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19

ID# 232612

THE WHITE HOUSE  
CORRESPONDENCE TRACKING WORKSHEET

0054-02

INCOMING

DATE RECEIVED: JULY 12, 1984

NAME OF CORRESPONDENT: THE HONORABLE RICHARD VON WEIZSACKER

SUBJECT: URGES FAVORABLE CONSIDERATION OF THE ENCLOSED  
PROPOSAL TO THE USIA BY MASSACHUSETTS  
INSTITUTE OF TECHNOLOGY REGARDING PARTNERSHIP

ROUTE TO: OFFICE/AGENCY (STAFF NAME)	ACTION		DISPOSITION	
	ACT CODE	DATE YY/MM/DD	TYPE RESP	C COMPLETED D YY/MM/DD

ROBERT C. MCFARLANE	ORG	84/07/12		
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*C 840713* TR

*USIA* REFERRAL NOTE: \_\_\_\_\_

*R 840716* *C 840817* DD

*CO DONO* REFERRAL NOTE: \_\_\_\_\_

*A 840713* *CP3AA 840818* DD

REFERRAL NOTE: \_\_\_\_\_

REFERRAL NOTE: \_\_\_\_\_

REFERRAL NOTE: \_\_\_\_\_

COMMENTS: *USIA*

ADDITIONAL CORRESPONDENTS: MEDIA:L INDIVIDUAL CODES: \_\_\_\_\_

MI MAIL USER CODES: (A) \_\_\_\_\_ (B) \_\_\_\_\_ (C) \_\_\_\_\_

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*ACTION CODES:          *DISPOSITION CODES:      *OUTGOING          *
*                       *                                     *CORRESPONDENCE:  *
*A-APPROPRIATE ACTION  *A-ANSWERED                *TYPE RESP=INITIALS *
*C-COMMENT/RECOM       *B-NON-SPEC-REFERRAL      *                   *
*D-DRAFT RESPONSE      *C-COMPLETED             *                   *
*F-FURNISH FACT SHEET  *S-SUSPENDED             *                   *
*I-INFO COPY/NO ACT NEC*                                     *                   *
*R-DIRECT REPLY W/COPY *                                     *                   *
*S-FOR-SIGNATURE       *                                     *                   *
*X-INTERIM REPLY       *                                     *                   *
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(ROOM 75, OEOB) EXT. 2590  
KEEP THIS WORKSHEET ATTACHED TO THE ORIGINAL INCOMING  
LETTER AT ALL TIMES AND SEND COMPLETED RECORD TO RECORDS  
MANAGEMENT.

THE WHITE HOUSE  
WASHINGTON

Date: ~~8-20/84~~

To: ~~Sara Emery~~

Should anyone else  
see this - recommended  
by State; approved  
by NSC -

A

To:

ANNE HIGGINS  
Special Assistant to the  
President and Director  
of Correspondence  
Room 94, x7610

Anne, if USIA,  
State, + NSC  
OK, then go.  
S.E.

Rec

1984 AUG 20 PM 5:09

S/RR  
wh

August 20, 1984

Dear Mr. President:

Thank you very much for your recent letter supporting the partnership between the Massachusetts Institute of Technology (MIT) and the Technical University of Berlin.

As you are aware, U.S. Government agencies have been working closely with MIT and the Technical University for some time to seek sufficient support for this program. One aspect of our effort has been to arrange funding through our official exchange program. As part of our overall effort, the United States Information Agency reviewed MIT's proposal in 1983 and recommended to Dr. Kenneth Gray, President of MIT, that the proposal be submitted in Bonn to the Commission for Educational Exchange between the United States of America and the Federal Republic of Germany. As you probably know, the U.S. Government jointly funds the Commission under the Fulbright program. The Commission is charged with disbursing most U.S. Government money for academic exchanges between our two countries. In the past, the Commission has been the vehicle for numerous institutional linkages, and this particular collaboration would seem to fall under the program's guidelines.

In addition, both USIA and the Department of State have also been working with MIT to locate private sector support for this important partnership program. We will continue to explore this possibility as well.

Like you, Mr. President, I believe that exchanges such as these make a lasting contribution to the strong and vital relationship between the United States and the Federal Republic of Germany. I appreciate your interest and support, and let me convey again my best wishes for what I am sure will be a highly successful Presidency.

Sincerely,

A

**RONALD REAGAN**

His Excellency  
Richard von Weizsaecker  
President of the  
Federal Republic of Germany  
Bonn

RR:DOS:NSC:AVH:CAD:pmv8PMN

840821

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Sincerely,

His Excellency Richard von Weizsaecker  
President, Federal Republic of Germany  
Bonn, Germany

RR/DSS/NSC/NW14/COA | 



August 17, 1984

*and / wk*  
*mail thru*  
*NSC*

MEMORANDUM FOR SALLY KELLEY

FROM:

*Paul B. Thompson for*  
ROBERT M. KIMMITT

SUBJECT:

Presidential Reply to FRG President Richard von Weizsaecker

In concert with the Department of State we have reviewed USIA's proposed Presidential reply to FRG President von Weizsacker concerning scientific and technological cooperation between MIT and the Technical University of Berlin and recommend the revised reply at Tab A. USIA's original draft and the accompanying background material are at Tab B.

Attachment

- Tab A Revised Draft
- Tab B USIA Input

*Anne -*  
*letter to Head of the Federal*  
*Republic of Germany -- thought*  
*you'd want to review, but*  
*not sure we should have*  
*this anyway - it came in*  
*Saturday.*

*[Signature]*

## NATIONAL SECURITY COUNCIL

6154

August 17, 1984

MEMORANDUM FOR SALLY KELLEY

FROM:

*Paul B. Thompson for*  
ROBERT M. KIMMITT

SUBJECT:

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## Attachment

Tab A	Revised Draft
Tab B	USIA Input

MEMORANDUM

## NATIONAL SECURITY COUNCIL

ACTION

August 17, 1984

MEMORANDUM FOR ROBERT M. KIMMITT

FROM:

PETER R. SOMMER *Peter*

SUBJECT:

Presidential Reply to FRG President Richard von Weizsaecker

RECOMMENDATION:

That you sign the self-explanatory Tab I memo to Sally Kelley.

Approve *JS*

Disapprove \_\_\_\_\_

*Steve Steiner**SES* ~~Walt Raymond~~ concurs.

## Attachments

Tab	I	Memo to Kelley
Tab	A	Revised Draft
Tab	B	USIA Input

National Security Council  
The White House

we

System #

I

Package #

6154

	SEQUENCE TO	HAS SEEN	DISPOSITION
Dep. Exec. Sec'y	1	△ All: 07	
Bob Kimmitt			
John Poindexter			
Tom Shull			
Wilma Hall			
Bud McFarlane			
Bob Kimmitt			
NSC Secretariat	2		D
Situation Room			

I = Information    A = Action    R = Retain    D = Dispatch    N = No further Action

cc: VP    Meese    Baker    Deaver    Other \_\_\_\_\_

COMMENTS

Should be seen by: \_\_\_\_\_  
(Date/Time)

*Richardson*  
*His Excellency* *Weizsäcker*  
*President* *Federal Republic of Germany*  
*Bonn, Germany*

Dear Mr. President:

Thank you very much for your recent letter supporting the partnership between the Massachusetts Institute of Technology (MIT) and the Technical University of Berlin.

*IP* As you are aware, US Government agencies have been working closely with MIT and the Technical University for some time to seek *for example* The United States Information Agency reviewed MIT's proposal in

1983, and recommended to Dr. Kenneth Gray, President of MIT, that the proposal be submitted in Bonn to the Commission for Educational Exchange between the United States of America and the Federal Republic of Germany. As you know, the U.S. Government jointly funds the Commission under the Fulbright program. The Commission is charged with disbursing most U.S. Government money for academic exchanges between our two countries. In the past, the Commission has been the vehicle for numerous institutional linkages, and this particular collaboration would seem to fall under the program's guidelines.

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*and let us again add my best wishes for what I am sure will be*

*a highly successful Presidency.*

*IP* Both USIA and the Department of State have also been working with MIT to locate private sector support for this important partnership program. We will continue to explore this possibility as well.

Sincerely,

*sufficient support for this program. One aspect has been to arrange funds through our official sector program.*

# USIA


OFFICE OF THE DIRECTOR

NOTE FOR: Ms. Sally Kelley

The background and our draft reply from the President were delivered to NSC Secretariat, per my telecon with your office last week.

*Loretta -- 6870*  
Teresa Collins

7/27/84

*Sally -  
Why did I  
get this -- original  
coming? *

# USIA

OFFICE OF THE DIRECTOR

NOTE FOR: Ms. Sally Kelley

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*L. Collins*  
Teresa Collins 6870

7/27/84

*Sally -  
Why did I  
get this -- original  
coming? CS*

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Sincerely,



840540 *Caf*

THE WHITE HOUSE OFFICE

REFERRAL

JULY 16, 1984

TO: UNITED STATES INFORMATION AGENCY

ACTION REQUESTED:

DIRECT REPLY, FURNISH INFO COPY

DESCRIPTION OF INCOMING:

ID: 232612

MEDIA: LETTER, DATED JUNE 28, 1984

TO: PRESIDENT REAGAN

FROM: THE HONORABLE RICHARD VON WEIZSACKER  
BONN GERMANY

SUBJECT: URGES FAVORABLE CONSIDERATION OF THE ENCLOSED  
PROPOSAL TO THE USIA BY MASSACHUSETTS  
INSTITUTE OF TECHNOLOGY REGARDING PARTNERSHIP

PROMPT ACTION IS ESSENTIAL -- IF REQUIRED ACTION HAS NOT BEEN  
TAKEN WITHIN 9 WORKING DAYS OF RECEIPT, PLEASE TELEPHONE THE  
UNDERSIGNED AT 456-7486.

RETURN CORRESPONDENCE, WORKSHEET AND COPY OF RESPONSE  
(OR DRAFT) TO:  
AGENCY LIAISON, ROOM 91, THE WHITE HOUSE

SALLY KELLEY  
DIRECTOR OF AGENCY LIAISON  
PRESIDENTIAL CORRESPONDENCE

*Return draft +  
background to NSC,  
per FC. Telecon w/  
Sally Kelley's office  
+ NSC Secretariat.*

RECEIVED 14 AUG 84 12

TO PRESIDENT FROM WEIZSACKER, RICHARD DOCDATE 28 JUN 84  
 COLLINS, T 27 JUL 84

KEYWORDS: GERMANY F R HS GRAY, KENNETH  
 USIA PAHL, PETER JAN

SUBJECT: MIT PROPOSAL FOR EDUCATIONAL EXCHANGE BTW US & TECHNICAL UNIV OF  
 BERLIN

ACTION: PREPARE MEMO FOR MCFARLANE DUE: 16 AUG 84 STATUS S FILES WH

FOR ACTION	FOR CONCURRENCE	FOR INFO
SOMMER	RAYMOND <i>Steiner</i>	SESTANOVICH
		COBB
		MATLOCK
		LEHMAN, R
		THOMPSON

COMMENTS

REF# 232612 LOG NSCIFID ( HW )

ACTION OFFICER (S)	ASSIGNED	ACTION REQUIRED	DUE	COPIES TO
<i>C</i>	<i>8/17</i>	<i>THOMPSON SEND MEMO</i>		<i>PS SS PT RK</i>

DISPATCH *ET 8/17* W/ATTCH FILE *WH* (C)  
*E.7.*

# 232612

6154

NSC  
Richard von Weizsäcker

Bonn, den 28nd June, 1984

The President  
of the United States of America  
The White House  
Washington, D.C.  
USA

Mr. President,

Scientific and technological cooperation is a significant component of the ties between Berlin and the United States of America. As former Governing Mayor of Berlin, I have enhanced this cooperation by sponsoring the Partnership between the Massachusetts Institute of Technology and the Technical University of Berlin. This Partnership is based on complementary research projects beneficial to both sides. The enclosed report outlines the scope of the activities.

The Senate of Berlin has provided program funding for the German side of the Partnership. The Massachusetts Institute of Technology has not yet been able to gain comparable program support in the United States. I am concerned that the Partnership may, as a consequence, lose some of its vitality and influence.

In view of the significance of close scientific and technological ties for our countries, I would highly appreciate your favorable consideration of the enclosed proposal submitted by the Massachusetts Institute of Technology to the United States Information Agency, or of some other form of adequate program support for the American side of the Partnership.

Permit me before assuming in a couple of days my new task as President of the Federal Republic of Germany, to submit to you, Mr. President, this request quite informally.

With best personal wishes  
yours faithfully,

R. Weizsäcker

## Executive Summary

### PARTNERSHIP

#### Technische Universität Berlin - Massachusetts Institute of Technology

##### Status

The Partnership was founded in 1964 with support by the Ford Foundation and enhanced in 1982 by an Agreement of Cooperation in Research. The two universities conduct coordinated research projects on the factory of the future, advanced bridge engineering, technology and development, future of the automobile and materials for new technologies, which are described in an appendix. Joint seminars and workshops have been held on topics such as production technology, earthquake engineering, circuit design and personal computers.

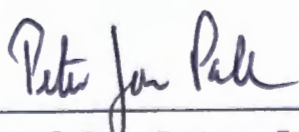
##### Funding

Activities at the Technische Universität are funded by the Senate of Berlin (1 Mio DM/year), the general university budget (0.1 Mio DM/year) and sponsored research. In spite of intensive efforts, M.I.T. has not been able to raise the 500.000 \$/year required as base funding comparable to that provided by the Senate of Berlin.

The lack of financial support for M.I.T. is a substantial threat to the future of the partnership. Scientists at M.I.T. must find external funding to be able to conduct their research. The existing vitality of the partnership, which is mainly due to personal engagement, will substantially diminish if adequate funding cannot be secured.

##### Request

The Partnership contributes to the ties between the United States and Berlin. It has been endorsed repeatedly by high-ranking politicians of both countries. Financial support in Berlin has not yet been matched by equivalent support in Washington. We request the Federal Government of the United States to grant political priority to financial support for our partners at M.I.T.. The attached proposal outlines the required program funding.



---

o.Prof.Dr. Peter Jan Pahl  
TUB Coordinator of the Partnership

## STATUS REPORT ON THE PARTNERSHIP

between the

TECHNISCHE UNIVERSITÄT BERLIN

and the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

---

### Purpose

This status report was prepared because the halfway point for the agreed upon first three year period has just passed. A status report and review of the development of the partnership are therefore necessary.

### Scope of the Partnership

The partnership between the Massachusetts Institute of Technology (MIT) and the Technische Universität Berlin (TUB) was founded in 1964. Objectives were the exchange of scientists, cooperation in research, acquaintance with the differing university systems, as well as enhancement of the ties between Berlin and the United States of America. The Ford Foundation created a generous financial framework in which these ideas could be pursued. Within the first years of the partnership, many scientists took part in the exchange, which had a lasting impact on their work.

A decline in the scope of the partnership in the wake of changing conditions at the universities in the early 70's was followed by a strong revival since 1980. A basis agreement to revive the MIT/TUB Partnership was reached in September 1980 by President Paul E. Gray, MIT, and President Jürgen Starnick, TUB. During the period from September 1980 to June 1982, the concept for the new partnership was developed by Professors A. Keil (MIT) and P. Pahl (TUB) as follows: 'To initiate and conduct complementary research

of importance to the development of both universities and both countries'. During the same period, areas for possible cooperation were explored.

After the signing of the partnership agreement in June 1982 and the establishment of funding for the TUB-part of the partnership by the Senate of Berlin, the following areas of cooperation were established by Vice President Professor K. Smith, MIT and Professor P. Pahl, TUB, and cooperative research is now proceeding or is in an advanced planning process:

- Advanced Bridge Engineering
- Energy Research
- Future of the Automobile
- Future of the Factory
- Materials for new Technologies
- Technology Adaptation

A progress report on the developments in each of these areas is attached (appendices 1-5). During the same period, substantial efforts were made to identify additional areas for effective cooperation in research:

- Microelectronics: VLSI/CAD
- VLSI Related Electronics Materials
- Medical Engineering
- Technology and Management
- Chemical Engineering
- Computer Architecture

The development in these areas, in which cooperation on broader projects has not been achieved as yet, is described in appendices 6-11.

### General activities

MIT has briefed TUB colleagues, for instance on the operations of the Energy Laboratory, the Center of Transportation Studies, the Whitehead Institute of Biomedical Research, the Center for Advanced Engineering Studies, the Industrial Liaison Program and the various interactions with industry.

The partnership has conducted workshops and seminars, both at Boston and at Berlin, on the following topics:

- VLSI: Design of highly integrated circuits
- Construction in earthquake regions
- Design, maintenance and repair of bridges
- Future of the automobile
- Production technology
- Future of the factory
- Personal Computers.

Results of complementary research projects of the partnership have been published as 'Reports on Cooperative Research':

- Bridge Design in Germany
- Durability of Concrete Bridges
- Concrete Bridge Deck Deterioration and Repair
- Automobile Technology for the Year 2000
- The Future of the Factory
- Product and Production Technology of Future Automobiles

Additional reports are in preparation.

## General Observations and Conclusions

A number of general observations can be made and conclusions can be drawn based on the experience gained during the planning phase for the partnership and the 18 months since the partnership was signed and established:

1. The envisioned complementary research efforts under the partnership can be established if at least one professor from MIT and one from TUB can be identified in the area under consideration, who accept the responsibility for developing cooperation. Together, they have to conceive a concept for a major project area, and each has to inspire colleagues at his university to participate in the formulation and execution of such research.
2. The complementary research approach works better if there are already related ongoing team efforts in existence at each university. It appears that coordinated larger team efforts, which are rather common at MIT, are not so easily established at TUB.
3. The individual complementary research projects under the partnership must be mutually stimulating. Otherwise, effective cooperation is unlikely.



### Special Aspects at M.I.T.

1. The fact, that during 1981-1983 a total of over 30 different MIT faculty members visited TUB, indicates the interest of MIT faculty members in the partnership.
2. Financial support for MIT's operation of the partnership was expected from the U.S. Federal Government as well as U.S. Foundations, but has not materialized in spite of diligent efforts. Nevertheless, a substantial number of MIT professors voluntarily contributed time toward achieving cooperation in complementary research. The MIT investment in developing the partnership and in preparing for and establishing such research programs amounts to more than \$100.000 per year for the three years 1981-1983. About 25% of this amount were direct allocations of MIT funds and about 75% is the value of voluntary contribution of their time by individual MIT faculty members.
3. The lack of program funding at M.I.T. clouds the future of the partnership. The faculty at M.I.T. depend on external financial support for their research activities. The personal engagement of individual professors and administrators cannot, in the long run, replace a sound financial basis.

### Special Aspects at TUB

1. At TUB, 51 faculty members and co-workers are engaged on active research in partnership projects. The salaries of 16 researchers are paid out of partnership funds. During 1981-1983, 42 different TUB faculty members visited M.I.T., many of them more than once.
2. The Senate of Berlin supports the partnership with DM 1 Million per annum, which is made available as part of the budget of TUB. These funds are mainly used for research projects at TUB. They are augmented by sponsored research. TUB supports the partnership by an additional amount of DM 100.000 per annum which is used for the development of new projects.
3. Efforts to acquire sponsored research funding on a project basis have met with varying success. Project areas like future of the factory, future of the automobile and materials for new technologies were able to maintain the desired ratio of 3:1 between direct project sponsorship and partnership funds provided by the senate. The technology adaptation area has made strong efforts to gain support from sources like the European Community and the Volkswagen Stiftung. Other areas, like bridge engineering are just beginning to gain external support.
4. The partnership has enjoyed strong support by the Senate of Berlin, as witnessed by visits of the Senator for Science and Research Professor Kewenig, and his Senatsdirektor, Dr. Schuster, to M.I.T..

A Proposal to the

UNITED STATES INFORMATION AGENCY

to Support the

M.I.T.-T.U.B. COOPERATIVE PROGRAM

Submitted by the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

June 1983



CONTENTS

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II. Background . . . . .	3
III. Areas for Cooperative Research . . . . .	5
IV. Conclusion . . . . .	11

## I. INTRODUCTION

The Massachusetts Institute of Technology proposes that the United States Information Agency (U.S.I.A.) consider a grant of \$300,000, payable over three years, to help support a new phase of M.I.T.'s cooperative research program with the Technical University of Berlin (T.U.B.).

The program with T.U.B., which began in the 1960s, has served as an important link in advancing cultural and academic ties between the United States and the Federal Republic of Germany. The new phase of the program was initiated in 1982 by an agreement between the two universities. The new phase will encourage continued cooperation between the administrations and faculties of both universities in advancing important areas of technological and economic development. It will also advance the evolution of both universities, and serve as an example for cooperative arrangements with universities throughout the world.

The \$100,000 per year which M.I.T. is requesting from the U.S.I.A. would support the "start-up" phase of the renewed research and exchange program. Specifically, it would fund:

- o visits between M.I.T. and T.U.B. faculty and administrators involved in identifying promising areas of complementary research;

- o workshops for initial studies of possible areas for cooperation, developed by faculty members from both universities;
- o joint development of plans for complementary research.

Research areas under consideration include: robotics and manufacturing, advanced bridge engineering, various projects related to energy, the future of the automobile, and technology adaptation for developing countries. Cooperative efforts are already under way in several of these areas. Once the joint research projects are defined and the start-up phase completed, M.I.T. and T.U.B. will seek research funding from both U.S. and West German sponsors.

The cooperative program has received endorsements from the U.S. Department of State, the U.S. Embassy in Bonn, and the government of the city of West Berlin. M.I.T. has made substantial contributions to the program, particularly through major commitments of faculty time and, when possible, through funding from Institute resources. In addition, the program has received important support from the Berlin Senate, which has allocated DM 1 million per year for three years to T.U.B. for the program, beginning in 1983. The proposed grant from the U.S.I.A. to M.I.T. would demonstrate the United States' commitment to this important research partnership and the continuance of close ties to the Federal Republic of Germany.

## II. BACKGROUND

The M.I.T.-T.U.B. cooperative program began in 1964, with funding from the Ford Foundation.\* In the 1960s the program consisted primarily of the exchange of individual faculty members (and their families) for periods of up to one year, without focusing on the achievements of research cooperation in any particular areas.

The program also involved several large conferences. For example, a joint summer conference, "The Computer in the University," held in Berlin in 1968, involved twenty-nine M.I.T. professors and attracted more than 600 registered participants from twenty-two nations. This conference not only discussed guidelines for the establishment of computer science departments, which were followed by many German universities, but also led to the installation of a large IBM time-sharing computer at T.U.B. Another major conference, "M.I.T.-T.U.B. Joint Conference on Environmental Problems and Environmental Education," was held at T.U.B. in June, 1974. The cooperative program lost momentum, however, in the mid-1970s, when the Ford Foundation redefined its mission, and changes in the administration and governance of T.U.B. made interaction difficult.

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\* In its first year, the program received a \$100,000 grant from the foundation. An additional \$485,000 was given to the program by the foundation over the following ten years.

In 1980, M.I.T. President Paul Gray and T.U.B. President Jürgen Starnick agreed to reactivate cooperation through a new partnership agreement. The program was conceived as a group of large-scale research ventures which would be of importance to the evolution of both universities; would involve graduate students as well as faculty; and would offer opportunities for continuing interaction. As a first step, Professor Peter Pahl from T.U.B. and Professor Alfred Keil, former dean of M.I.T.'s School of Engineering, were asked to conduct a joint feasibility study for this new type of cooperative program and to identify viable research areas. Initial exploration proved very promising, and in June 1982, Howard Johnson, chairman of the M.I.T. Corporation, and President Starnick signed an agreement for cooperative research. Since that time, interaction between faculty and administrators from M.I.T. and T.U.B. has increased substantially.

The contributions of M.I.T. and T.U.B. to the program through faculty time have been considerable. In the past three years, nineteen M.I.T. faculty members have visited T.U.B. (seventeen for the first time), and sixteen T.U.B. faculty members visited M.I.T. (fifteen for the first time). President Starnick visited the Institute twice, and M.I.T.'s two associate provosts, Kenneth Smith and Frank Perkins, visited T.U.B. In addition, in 1982 M.I.T. provided a



special two-day briefing for Wilhelm Kewenig, Berlin Senator of Science and Cultural Affairs. Professor Kewenig visited M.I.T. to evaluate the viability of the cooperative program. As a result of that visit, he proposed, and obtained approval for, a grant of DM 1 million per year for three years from the Berlin Senate for T.U.B.'s participation in the program.

This increased interaction has stimulated a wide range of academic exchanges (which are described in the following section of the proposal). In 1983 a symposium, "The Future of the Factory: Manufacturing Research at M.I.T. and the Technical University of Berlin," was held on the M.I.T. campus. This conference attracted three-hundred participants, and a follow-up to the conference will be held in Berlin this fall.

### III. AREAS FOR COOPERATIVE RESEARCH

The M.I.T.-T.U.B. Cooperative Research Program is designed to enhance the research programs at both universities and to be mutually advantageous to the United States and the Federal Republic of Germany. Cooperative efforts will focus on research and engineering developments which are the mainstay of industrial society.

The five areas currently identified for initial cooperative research are:

1. Robotics and Manufacturing

After visiting T.U.B. in 1981, Professor Alfred Keil gave an enthusiastic report on the work of T.U.B. Professor Günther Spur, in the area of production technology. Professor Spur then came to M.I.T. and visited the Laboratory for Manufacturing and Productivity, the Materials Processing Center, and the Artificial Intelligence Laboratory. A team of M.I.T. faculty members, led by Professor Herbert Richardson, then visited T.U.B. to become familiar with Professor Spur's research activities. The joint conference, "Future of the Factory," resulted. At the conference, potential areas for collaborative research were identified. They include: the future of the factory; sensor technology in manufacturing; computer-aided construction; computer-controlled manufacturing; grinding technology; and robotics.

Collaborative work in these areas will be conducted under a tripartite arrangement among M.I.T., T.U.B., and a consortium of multinational industrial firms who share an interest in the research. Projects will be carried out independently at each university. The research results will be reviewed jointly twice a year, and future research directions will be discussed at those review sessions.

## 2. Advanced Bridge Construction

The initiation of collaborative efforts between M.I.T. and T.U.B. in advanced bridge engineering was motivated by the recognition in both Germany and the United States of the need to develop efficient and economical methods to rehabilitate bridges, and the need for innovative designs for new bridges.

M.I.T. and T.U.B. are both known worldwide for their strengths in the area of civil engineering. During the past three years, three joint workshops on advanced bridge engineering were held at M.I.T., and one was held in Berlin. As a result of these preliminary conferences, areas of interest for cooperative research have been identified. They include: inspection techniques and safety criteria for existing bridges; maintenance and strengthening of existing bridges; mathematical modeling and experimental investigations of joints; and innovative design concepts.

Both M.I.T. and T.U.B. have unique, yet complementary contributions to make to this collaborative research program. The strengths of the research team from T.U.B. are in the areas of innovative design, field experience, and experimental techniques. The strengths of the M.I.T. team are in the areas of fundamental structural mechanics, analytical and

numerical modeling, and experimental techniques in structural engineering.

Advanced bridge construction is of particular interest in the United States because the safety of aging bridges is currently a major national issue and one focus of the current program to rebuild our nation's infrastructure.

### 3. Transportation

In 1980 M.I.T. launched a multi-year international study on the future of the automobile. The study is partially sponsored by the German Marshall Fund of the United States. The program analyzes and contrasts current auto strategies and future policy options in the United States, Western Europe, and Japan. It addresses ways to understand better how companies, governments, and organized labor deal with the complex, changing systems of auto production, employment, and trade within and between nations. Researchers from T.U.B. are now participating in this program and plan future collaboration.

### 4. Energy

Initial discussions between researchers at M.I.T. and T.U.B. have identified three major areas for joint research related to energy: energy conservation; energy systems for the future; and electric power networks.

In the area of energy conservation, research concentrates on teaching practicing engineers new approaches to energy-saving in their respective industries. The research builds on project PROCEED, which was conducted through M.I.T.'s Center for Advanced Engineering Studies in the late 1970s. Dr. Dietmar Winje, of T.U.B. and now visiting associate professor in M.I.T.'s Department of Nuclear Engineering, is leading this project.

Another project, Energy Systems for the Future, is being planned by researchers in the M.I.T. Energy Laboratory. This project, which will also involve Professor Winje, may lead to a complementary West German project conducted under the new M.I.T.-T.U.B. partnership.

The third area of interest, electric power networks, would continue the long-standing cooperation among M.I.T. Professors John Kassakian, James Kirtley, and Fred Scheppe, and T.U.B. Professor Dieter Filbert. Possible topics include the economics of electricity supply, cost-dependent rates for electricity, load distribution in electricity nets, and the use of measurements for control and adjustment of electricity nets.

##### 5. Technology and Development

In 1981, two M.I.T. professors visited T.U.B. and discovered that several T.U.B. activities in technology

transfer were complementary to work under way at M.I.T.'s Technology Adaptation Program (an interdisciplinary program which focuses on the transfer and adaptation of technologies to the needs of developing countries). A joint workshop followed in the fall of 1982, when several T.U.B. faculty members visited M.I.T. Since that time, a joint team from M.I.T. and T.U.B. visited possible collaborating universities in Turkey and Portugal.

M.I.T. and T.U.B. are now involved in developing a collaborative program on science, technology, and development with the Middle East Technical University in Ankara, Turkey, the Universidade Technico de Lisboa, and the Universidade Nova de Lisboa. Both M.I.T. and T.U.B. have had extensive experience in collaborating with institutions in other countries and in upgrading their capability to participate in the development process.

The overall objectives of the proposed collaborative program are to study the role of science and technology in a country's economic development; to identify appropriate science and technology infrastructures needed to sustain a viable science and technology capability; and to develop mechanisms for strengthening the training of scientists and engineers.

IV. CONCLUSION

During the past several decades, many close academic and cultural ties have developed between the United States and the Federal Republic of Germany. There is concern, however, that many of the close ties formed in the decades following World War II will not be maintained unless a "successor generation" of scholarly exchange is developed. Many of the Americans who have traditionally provided important links to colleagues in the Federal Republic are now retiring from active research and teaching activities.

M.I.T. views the cooperative venture with T.U.B. as an important step in maintaining close U.S.-West German interaction. The Institute is hopeful that the renewal and expansion of the cooperative program will help facilitate the development of new relationships among younger faculty members and graduate students, promote research and educational programs at M.I.T. and T.U.B., and advance technological and economic development of importance to both nations.

The proposed U.S.I.A. grant of \$300,000, payable over three years, would give tremendous impetus to the M.I.T.-T.U.B. program. Coupled with M.I.T.'s commitment of faculty time, these much-needed start-up funds would help to promote the exchange of faculty, arrangement of preliminary workshops,

and expansion of agreed upon cooperative research efforts. In addition, the proposed grant would provide the framework for the development of additional long-term research projects between two of the world's leading universities for science and technology.





OFFICE OF THE PROVOST

June 21, 1983

John Kornblum, Director  
Office of Central European Affairs  
United States Department of State  
State Department - German Desk  
Room 4228  
Washington, DC 20520

Dear Mr. Kornblum:

Enclosed is a copy of a proposal which MIT has recently submitted to the USIA. As you will see, this proposal requests \$300,000, payable over three years, to foster a program of cooperative research between MIT and the Technical University of Berlin (TUB). We believe this to be an innovative and important program, both culturally and technically.

I have just returned from a trip to Germany which provided an opportunity for me to observe the uniformly high level of enthusiasm which exists there toward this program. One measure of this enthusiasm is the decision by the Senate of the city of Berlin to allocate for this joint venture DM 1 Million per year to the TUB for three years beginning in 1983. I also learned that you will be in Bonn on June 24 for discussions of the German-American cultural agreement and that Dr. Freitag, of the Division of Cultural Affairs in the German Foreign Office, may then speak to you concerning the importance of this proposal. I would not wish for you to be caught unaware on that occasion, and it is that fact which explains the haste with which I am dispatching this brief note. For this same reason, I am sending an identical note to Mr. Wick.

We hope that you will share our enthusiasm for this proposal and that you may wish to champion it. Perhaps it could be an element of the cultural agreement. In any event, I would be happy to discuss it further with you, either by telephone or in person and either in advance of your trip or subsequent to it. Indeed, my colleagues and I would welcome such an opportunity.

With best wishes for a pleasant and productive journey.

Sincerely,

Kenneth A. Smith, Associate  
Provost and Vice President  
for Research

KAS/e  
Enclosure

CC: S. McKnight (USIA)



OFFICE OF THE PROVOST

June 21, 1983

Charles Wick, Director  
United States Information Agency  
400 C Street, S.W.  
Room 800  
Washington, DC 20547

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Sincerely,

Kenneth A. Smith, Associate  
Provost and Vice President  
for Research

KAS/e  
Enclosure

cc: S. McKnight (USIA)

Information Agency

Washington, D.C. 20547



USIA

September 30, 1983

OFFICE OF THE PRESIDENT ROOM 3-208
OCT 20 1983
REF. TO _____

Dear Dr. Gray:

I am writing in regard to your proposal submitted to Dr. Stephen A. McKnight for a grant to support a cooperative research program between M.I.T. and the Technical University of Berlin (T.U.B.). Dr. McKnight recently left the Agency to return to his university, and since my appointment as his successor, I have been trying to follow-up on matters in process. I regret the tardiness of this reply.

XC. NCL  
KAS  
DEVELOPME  
NCL

We welcome private exchange initiatives and compliment you on your innovative approach toward revitalizing joint U.S. - German scholarly endeavors. We deeply regret that, following a thorough review of the project with our Embassy in Bonn and with other Agency officials, we are unable to provide the general funding which you have requested.

As you may know, in Western Europe we provide financial support for academic exchanges only through the binationally governed and financed commissions such as the Fulbright Commission in Bonn. Therefore, we suggest that, if Dr. Smith has not already done so, he or the T.U.B. may wish to explore with the Fulbright Commission in Bonn the possibility that individuals participating in your exchange might obtain grants under its program. There are each year a substantial number of grants available for German and American researchers and students. Since the Commission is well aware of the importance of academic ties between Berlin and American institutions, I am confident that it would wish to be of any appropriate assistance.

Dr. Paul E. Gray  
President  
Massachusetts Institute of Technology  
Cambridge, MA 02139

M. I. T. Development Office

10/20/83

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Unfortunately, we have been unable to locate any other likely sources of financial support to suggest. We had hoped the Tricentennial celebration would generate funds for use in such educational exchange projects, but this has not been the case to date.

Thank you again for bringing the project to our attention. We hope you will be successful in your efforts to strengthen and expand the relationship between M.I.T. and T.U.B.

Sincerely,

A handwritten signature in cursive script that reads "Jeanne J. Smoot". The signature is written in dark ink and is positioned above the typed name.

Jeanne J. Smoot  
Director  
Office of Academic Programs

ARTICLE BY: Professor Peter Jahn Pahl of Technical University Berlin on

TRANSATLANTIC PARTNERSHIP  
(COOPERATION OF TECHNICAL UNIVERSITY BERLIN WITH MASSACHUSETTS INSTITUTE OF TECHNOLOGY)

The multitude of connections between the Technical University Berlin and universities and research establishments in foreign countries go back to its predecessor; the Technische Hochschule Charlottenburg. Established in the Capital of Germany, it encompassed tasks which led to contacts with people and institutions in many countries.

After World War II, the connections of TUB to foreign countries had to be rebuilt under drastically changed conditions. Due to its insular location, TUB had lost a large part of its contacts. Many tasks which formerly were brought to TUB scientists by the central administrations and the technical sections of Berlin's large enterprises have been lost because many of these segments of large industries relocated in West Germany. Attempts to compensate for these losses by means of newer industries in Berlin have, up to now, not been successful.

The loss of the advantages of the pre WWII situation and the present disadvantages just described forced TUB to find new ways and to make special initiatives. This is also true for TUB's relation to foreign countries. The classical methods of scientific exchanges by means of publications, travel, and presentation of papers are inadequate under the present circumstances. The substantial losses in Berlin can only be reduced especially for the engineering sciences by intensifying the contacts outside Berlin, and if new forms of cooperation are developed between scientists and institutions, with industry and Government participating as partners. The transatlantic partnership of TUB/MIT is such a new form of scientific cooperation.

In 1964, the first partnership agreement between TUB and MIT was signed. Goals were exchange of scientists, scientific cooperation, mutual familiarization with the different university systems, as well as the fostering of closer ties between Berlin and the United States. The Ford Foundation provided the generous support for the realization of this idea.

The capabilities and performance of both universities and the favorable conditions of the Ford Grant created opportunities which were not available for the participating scientist outside the partnership. The first years of the partnership were characterized by a special effectiveness. Many scientist participated in the exchange with enduring impacts on their careers. This initial period climaxed in the international conference. "The computer in the university" 1968 at TUB. This conference has a lasting impact on the use of computers at German universities.

After 1970, events took place at both universities, which diverted attention from the partnership. The reverberations of university politics have left deep scars in Berlin. The massive support of the program by the Ford Foundation was replaced by modest financing through the TUS budget, which did not offer the opportunities, particularly to MIT colleagues which the original program had offered. This led to a substantial reduction of the activities.

In September 1980, Professor Juergen Starnick, President of TUB, visited MIT. Together with the President of MIT, Dr. Paul E. Gray determined the principles for a revitalization of the partnership on the basis of complimentary research. The Senate of Berlin strongly supports this change in the partnership. In March, 1982, Senator Kewenig visited MIT to check out the prerequisite for a successful cooperation in the newest areas of scientific developments at MIT. Together with Senator Pieroeth (Commerce and Transportation), he was informed about the impact of new technical developments at MIT on greater Boston. Dr. Howard Johnson, Chairman of the MIT Corporation, visited Berlin on invitation of the Governing Mayor von Weizsacker on the occasion of signing the new partnership agreement in June, 1982.

The goal of the MIT/TUB Partnership is the cooperation in mutually agreed upon research projects in the engineering and natural sciences. This partnership is based on a new form of scientific cooperation between two universities which are geographically far apart, with the following characteristics:

- first contacts via the respective spokesman for the partnership;
- preliminary planning in selected areas by means of mutual visits;
- workshops to define and agree upon research projects;
- obtaining of outside resources for the research projects;
- regular contacts during the execution of the research;
- joint symposia and publications for the transfer of research results to practical applications.

Several factors qualify both universities as especially appropriate research partners:

- Berlin and Boston are centers of scientific and technical developments with a multitude of research institutes.
- MIT has a world-wide respect as one of the leading technical universities of our times.
- Both universities are striving for a closer cooperation between science and industry.
- The major thrust at MIT and the major thrust at TUB is in the engineering and natural sciences.

The following benefits will accrue to TUB and MIT from the Partnership:

- TUB can demonstrate its performance in an international context;
- the sphere of impact of strong departments at TUB is expanded, manufacturing technology, vehicle construction, bridge building;
- strong fields at MIT support the development of comparable fields at TUB, i.e., micro electronics.
- Fields of comparable strength at TUB and MIT compliment each other in equipment and research capacity, i.e., the energy sector, application of data processing projects in developing countries;
- the cooperation with MIT can facilitate the understanding for appropriate structural changes at TUB, i.e., Industrial Liaison Program, Center for Policy Alternatives, Personnel Policy in connection with opening up new research areas.

For Berlin and the United States, additional advantages accrue for the partnership:

- the knowledge available at MIT for the high technology area around Boston can be used for establishing new technologies in Berlin;
- the friendship between FRG and USA will be strengthened as a result of the experience of the participating scientists and the joint successes in research projects;
- joint efforts in projects in developing countries will demonstrate the bonds between the FRG and USA;
- Scientists who because of their personal work-experience are familiar with technologies and research approaches in both countries can enhance the cooperation between industries in Germany and the United States.

Initiatives of participating scientists in 1981 and 1982 have resulted in several complimentary research projects. On most such multi-disciplinary projects, about five to ten scientists are participating. They remain in their individual departments. Each area has a spokesman.

The area TRANSPORTATION is dealing with the future of the automobile, future development methods, and production technologies, demands and concepts for future automobiles, transportation systems in cities, and changes in use patterns of automobiles.

The area MANUFACTURING TECHNOLOGY addresses the future of factories; robot technology, sensor applications in manufacturing, grinding technology, computer aided design, and computer controlled manufacturing.

The area CONSTRUCTION addresses new technologies for bridge building, technology of segmented concrete construction, design and construction of segmented bridges, durability and expected life times, as well as maintenance and repair of existing bridges.

The area ENERGY SECTOR addresses energy conservation, methodology for industrial energy savings, case studies in the chemical industry, cost dependent rates for electric energy as well as control and load distribution in electric nets.

The area ELECTRONIC addresses the design of highly integrated circuits and computer networks, design methodology for highly integrated circuits, computer aided design systems, manufacturing and testing of integrated circuits as well as data technology for computer networks.

The area TECHNOLOGY AND DEVELOPMENT addresses joint projects both universities in developing countries, logistics for supplying the population and industry, logistics for facilitating import and export as well as transportation, storage and transfer systems.

The Technical University Berlin supports the activities of the partnership in part out of its own budget to make possible the development of contact between interested scientists and for the formulation of complementary research projects. This phase is carried out by means of joint workshops and seminars. During 1981 and 1982, meetings addressed the following themes: future of the automobile, load distribution, and rates in electric power nets; bridge engineering, manufacturing technology, earthquake proof design, the factory of the future, highly integrated circuits, as well as technology and development.

If the initiatives of a group of scientists lead to an area of cooperation, this area (by simultaneous decision of MIT and TUB) is accepted into the partnership. The activities in the accepted areas are supported at TUB out of allocation of one million DM per year from the Senate of Berlin. The amount of support allocated to an area depends on the amount of research support obtained from outside sources. The external evaluation of the proposals for outside support assures an independent control of performance.

The United States and the Federal Republic Germany are now engaged with renewal of their industries. This requires the introduction of technologies which are important for the future, the management of these technologies and the financing of new enterprises. The knowledge developed or exchanged as a result of the partnership can facilitate this process. Parallel to the research projects, a special transfer mechanism is therefore being developed in cooperation with industry and the



Senate of Berlin for transferring the knowledge available in both universities and in both countries. The Industrial Liaison Program of MIT, which has proven to be an effective window to industry, serves as model.

The accomplishments of the partnership between TUB and MIT are to be assessed after a three year period. Then, it will be possible to determine whether incentives and opportunities, which the partnership offers have led to a special benefit for the participating scientists and institutions.