



PROJECT AUTHORIZATION

1. PROJECT NUMBER 731-11-925-961	2. REGION Worldwide	4. AUTHORIZATION NUMBER TA 0138
3. PROJECT TITLE Increasing Ready Availability of U.S. Technological Publications of Particular Interest to Developing Countries (Technical Information)		5. AUTHORIZATION DATE August 16, 1971
7. LIFE OF PROJECT		6. PROP DATED April 15, 1971

a. Number of Years of Funding: 2
Starting FY 19 72 Terminal FY 19 73

b. Estimated Duration of Physical Work
After Last Year of Funding (in Months):

FUNDING BY FISCAL YEAR (in U.S. \$ or \$ equivalent)	DOLLARS		P.L. 480 CCC + FREIGHT	LOCAL CURRENCY			
	GRANT	LOAN		U.S. OWNED		HOST COUNTRY	
				GRANT	LOAN	JOINTLY PROGRAMMED	OTHER
Prior through Actual FY							
Operational FY 72	100,000						
Budget FY	110,000						
B + 1 FY							
B + 2 FY							
B + 3 FY							
All Subsequent FY's							
TOTAL	210,000						

9. DESCRIBE SPECIAL FUNDING CONDITIONS OR RECOMMENDATIONS FOR IMPLEMENTATION, AND LIST KINDS AND QUANTITIES OF ANY P.L. 480 COMMODITIES

BEST AVAILABLE DOCUMENT

10. CONDITIONS OF APPROVAL OF PROJECT

AFR is not opposed but gives it low priority.

- AA/TA approval on condition need for subsequent year funding to be reviewed after project experience gained.

(Use continuation sheet if necessary)

11. Approved in substance for the life of the project as described in the PROP, subject to the conditions cited in Block 10 above, and the availability of funds. Detailed planning with cooperating country and drafting of implementation documents is authorized.

This authorization is contingent upon timely completion of the self-help and other conditions listed in the PROP or attached thereto.

This authorization will be reviewed at such time as the objectives, scope and nature of the project and/or the magnitudes and scheduling of any inputs or outputs deviate so significantly from the project as originally authorized as to warrant submission of a new or revised PROP.

A.I.D. APPROVAL	CLEARANCES	DATE
Signature: <i>Joel Bernstein</i> Joel Bernstein AA Technical Assistance Bur.	NESEA/TECH, J. Klume	4/26/71
	AFR/TAC, M. Belcher	4/23/71
	EA/TECH, L. Johnson	5/17/71
	LA/DR, Sleeper/Bowie	5/26/71
	VN/ND, A. Jacobs	5/26/71
	A/CONT ENGR, K. Vernon	4/15/71
TITLE	DATE	

INCREASING READY AVAILABILITY OF U.S. TECHNOLOGICAL
PUBLICATIONS OF PARTICULAR INTEREST TO
DEVELOPING COUNTRIES

April 15, 1971

INCREASING READY AVAILABILITY OF U.S. TECHNOLOGICAL
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I. OBJECTIVES

This two-year experimental project is designed to explore the value of improved availability to scientists, engineers, and large and small industrialists in developing countries of the results of specific research and development projects, of relevance to the solution of development problems, which have been carried out in the United States. This objective will be accomplished through testing the market for technical publications and by follow-up activities to determine how the reports actually were used. In addition, the project should increase the general awareness both in the United States and the developing countries of the different types of research and development activities conducted by U.S. organizations of potential application to development problems and thus provide an impetus for strengthened direct linkages between U.S. institutions and developing country counterparts.

Specifically, the project provides for quarterly distribution to selected institutions in developing countries of bibliographies and abstracts of U.S. technical books, journals, reports, articles, and other documentation reporting results of research and development of particular interest to these institutions. Initially, distribution will be directed principally to industrial and technological research institutions, industrial standards institutions, universities, technical libraries, productivity centers, and technical

departments of Ministries of Works and Ministries of Industry and Commerce in 15 - 20 AID countries. The subject matter will be limited to the fields of materials, chemistry and mechanical, industrial, civil, and marine engineering. Reports identified by the developing country institutions will be available to them at nominal reproduction costs.

This project will capitalize on the unique capabilities of the National Technical Information Service (NTIS) of the Department of Commerce which provides the central focal point for collecting, announcing, reproducing, and distributing research reports of work performed at government laboratories and by industrial firms and private institutions under contract to federal agencies. The project will initially be limited to selections from the 40,000 reports routinely available to the NTIS with subsequent consideration to NTIS screening of reports from other sources which do not pose copyright problems. Two important by products of the project will be (a) clarification of the potential application of U.S. Government sponsored research and development activities to developing countries, and (b) focusing of NTIS interests and resources on development problems.

II. PROJECT COMPONENTS

Phase I

NTIS and AID will jointly identify the types of publications of potential interest and the recipient organizations in developing countries. OAS, OECD, and UN agencies will be consulted to capitalize on their past experiences in dealing with developing country interests in areas of scientific and technical information closely related to this project. Among the topics to be considered are:

Materials - adhesives and seals; ceramics, refractories, and glasses; coatings, colorants, and finishes; composite materials; fibers and textiles; metallurgy and metallography; miscellaneous materials; oils, lubricants, and hydraulic fluids; plastics; rubbers; solvents, cleaners, and abrasives; and wood and paper products.

Mechanical, Industrial, Civil, and Marine Engineering - heating, lighting, and ventilating; construction equipment, materials, and supplies; containers and packaging; couplings, fittings, fasteners, and joints; ground transportation equipment; hydraulic and pneumatic equipment; industrial processes; machinery and tools; pumps, filters, pipes, fittings, tubing, and valves; safety engineering; and structural engineering.

Chemistry - chemical engineering; inorganic chemistry; organic chemistry; physical chemistry; and radio and radiation chemistry.

Phase II

Once each quarter during the lifetime of the project NTIS and AID will jointly identify the specific publications to be abstracted and/or identified in bibliographies.

Phase III

NTIS will prepare the abstracts and bibliographies, together with information concerning procedures for acquiring the publications, and distribute them to the selected institutions as an NTIS special series on application of modern technologies to international development.

Phase IV

NTIS will respond to requests for copies of the individual publications at a nominal cost.

Phase V

The effectiveness of the approach and the value of the publications to development will be evaluated by tabulating the number of requests from developing countries for the publications, annual questionnaires to the recipients of the abstracts and bibliographies, and spot visits to several of the recipients.

III. Funding Level

This project will be funded at \$100,000 in FY 72 and \$100,000 in FY 73 with an additional \$10,000 earmarked in FY 73 for evaluation. If the results are encouraging, the project may be expanded in future years to include greater inputs from the U.S. private research and development organizations, other subject fields, and increased number of recipients. On the other hand, if results are not encouraging, project will be terminated.

The funding will be used principally to cover the cost of preparing more detailed abstracts of NTIS publications than would routinely be done at NTIS expense and to cover additional administrative and mailing costs associated with a new series of reports. About 2.5% of the annual output of government reports, or 1000 reports per annum, should be relevant. It is expected that some 500 recipients in the developing countries will order about 10,000 titles annually. The costs will include the following items:

Preliminary evaluation;

Detailed screening;

Abstract writing;

Keyboarding, proofreading and correcting;

Printing and distribution of announcements
(500 copies);

IV. JUSTIFICATION

Many of the developing countries are entering into periods of accelerated economic growth, spurred by a belief that the application of science and technology will significantly enhance their productive capacities. According to their size, resources and level of development, they are seeking with varying degrees of success to draw on the scientific and technological knowledge of the advanced countries to further their development efforts. The explosion of scientific and technological information -- which has reached proportions aptly characterized as those of "a paper blizzard" -- has complicated the problems of the developing countries in obtaining relevant and useful technological information and has highlighted the need for special action by both the developing and advanced countries if effective partnerships in the sharing of technical knowledge are to be realized.

Experience of the developed countries has demonstrated that the effective management of scientific and technological information requires expertise of a high order, and may involve heavy investments. The costs of information management within the United States have been spiraling in the past decade and involve investments in the billions of dollars. Sophisticated and expensive techniques have been designed for the storage and retrieval

of information in such form that it can reach the final user in a suitable form and at the right time. The United States occupies a preeminent position both in the generation of knowledge relevant to economic advances and to the management of such information. Other advanced countries, notably Japan, have made enormous investments designed in part to exploit as fully as possible the knowledge available in the United States and to build on the experience of the United States in devising effective methods for diffusing such knowledge within the Japanese economy. Under bilateral arrangements and under the aegis of multilateral organizations, in particular the OECD, the United States has cooperated with other developed countries in the liberal exchange of scientific and technological information.

The developing countries have for the most part neglected the development of effective techniques to acquire the most relevant information or have approached this problem in a piecemeal and ineffective way. In recent years, as efforts have been made to build up a capability for applied research within certain developing countries, the need for developing a national capability in this important area has become recognized, and limited steps

have been taken in some countries to tap into the vast pool of technological reports available in the United States. This project is designed to complement and further stimulate such efforts.

Meanwhile, the developing countries have, out of a sense of technological frustration, sought better access to modern technologies through their "technology transfer" demands at multilateral forums. While they have been demanding better deals on licensing arrangements, we have been calling for a strengthening of the absorptive capacities of the developing countries. This project represents a specific and realistic response to the widespread interest in facilitating a flow of technologies to developing countries.

The U.S. Government funds about two-thirds of our national research and development effort which totals \$24 billion annually. Most of this activity is unclassified and is reflected in the technical reports routinely supplied by more than 125 U.S. Government activities to NTIS. NTIS organizes the reports in 21 categories, three of which have been selected as the basis for this project. In short, the project will tap into a very significant segment of the total U.S. research and development activity in the selected fields.

V. UTILIZATION OF THE TECHNICAL REPORTS IN DEVELOPING COUNTRIES

Since this type of project is useful only if the documentation provided the countries is actually used in a meaningful way, the evaluation phase will give particular attention to determining the extent to which they are used. The TA/OST project "Application of Industrial Technology Developed under NASA Auspices to the Needs of a Developing Country" has vividly shown that acquisition of technical reports is only one aspect -- but nevertheless an important aspect -- of the technology transfer process.

At one extreme, access to a technical report prepared by another organization can result in an immediate commercial product development, improvement, or adaptation activity. However, this will probably be an exceptional case under this project. At the other extreme, technical reports serve merely as an educational tool to keep professionals abreast of the state of the art in their fields.

Given the heavy dependence of developing countries on foreign industrial technology, it is envisaged that one principal use of the reports will be to keep developing countries up to date on developments in the United States and thus provide them with a better basis for decisions concerning the importation of specific technologies. Also, they will be able to profit from our experience in identifying the most promising lines of research and be in a better position to shape their research programs accordingly. Finally,

they will undoubtedly learn a number of "technological tricks" from the way specific types of research activities are conducted in the United States and save themselves enormous amounts of time, effort, and money in carrying out their own research programs in similar areas.

We have learned from the previously cited TA/OST project to transfer industrial technology developed under NASA auspices that one of the most important aspects of a single technical report is the leads it provides to the organizations, people, and other documentation that are the repositories of the years of technological development that back up the report. Similarly, in this project it is anticipated that through the reports the developing countries will enhance considerably their knowledge of where to "plug into" the reservoirs of technology in the United States.

The NASA project has demonstrated that there are many aspects of even space technology which are not too esoteric for potential application in developing countries. The reports for this project will come principally from contractors of DOD, NASA, AEC, NBS, NSF, Interior, Transportation, and HUD. A principal responsibility of the AID participant in the selection of reports to be considered under this project is to insure that they are not totally irrelevant to development and lead already over committed specialists in developing countries down blind alleys.

VI. PAST AID EFFORTS IN TECHNICAL INFORMATION

Over the years AID has supported a variety of efforts to increase the flow of technical information to developing countries. Usually, these efforts have been parts of broader technical assistance projects. Of course, there have been many book and journal distribution efforts. The principal current efforts are the RTAC textbook program in India, a PL-480 textbook program in India, and AID technical information backstopping activities provided by the Departments of Agriculture, HEW, Transportation, and HUD and by VITA and LIFE. In addition AID facilitates the distribution of technical literature through in-house staff efforts in Washington and in the field.

Several years ago AID launched a major program to distribute up-to-date technical publications to selected institutions in developing countries, utilizing the resources of the National Academy of Sciences and Franklin Books Company. That project became bogged down through delays in shipments, excessive costs, and other administrative problems, but nevertheless did succeed in heightening awareness in developing countries of U.S. activities in this field.

This project is directed to (a) increasing awareness of appropriate specialists in developing countries of relevant U.S. technical reports that are available and (b) providing a mechanism to provide these reports from a central facility at minimal cost, but (c) relying on developing countries to choose and pay for the reports which they genuinely desire.

VII. CURRENT AVAILABILITY OF THE TECHNICAL REPORTS

Several of the concerned government agencies -- particularly HUD and Transportation -- are already routinely distributing some of their most interesting reports to counterparts in developing countries. In these cases there might be some overlap with this project although it is anticipated that this project will reach a broader audience -- and particularly a broader range of scientists and engineers -- with packets organized along the lines of professional disciplines rather than organizational responsibilities. In any event, if there is minor duplication, the recipients simply will not order the documents from NTIS which they already receive through other channels.

VIII. TIMING

As soon as funds are made available for this project, a PASA will be negotiated with the National Technical Information Service (NTIS) of the Department of Commerce. NTIS is ready to implement this project at once in phases described in Section II.

Under Phase III, abstracts and bibliographies will be distributed quarterly to 500 selected institutions as an NTIS/AID special series on application of modern technologies to international development. In this regard, we assume PASA negotiations will be completed in September 1971, initial reports will be selected and preparation of bibliographies and abstracts will proceed during the second quarter of FY 1972, and the first publication of bibliographies and abstracts in the NTIS/AID special series will be distributed in December, 1971. Subsequent publications in the series will be distributed quarterly.

Evaluation of this project will be based on:

- the response of developing countries in purchasing the reports from NTIS,
- feedback queries by developing countries to original sources of research projects, and
- utilization of the reports by mission-oriented organizations in developing countries.

While overall program evaluation is scheduled for FY 1973, preliminary information on demand for the reports in developing countries should be available by summer, 1972. The information available at that time may not be sufficiently complete to justify a decision to expand the

program to include a broader number of technical fields and increased number of recipients, in which case level funding for a third year would be indicated for forward budgeting purposes. Based on evaluation information available by June 1973, a decision should be made either to expand the project, commencing in FY 1975, or terminate it.