committee may wish to consider a definite meaning for the terminology "provide support for," so as to eliminate questions or different interpretations concerning such items as funds, personnel, and computer equipment. Consideration should also be given to defining "researchers" and "institutions," since these are extremely broad terms and are subject to numerous interpretations. The Committee may also wish to clarify the term "culture," which is not only a broad term but also seemingly inconsistent with the purpose of the bill, which is to transfer developments in science and technology.

Section 7(a)(1) directs the establishment of procedures for continuously monitoring discoveries, inventions, and research developments in science and technology made in the United States, made at any location with financial assistance from the United States Government, or made at any location by a corporation or any other person which is owned or controlled by a United States citizen. A mayor obstacle to such monitoring would be overcoming the barriers of proprietorship and exclusiveness that are built into the private enterprise system to protect product formulas and production, manufacturing, packaging, and fabrication techniques. Section 7(b) recognizes this problem by providing that information may not be obtained in violation of copyright, patent, or similar protective laws. In this respect, the Committee may wish to provide in Section 7 parameters or other guidelines to aid the Director of the Institute in establishing monitoring procedures.

Sections 7(b) and 8(b) refer to the retention by the Institute of; Information obtained under section 7. However, no mention is made of: how such information, or any other information obtained by the Institute, to be retained. The bill should provide guidance as to the methods of Storage that are to be considered and used. Lack of such guidance may result in the use of inefficient or expensive storage and retrieval methods. The Committee may wish to insert in section 7 a provision authorizing or directing the Director of the Institute to establish; Standards and procedures for data retention.

Section 8(c) provides that the Institute's financial contribution, any, toward the costs of establishing and maintaining a communication center in a participating country, shall be jointly determined by the council and officials

of that country. The determination is to be based upon the per capita income of the participating country as compared with the per capita income of other countries whose requests to participate have been approved by the Council pursuant to section 8(b). The higher a countrymen per capita income, the less the Institute shall contribute. We believe more specific guidance should be given concerning the application of these provisions. For initial determinations, there will be few or no other approved applications for use in making the required comparisons. Also, the more affluent countries (i.e., those with a higher relative per capita income) may establish more costly communication centers and thus increase the Institute's outlay. Further, the amount of the Institute's contribution is subject to negotiation between the Council and country officials. The Committee may wish to establish or prescribe some guidelines or limitations for use in applying the per capita provisions and determining the Institute's contribution.

Section 9(a) provides that, immediately after the establishment of a communication center in any less developed country under section 8, the Institute shall establish and maintain a communication center in the United States. It is not clear whether the intent of this section is for the Institute to establish a single communication center, but only after the first one is established in a foreign country, or whether the Institute is supposed to establish a communication center in the United States for each such center established in a foreign country. In addition, under Section 6(a), the Council is to establish standards and procedures for the operation of the Institute's communication center, although the bill contains no prior provision establishing such a center. We believe these matters should be clarified. We note further that section 9(b) refers to the less developed country's "communication centers." The word "centers" should be changed to "center" unless it is intended that a foreign country have more than one communication center.

Section 9(b) provides that the Institute and participating foreign country shall lease the requisite telecommunication capacity and that the cost of such leasing shall be shared by the Institute and the participating country in a manner agreed upon by the Council and the government of such country. The Committee should clarify whether the per capita comparison method prescribed in section 8(c) is intended to apply to the Institute's contribution to the cost of leasing under section 9(b).

Section 13 provides that the term "less developed friendly country". shall include foreign countries which do not receive economic assistance the foreign Assistance Act of 1961. This implies that countries receiving such assistance would also be eligible to participate. The committee may wish to clarify which countries are eligible to participate by providing more positive eligibility criteria. Clarification is especially desirable in this respect since the concept of "friendly country" is one that can engender considerable disagreement in light of the shifting and somewhat unpredictable nature of international relations. In the absence of more precise criteria, the Committee may wish at least to delineate the specific responsibility for making eligibility determinations. In any event, the term "less developed friendly country" as used in section 13 should be used consistently throughout the bill. In the bill's present form, participating countries are-variously referred to as "less developed country," "country," and "developing country," as well as "less developed friendly country.!'

We note that the bill does not specifically provide for an evaluation of the

program. It is our view that program evaluation is a fundamental part of effective program administration and that the responsibility for evaluations should rest initially upon the agency concerned. In line with this concept, we believe the Congress should attempt to specify the kinds of information and tests which will enable it to better assess how well programs are working and whether alternative approaches may offer greater promise. We will be happy to work with the Committee in developing specific language if you wish.

Although the bill deeply involves foreign governments, there is no provision for coordination between the Institute, the Council, and the State Department in carrying out the requirements of the bill. Generally, the responsible agency establishes the administrative requirements and the related policies ant procedures while the State Department, through its diplomatic contacts, negotiates appropriate agreements with the foreign governments involved. The Committee may therefore wish to define the role of the State Department in accomplishing the purposes of the bill.

Section 1876 of title 42, United States Code, establishes, within the NSF, the Science Information Service with functions similar to those of the Institute under the present bill. The enactment of H.R. 14242 in its present form may thus result in some duplication of effort or conflict of responsibility with the Science Information Service. Therefore, the Committee may wish to consider either amending 42 U.S.C. Sec. 1876 or providing language in the present bill to preclude such duplication and/or conflict and to specify the relationship between the Institute and the science Information Service.

Finally, although the bill contemplates the participation of the Atomic Energy Commission, and may eventually include the Department of Defense there is no provision relating to the treatment or information which has been given a security classification. Note in this connection, the language used in 42 U.S.C. Sec. 1874.

Enclosed herewith is a list of suggested editorial changes that may be of assistance to the Committee.

Sincerely yours,

Deputy Comptroller General of the United States

Enclosure

Suggested technical and editorial changes in H.R. 14242.

Section 4(a)(1) (page 2, line 14): The words "of the Board" should be deleted.

Section 5(e) (page 4, line 20): The word "Commission" should be "Institute."

Section 9(a) (gage 9, line 4): For purposes of consistency, the word "communications" should be "communication."

Section 9(a) (page 9, lines 5-6): For purposes of consistency, the word "communications" should be "communication."

Section 9(b) (page 9, line 17): For purposes of consistency, the word "country's" should be "country's."