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CAIRO UNIVERSITY/MIT TECHNOLOGICAL PLANNING PROGRAM

REPORT TO

USAID EVALUATION TEAM

DECEMBER 1982

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PART I: RESPONSE TO THE RECOMMENDATIONS OF THE JUNE 1980 EVALUATION TEAM

GENERAL

1. "Continue the AID/MIT/Cairo U Program with modifications to insure a transition to an independent Egyptian capability."

Three specific suggestions were made within this recommendation:

- a. "More planning emphasis should go to institutional characteristics of success."

The Scope of Work approved for the extension of the CU/MIT Program in October 1980 included several new activities directed toward institutionalization. However, delays were encountered in this institutionalization process, and for several reasons it was agreed in the spring of 1982 that the final phase would be extended and reorganized to achieve this goal. Therefore a new scope of work was jointly prepared by MIT and CU based on:

1. The recommendations of the 1982 evaluation.
2. USAID/Cairo recommendations during the spring of 1982.
3. Priorities and directions suggested by the recently appointed Director of the Center.

The overall objectives of this "institutional phase" are described on page 5 of the Proposal to USAID for a supplement to and extension of the existing contract with MIT for the CU/MIT Program. The Proposal is attached as Appendix A to this report.

Several important changes at the Center make the more precise definition of the final phase possible. These are noted on page 4 of the Proposal, and in summary are:

1. Greater participation by the Cairo University Executive Committee of the CU/MIT Program in the management of the Center. All are now members of the Center's Board of Directors.

2. Appointment of a new Center Director.
 3. Establishment of clearer guidelines for new Center activities.
 4. Phasing out of ongoing Center activities which are not consistent with these guidelines.
- b. "Research projects should be selected or directed to help parts of the University or ministries which need more experience with research."

Since June 1980 seven CU/MIT research projects have been phased out and six new ones initiated (including one mini-project). These projects involve several new CU faculties and GOE ministries which are presented on Tables 1 and 2. Table 1 also gives an indication of the strong interdisciplinary nature of these projects, which the Program has encouraged.

Furthermore, in establishing the doctoral and postdoctoral fellowships in 1981, the Deans of the four relevant CU faculties (Engineering, Science, Economics and Political Science, and Commerce) were all asked to nominate candidates in a conscious effort to broaden the base of involvement (see Table 3).

- c. "Training which occurs as part of the conduct of research projects should be supplemented in some particulars."

This recommendation will be discussed under Recommendation #3 for MIT, below.

2. "Clarify the purpose and end-of-project status."

The end-of-project status was defined in the fall of 1980, and can be briefly stated as follows:

Cairo University: For those departments which can contribute to the development goals of the government, a nucleus of faculty will have been trained through the program, who will be able to continue similar activities with the Center.

GOE Ministries: In those ministries whose function addresses the development goals of Egypt, a nucleus of personnel will have been trained in planning and coordinating interdisciplinary and cooperative research. Organizational changes will have taken place which will facilitate usage of the research techniques and approaches emphasized by the Program.

Development Research and Technological Planning Center: A Center will have been established at Cairo University as a permanent mechanism to conduct applied research activities related to the priority requirements of Egyptian economic and social development. A solid administrative infrastructure will have been developed and maintained, which will be capable of managing several types of research and educational activities. The Center will have demonstrated its ability to attract substantial amounts of funding to support these activities.

A set of indicators for the "end of project status" were developed during the preparation of the Proposal for the final phase, and are listed on pp. 18-20 of Appendix A.

MIT RECOMMENDATIONS

1. "In collaboration with Cairo U and USAID, develop a three year operational plan."

As mentioned previously, CU, USAID, and MIT all participated in developing a comprehensive Proposal for the final phase during the spring of 1982. Special material was prepared for the 1982 evaluation team on the current status of the Center, with regard to the following general indicators of success:

1. Development of an organizational structure and the corresponding administrative functions within the Center.
2. Status of Center research with outside funding.
3. Status of CU/MIT research projects with regard to training and follow-on funding.

4. Expanded base of involvement at Cairo University and the ministries.
5. Resource flows from various sources of support to the Center.

This material will be presented later in this report.

The Proposal outlines future strategies for each Program activity on pp. 7-17. As suggested by the 1980 evaluation, more careful attention has been given to describing how each activity will fit into the overall Program strategy of institutionalization.

2. "Set targets for numbers and types (disciplines) of Cairo U and ministry personnel to attain capability in interdisciplinary and collaborative solving of development problems."

This concern has already been addressed in part under General Recommendation #1b. Although formal quantitative targets have not been set, inclusion of new faculties and ministries has become an important criterion in selecting new projects and other participants, as noted on page 14 of the Proposal. The number of participants in each category has shown a definite increase, as shown on Table 4.

3. "Add more formal training."

The CU/MIT projects have continued to hold short courses, and several more are planned for the future. These are outlined on Tables 5 and 6. The Center also began to hold short courses shortly after it was established in 1979, but some of these were not entirely consistent with the Center's intended focus on development-related subjects. However, the new Center Director plans to reinstate this activity in the near future, as indicated on page 16 of the Proposal, and one training activity has already been completed (funded by the Ministry of Irrigation).

4. "Adjust MIT project support to phase reached by each research project."

As noted before, seven CU/MIT research projects have been phased out. The following criteria have been established for this process:

1. The scope of work in the research proposal has evolved to the point where no new skills are being developed and continued funding is no longer considered appropriate.
2. The accomplishments of the research project and the capabilities acquired by the principal investigator and staff are such that the project has achieved self-sufficiency; i.e. outside funds can be acquired to continue to support the research activities which were developed under CU/MIT sponsorship.
3. The activities of the project have reached a logical concluding point and the researchers have decided to go into different but related areas.

The Housing and Construction Industry and the Communication Needs for Rural Development Projects are examples of the first criterion; the Urban Transportation and the Macroeconomic and Sectoral Planning Projects fall under the second. Labor Migration and Health Care are examples of the third.

In regard to the ongoing projects, the potential for contributions by the participating ministries has become an important factor in the funding decisions made by the Joint Executive Committees of the CU/MIT Program (page 14 of the Proposal). The CU/MIT Program therefore will be expected to cover a correspondingly lower percentage of the total project costs.

5. "Gradually merge the functions of research management and logistic support performed by the Liaison Office and the DRTPC."

Planning for the merger was started in the summer of 1981 and the process was completed on July 1, 1982, with the formal integration of payrolls. Former CU/MIT employees are now employed in four of the Center's new operating sections. All nine former CU/MIT Liaison Office employees elected to stay with the Program as Center employees, with major responsibilities.

6. "Coordinate total MIT program."

Contact between MIT participants has not been formalized in the sense

recommended in the 1980 evaluation report; that is, regular group meetings. However, the Technical Officer at MIT and the TAP/MIT Representative in Cairo both keep in close contact with all MIT participants and refer them to each other when it seems that the experience of one would be relevant to another. The experience that has been most frequently discussed informally among MIT participants is transferring computer models developed at MIT to the equipment available at CU. (Note: several MIT participants have already requested information on the new Digital VAX system recently installed at the Center.) Exchange of written reports and other information is encouraged or initiated by the Technical Officer at MIT when it is felt that duplication of effort would be avoided.

The MIT faculty have steadily encouraged assumption of responsibility by Cairo University faculty, which indicates an awareness of and promotion of institutionalization objectives.

The MIT faculty have also been made aware of the need for follow-on funding and are required to respond to this concern in their proposals. Some MIT faculty (e.g. Stochastic Model/Nile project) have inquired as to how they can independently submit proposals to the Center with their counterparts.

At the initiative of the AID Program Officer in Cairo, more effort has been made to keep AID in touch with the project activities. In particular, the Program Officer has met with several of the MIT Principal Investigators, and has put them in contact with other AID/Cairo staff with similar interests.

The MIT Policy Committee was redesigned in mid 1980 to include two senior professors who are not involved in the specific research and administrative activities of the Program. They were carefully chosen for their experience in other MIT programs concerned with institutionalization issues very similar to those faced by the CU/MIT Program.

Finally, MIT participation has been coordinated and expanded in support of the administrative development of the Center. This will be discussed in a later section of this report.

CENTER RECOMMENDATIONS

1. "Increase the representativeness of the Board of Directors."

The Minister of Electricity and Energy was added to the Board of Directors in May 1982. Two additional ministers have been asked to join the Board, and an announcement of their appointment should be made shortly. An industrial representative has not been added yet; this may be considered in the future.

On the first Board of Directors, only one CU/MIT Executive Committee member was a voting member. The entire Committee has now been appointed to the Board, which insures close cooperation between the CU/MIT Program and the Center.

2. "Organize the Center with three divisions: Training, Research, and Administration."

The Center was reorganized in May 1982. The first part of the new Organization Plan describing the overall structure is attached as Appendix B.

Research areas will be assigned to a "Program Coordinating Committee" to be chaired by the Center Director. The individual Coordinators are now being selected. Establishment of a separate training unit has been deferred, since it is expected that in the near future short courses and other training will continue to take place in the context of research activities. The position of Fellowship Officer has been established to supervise and coordinate the large number of fellowships and internships awarded by the CU/MIT Program each year (33 for 1982).

The functions of the administrative sections are fully described in the Organization Plan (a complete copy has been given to the member of the 1982 evaluation team investigating this aspect of the Program).

3. "Adapt Liaison Office procedures with modifications to fit Egyptian needs."

A Personnel Policy and Procedures Manual has been completed for the Center which has superseded the old Liaison Office manual. A manual for accounting procedures is being prepared and implemented in stages. Other procedures are being developed and will be documented accordingly. This has been, of course, facilitated by the merging of the two organizations.

4. "Formalize criteria and procedures for project selection and quality control."

The Center reviewed its existing research at the time of the reorganization, which began in March 1981. Several projects (which had been funded internally) were phased out because they were considered inappropriate. New proposals for research contracts are now reviewed by the Center Director and by the Board of Directors, who apply the guidelines mentioned on page 4 of the Proposal, and the criteria which follow:

1. The academic/educational content must be of a high level; for example, the work should involve the development and application of advanced analytical techniques, or the improvement of existing technical standards. Where possible, the work should contribute to the development of new expertise within the Center.
2. The subject area must be consistent with the focus on technological and socio-economic development established by the Center.
3. The Center must possess the necessary staff and qualifications to perform the work outlined within the time frame and budget specified.

The current members of the Board of Directors possess an impressive amount of experience in conducting and administering research, both as individual researchers and as the heads of important academic and government organizations. For example, one member is a former Rector of Cairo University,

former Minister of Education and Scientific Research, and former President of the Egyptian National Academy of Scientific Research. Five of the six have been involved with the Program since its inception, and their long term commitment has been a strong factor in the Program's success. The Board therefore will insure that quality control is maintained. The establishment of written criteria for quality control will evolve as more experience is gained.

5. "Use MIT personnel as consultants to the DRTPC."

A provision has been established in the Proposal for MIT faculty to advise Center staff in the preparation of proposals (page 15). Several MIT faculty have expressed a willingness to serve as advisors for fellowship recipients who are expected to travel to MIT for extended visits. MIT faculty involved in CU/MIT research projects are already advising their colleagues at the Center on an informal basis. Several have already reviewed theses, reports, or proposals produced by their Egyptian counterparts.

On the administrative side, the consulting contributions that are expected from MIT are outlined on page 11 of the Proposal.

6. "Sponsor training for Cairo U investigators in various aspects of research methodology."

This was discussed under recommendation #3 for MIT. A provision has also been added to the Proposal for incorporating Center expertise into the existing curricula of selected faculties at Cairo University (page 16).

7. Recruit faculty from other Universities when needed."

Although the CU/MIT Program has not formally promoted the participation of faculty from other universities, it has occurred in several cases when Principal Investigators have identified appropriate individuals. This involvement is presented in Table 7.

8. "Establish a policy on patents for inventions resulting from Center work."

This has not yet been established.

9. "Investigate follow-on funding from UN sources for projects of strong interest to other nations."

Funding has been solicited by the Center from several international sources, including USAID, the World Bank, the ILO, the EEC, and appropriate divisions of the United Nations. A number of contracts have already been received (see Table 9, Section II).

II. INFORMATION REQUESTED BY THE 1982 EVALUATION TEAM

The 1982 evaluation team outlined three areas of specific investigation:

1. Fiscal support to the DRTPC.
2. Client capacity to call upon the Center and to understand and implement findings.
3. Capacity of Egyptian staff to perform core management/administrative functions.

The following material has been prepared by the CU/MIT Program in regard to the above.

1. Fiscal support to the DRTPC

A summary of "Resource Flows" into the Center has been prepared (Table 8) to show the funding from USAID for the CU/MIT Program, the estimated contributions from Cairo University and the GOE ministries, and the outside funding received for DRTPC projects. This table shows that:

- USAID funds have shifted away from CU/MIT research to activities which promote the institutionalization of the Center.
- CU contributions have grown steadily, especially with the donation of the DRTPC space in December 1979.
- Ministry contributions of an "in kind" nature have also increased steadily.
- The Center's ability to generate funding for projects outside the CU/MIT Program is also increasing as planned.

A breakdown of the Center's individual research projects is shown on Table 9. In accordance with the objective of funding diversification, fourteen Egyptian government ministries and agencies have contributed funds, along with four international organizations and six Egyptian private sector companies. Nine different academic departments have been involved at Cairo University.

As stated in the Proposal on pages 21 and 23, the Center intends to develop an overhead structure and rate during the coming year to be applied to all its research contracts. As the non-CU/MIT projects increase, they will cover a greater share of these costs. Accordingly, CU/MIT support will be phased down.

2. Client capacity to call upon the Center and to understand and implement findings

Information was obtained on twelve of the Center projects as to source of initiative. It was found that in several cases the initiative came from DRTPC faculty, and in five cases from the client organization. In questioning nine of the CU/MIT principal investigators, three expected the initiative for future funding for the Center to come from clients, five from a combination of client and DRTPC, and one did not feel qualified to respond yet.

The Center research which has been generated by the CU/MIT research is examined more closely in Table 10. This shows the duration of the CU/MIT project, amount of USAID funding, follow-on funding to the Center, and the "initiatory mode".

All of the CU/MIT principal investigators who expected follow-on projects with the Center said that they intended to provide a provision for financial incentives for ministry staff in the contracts for their work. They expected the ministries to concur with this, and felt that the most usual form would be subcontracts for specific tasks or services.

In terms of "numbers of participants trained" by the CU/MIT Program, the total for selected years by category has already been shown in Table 4.

3. Capacity of Egyptian staff to perform core management/administrative functions

The phasing out of MIT involvement is shown in Table 2 of the Proposal

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(page 21). Only one MIT staff member is a full-time resident in Cairo, and now serves in an advisory capacity (except in matters involving the USAID contract). Therefore, administrative growth of the Center does not involve a formal transferring of responsibility as much as a growth in existing capabilities. Pages 1 and 2 in the Organization Plan (Appendix B) show the organizational structure recently developed for the Center. Page 4 shows the staff that is anticipated within the next few years. Table 11 discusses the various administrative functions and the changes that are planned for the duration of the contract. The table also indicates the present staff for each division at present, and the expected staff for the future.

MIT and Cairo University expect to play a large advisory role in the development of these divisions. As an example, Table 12 shows the joint participation in the development of the computer division to date, and the resources contributed by the CU/MIT contract and the Center.

4. Other material

The evaluation team also requested written evidence of overhead cost documentation for the Center. Pages 50 and 51 of the proposal outline the present estimate of the Center's overhead costs. In accordance with the Proposal, more specific operating costs will be quantified during the coming year, in the preparation of an overhead rate and base.

The material prepared for the September 1982 Progress Report to USAID contains additional information on institutional viability, and two sections are attached to this report as Appendix C. Specifically, this material contains detailed information on the assistance provided to the Center by Cairo University and MIT administrative staff, and on the new fellowship and internship activities.

TABLE 1

INVOLVEMENT OF CAIRO UNIVERSITY FACULTIES AND DEPARTMENTS IN CU/MIT PROJECTS INITIATED SINCE JUNE 1980

<u>Project</u>	<u>Cairo University Faculties and Departments</u>
Resource Development and Policy: Petroleum	Department of Economics, Faculty of Economics and Political Science Department of Geology, Faculty of Science*
Urban Infrastructure	Urban Planning Institute* Department of Architecture, Faculty of Engineering Department of Public Works, Sanitary Engineering Division, Faculty of Engineering*
Qattara Depression	Department of Meteorology, Faculty of Science* Department of Irrigation and Hydraulics, Faculty of Engineering
Auto Production Planning	Institute of Statistical Studies and Research: Operations Research Department*, Computer Science Department* Department of Applied Mathematics and Physical Sciences, Faculty of Engineering* Department of Electric Power, Faculty of Engineering
Energetics in the Egyptian Metal Industries	Department of Metallurgy, Faculty of Engineering* Department of Mechanical Power, Faculty of Engineering* Department of Mechanical Design and Production Engineering, Faculty of Engineering Department of Electric Power, Faculty of Engineering
Gypsum Quarrying and Product Manufacturing in Egypt	Department of Mining, Faculty of Engineering*

*Indicates new department involved in CU/MIT Program

TABLE 2

INVOLVEMENT OF MINISTRIES AND GOE AGENCIES IN CU/MIT RESEARCH ACTIVITIES
AND FELLOWSHIPS INITIATED SINCE JUNE 1980

<u>Project</u>	<u>GOE Ministry or Agency</u>
Resource Development and Policy: Petroleum	Ministry of Planning Ministry of Petroleum* Egyptian General Petroleum Company* AGIBA (state petroleum operating company concerned with natural gas)*
Urban Infrastructure	National Organization for Water and Sanitary Drainage* General Organization for Physical Planning
Qattara Depression	Civil Aviation Authority, Department of Meteorology* Ministry of Electricity and Energy
Auto Production Planning	El Nasr Auto Company*, Ministry of Industry
Energetics in the Egyptian Metal Industries	Egyptian Iron and Steel Corporation,* Misr Aluminium Company*, Ministry of Industry
Gypsum Quarrying and Product Manufacturing in Egypt	Fayoum Governorate*
Ministry Internships	Egyptian Iron and Steel Co.* El Nasr Organic Chemical Co.* Egyptian Portland Cement Co.* Delta Steel Co.* Ministry of Electricity and Energy New Valley Governorate* National Cement Co.* Electricity Distributing Co. for Cairo*

*Indicates new ministry or government agency involved in CU/MIT Program

TABLE 3

INVOLVEMENT OF CAIRO UNIVERSITY FACULTIES AND DEPARTMENTS IN CU/MIT
FELLOWSHIPS AND INTERNSHIPS INITIATED SINCE JUNE 1980

Faculty of Engineering:	Civil Engineering Irrigation and Hydraulics Mathematics and Physical Sciences* Electric Power and Electronics Biomedical Engineering* Aeronautical Engineering* Chemical Engineering* Architecture Structural Engineering Metallurgy, Mining and Petroleum* Mechanical Production and Design Mechanical Power*
Faculty of Science:	Physics* Geology* Astronomy*
Faculty of Economics and Political Science:	Economics Political Science
Faculty of Commerce:	Accounting* Management*

*Indicates new department involved in DU/MIT Program

TABLE 4

UPDATE OF DATA ON CU/MIT EGYPTIAN PARTICIPANTS

Chart originally prepared for 1980 evaluation

Number of professional people substantially and continuously participating in the CU/MIT program as of May each year.

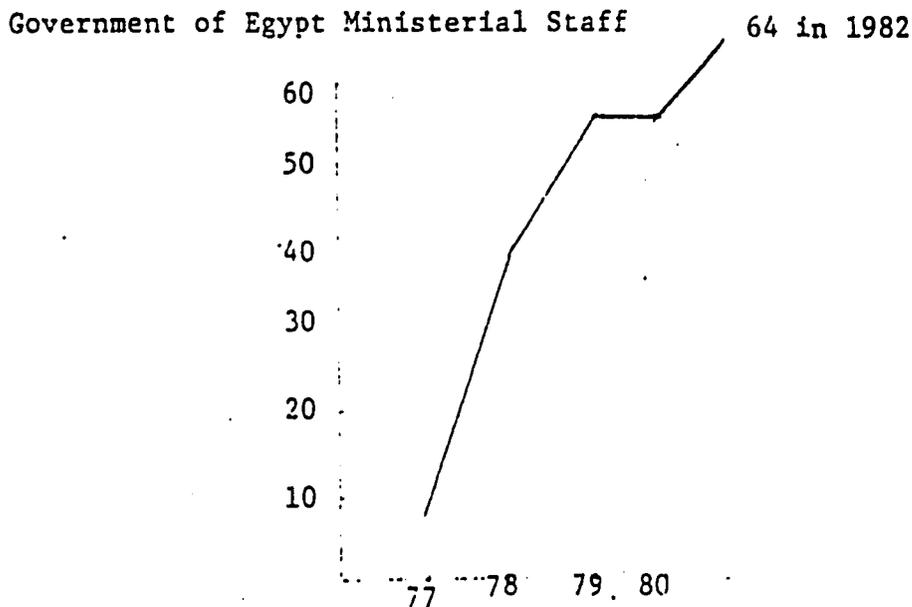
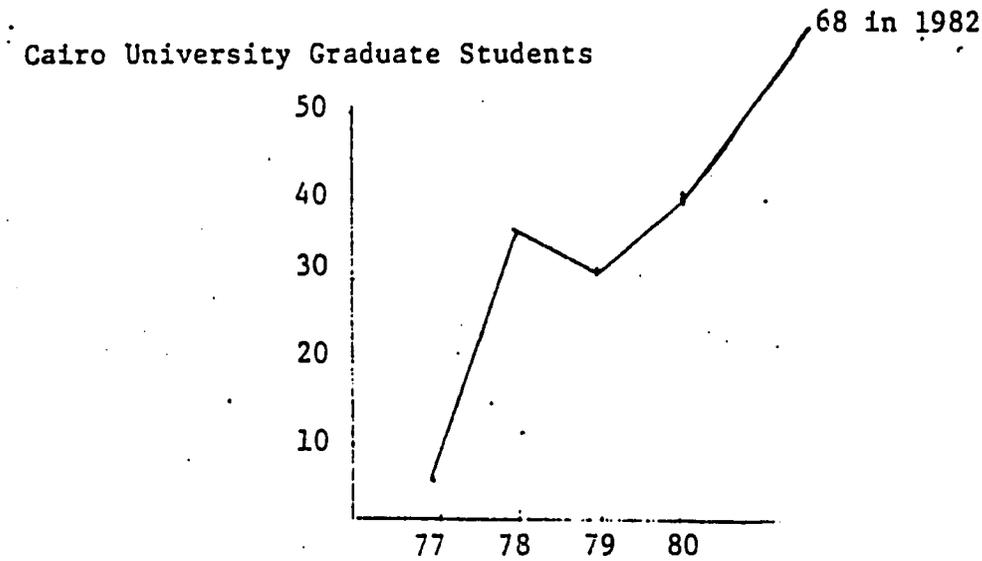
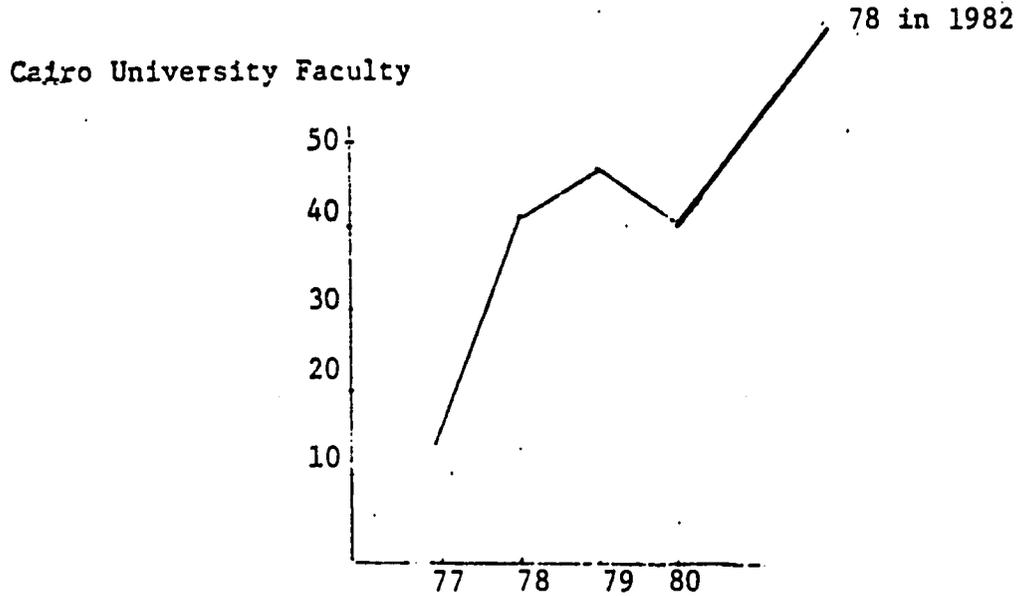


TABLE 5

Workshops and Short Courses held by CU/MIT Program since 1980

<u>Date</u>	<u>Title</u>	<u>Scope and Participations</u>
January 1980	Management of the Construction Industry in Egypt	60 top construction industry managers, ministry officials, and university faculty and students attended to review, discuss and debate important industry issues. The workshop was designed to provide an understanding of constraints limiting company growth and entrance of new firms into the construction sector with a fuller appreciation of the applicability or non-applicability of modern project management techniques.
January 1981	Management of the Nile Delta Groundwater Aquifer	Over 80 participants from government agencies, three Egyptian universities and two U.S. universities. Workshop focused on the management alternatives for the Nile Delta Aquifer. Newly recognized upward leakage of groundwater in the Delta area has caused concern within the Ministry and research findings were used to discuss the impact and alternatives.
January 1982	Analysis of Water Resources Systems	This workshop incorporates research results and techniques developed since the first workshop held in 1978.
10-11 January, 1982	Communication for Rural Development in Egypt	This seminar presented results of research by the Communication Project and included sessions on communication structure and policy in rural Egypt, appropriate technology for rural development, technological alternatives and telecommunication policy in Egypt, and development communication and national development.
23 May 1982	Plastic Piping for Potable Water Supply and Drainage Systems	Attended by 90 people. Approximately 40% were representatives from the private construction industry.
1 November 1982	Workshop on CU/MIT Petroleum Project	Attended by 20 people from all groups participating in the project.
November 1982	Design of Irrigation Structures	20 ministry participants attended this short course, which took place at the DRTPC over a three week period.

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TABLE 6

FUTURE CONFERENCES, SEMINARS, AND SHORT COURSES EXPECTED FOR THE DRTPC
IN ADDITION TO ANNUAL PROGRAM CONFERENCE HELD IN JANUARY

<u>CU/MIT Project</u>	<u>Expected or Potential Activity</u>
Electric Power System	May repeat short course held in January 1979, with emphasis on reliability in systems planning.
Intercity Transportation	One seminar is held each year in addition to January Program conference
Engineering Applications for the Plastics Industry	Short course planned on plastics engineering for production engineers from public and private sector companies.
Water Resource Planning.	Third major conference on water resource planning will be held in June 1983.
Stochastic Models of Nile Inflows to Lake Nasser	Will participate in June 1983 water resource conference. May hold a short course on advanced principles of hydrology for graduate students at Cairo University
Resource Development and Policy: Petroleum	Will hold a workshop on natural gas next year
Urban Infrastructure	Will hold a seminar later in the year to present project findings.
Auto Production Planning	Planning a 3 month workshop on operations research to be held for 20 employees of El Nasr Automotive Co. A 10 day workshop for 30 employees would also be held. This is to assist in the establishment of a Department of Operations Research at the company.
Energetics in the Egyptian Metal Industries	Short courses anticipated.

11.

TABLE 7

INVOLVEMENT OF OTHER EGYPTIAN UNIVERSITIES IN CU/MIT RESEARCH PROJECTS

<u>Project</u>	<u>Other Universities Involved and Nature of Involvement</u>	<u>Potential Involvement</u>
Intercity Transportation	One faculty member from Assiut University is a paid member of the team.	Similar involvement expected.
	Faculty members from Ain Shams, Alexandria, and Mansoura Universities have been consulted	
Stochastic Models of Nile Inflows to Lake Nasser	None	Alexandria - potential involvement in other projects to be conducted in the DRTPC
Water Resource Planning Models	Representatives from Ain Shams, Alexandria, and Assiut have participated in conferences. Zagazig has been consulted in water allocation study	Similar involvement expected
Resource Development and Policy: Petroleum	One faculty member from Minoufiya University is a paid member of the team, chosen for special interest in petroleum and operations research.	Similar involvement expected
Urban Infrastructure	None	Ain Shams and Alexandria - potential involvement in other projects to be conducted in the DRTPC
Auto Production Planning	None	Potential for participation by Ain Shams and Alexandria

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TABLE 8

SUMMARY OF RESOURCE FLOWS

CU/MIT Program and DRTPC

CU/MIT PROGRAM USAID FUNDS (LE Expenditures Only)	Spending						Budget submitted for 1983/86	
	1977/78		1979/80		1981/82*		LE 000	% of total
	LE 000	% of total	LE 000	% of total	LE 000	% of total	LE 000	% of total
Administration	290	30%	420	24%	620	33%	1340	22%
CU/MIT Research	690	70%	1330	76%	1070	56%	1600	26%
Manpower Devel. Initiatives					140	7%	980	16%
Research Support Systems					70**	4%	680	11%
DRTPC-Initiated Research					-		1470	24%
Total	LE 980		LE 1750		LE 1900		LE 6070 +1890 DRTPC Indirect 7960 Total budget	
<u>CU CONTRIBUTIONS TO CU/MIT PROGRAM</u>								
Estimated	LE 240		LE 500		LE 900		LE 1760	70% Plant & operating costs 16% Acad. Admin. 11% Delegated staff 3% Other
<u>MINISTRY CONTRIBUTIONS TO CU/MIT PROGRAM</u>								
Estimated	LE 100		LE 240 + projects to Center below		LE 360 + projects to Center below		LE 540 + projects to Center below	
<u>OUTSIDE FUNDING FOR DRTPC PROJECTS</u>								
Initiated from CU/MIT Projects, or involving CU/MIT staff	0		LE 270		LE 550 + \$26		LE 430 and \$17	
Other	0		LE 130		LE 140		LE 240	
TOTAL	0		LE 400		LE 690 + \$26		LE 670 \$17 funding in place or in final stages of negotiation	

*November-December '82 figures estimated

**Dollar contributions to computer development total about \$300,000. Dollar contributions in other areas are substantial, but data is not available at present.

TABLE 9: SUMMARY OF DRTPC RESEARCH PROJECTS

I. CURRENT RESEARCH PROJECTS - FUNDED BY EGYPTIAN SOURCES

Project	Principal Investigator	Sponsored by	Approximate Funding
Structural Planning for El Amal City	Dr. Mahmoud Yousry Faculty of Engineering Dept. of Architecture	General Organization for Physical Planning	LE 155,000
Study of the Cement Market in Egypt	Dr. Atef Ebeid Faculty of Commerce	Egyptian Cement Office	LE 77,000
Education Information Systems	Dr. Ahmed Omar Faculty of Economics	Ministry of Education	LE 22,000
Design and Mechanization of the Financial and Managerial Systems of the Family Planning Organization	Dr. Abdel Moneim Mahmoud Faculty of Commerce	Family Planning and Population Agency	LE 30,000
Planning and Design of Youth Villages	Dr. Mahmoud Yousry Faculty of Engineering Dept. of Architecture	Ministry of Housing and Reconstruction	LE 60,000
Development of Pharmaceutical Chemical Systems	Dr. S. Balbaa Faculty of Medicine	Ministry of Health	LE 70,000
Performance of Paraffinic Asphalt-Cements in Road Construction (joint project with CU/MIT Program)	Dr. Abdelmoneim Osman Faculty of Engineering Dept. of Civil Eng.	General Authority for Roads and Bridges The Arab Contractors The Nile Company for Roads and Bridges El Nasr Contracting Company The Nile Company for Road Construction The Nile Company for Desert Roads The Nile Company for Construction and Paving	LE 100,000

TABLE 9 (continued)

I. CURRENT RESEARCH PROJECTS - FUNDED BY EGYPTIAN SOURCES (continued)

Project	Principal Investigator	Sponsored by	Approximate Funding
Guidelines for Urban Area Planning (joint project with CU/MIT Program)	Dr. Mahmoud Yousry Faculty of Engineering Dept. of Architecture	General Organization for Physical Planning	LE 27,000
<u>Projects in final stages of negotiation:</u>			
Connecting New Cities Road Network with Greater Cairo	Dr. M. El Hawary Faculty of Engineering Dept. of Public Works	Ministry of Housing and Reconstruction	LE 150,000
Protection of the Open Railway Connection Serving Abou Tartour Phosphate Mines from the Danger of Floods	Dr. Halim Salem Faculty of Engineering Dept. of Irrigation and Hydraulics	Ministry of Transport and Communications	LE 80,000
Real Time Forecasting and Control of the High Dam	Dr. Halim Salem Faculty of Engineering Dept. of Irrigation and Hydraulics	Ministry of Irrigation, Water Master Plan	LE 15,000
Upper Nile Valley Project	Dr. Halim Salem Faculty of Engineering Dept. of Irrigation and Hydraulics	Ministry of Planning	LE 20,000

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TABLE 9 (continued)

II. CURRENT RESEARCH PROJECTS - FUNDED BY NON-EGYPTIAN SOURCES

Project	Principal Investigator	Sponsored by	Approximate Funding
Economy Wide Modeling and Social Accounting Matrix Updating Project	Dr. Amr Mohie-eldin Faculty of Economics	United States Agency for International Development World Bank	LE 379,000 US\$ 18,000 US\$ 25,000
Employment of Women: Patterns and Demographic Change	Dr. Amr Mohie-eldin Faculty of Economics	International Labor Organization and United Nations Fund for Population Activities	LE 30,000
Economic, Social, and Cultural Characteristics of Egyptian Pilgrims (Hajj Project)	Dr. M. Zaki Shafei Faculty of Economics	Pilgrimage Research Center University of King Abdel Aziz Jeddah, Saudia Arabia	LE 196,000

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TABLE 9 (continued)III. COMPLETED RESEARCH PROJECTS

<u>Project</u>	<u>Principal Investigator</u>	<u>Sponsored by</u>	<u>Approximate Funding</u>
Studies of the Center Nasr and Gesr El Suez Workshops	Dr. M. El Alailli Dr. Mohamed El Hawary Faculty of Engineering Dept. of Civil Eng.	Cairo University	LE 32,000
Replanning and Development of El Fayoum City	Dr. Taher El Sadek Institute of Planning Cairo University	El Fayoum Governorate	LE 30,000
Optimum Policies for Maintenance of Delta Paved Road Network	Dr. Mohamed El Hawary Faculty of Engineering Dept. of Public Works	General Authority for Roads and Bridges	LE 232,000
Study of Manpower Demand at both Occupational and Sectoral Levels	Dr. Amr Mohie-eldin Faculty of Economics	Ministry of Planning	-
Study of the Sinai Society and its Structure, and Preparation of a Structural Plan for Sinai Peninsula	Dr. Sobhi Abdel Hakim Faculty of Arts Dept. of Demography	Ministry of State for Scientific Research	LE 25,000

IV. COMPLETED MINI-PROJECTS

LE 25,000

TABLE 10

CENTER FUNDING FROM CU/MIT RESEARCH PROJECTS

1. SEPARATE PROJECTS

<u>Name of CU/MIT Project</u>	<u>Amount of Funding</u> LE 000	<u>Number of Years</u>	<u>Follow-on Project to Center</u>	<u>Funding</u> LE 000
Intercity Transportation	316.8	5.5	Optimum Policies for maintenance of Delta Paved Road Networks*	232.0
			Connecting New Cities Road Network with Greater Cairo*	150.0**
			Total	382.0
Stochastic Model of Nile Inflows to Lake Nasser	419.7	5.5	Upper Nile Valley Project	20.0**
			Protection of Open Railway Connection/ Abou Tartour Phosphate Mines	80.0**
			Real Time Forecasting and Control of the High Dam	15.0**
			Total	115.0
Labor Migration	158.9	4	Employment of Women: Patterns and Demographic Change	30.0
Macroeconomic and Sectoral Planning	156.0	3	Economy Wide Modelling & Social Accounting Matrix Updating Project*	379.0
				\$43.0
			Total	LE 906.0
				\$43.0

*Initiated by client; others initiated by faculty member

**Proposal in final stage of negotiation

TABLE 10 (continued)

2. JOINT PROJECTS

<u>Name of Project</u>	<u>Amount of CU/MIT Funding</u> LE 000	<u>Amount of Center Funding</u> LE 000	<u>Number of Years</u>
Performance of Paraffinic Asphalt Cements in Road Construction	110.7	101.5	3.5
Planning Urban Infrastructure for Secondary Cities*	76.8	<u>27.0</u>	1.5
Total		LE 128.5	

3. CENTER PROJECTS INVOLVING CU/MIT PARTICIPANTS

Structural Planning for El Amal City		155.0	
Planning and Design of Youth Villages*		<u>60.0</u>	
Total		LE 215.0	

GRAND TOTAL for projects
initiated by CU/MIT
projects and projects
involving CU/MIT staff

LE 1,250.0

\$43.0

*Initiated by client, others initiated by faculty member

TABLE 11: DEVELOPMENT OF ADMINISTRATIVE FUNCTIONS AT THE DRTPC

<u>Category</u>	<u>Functions performed now</u>	<u>Functions to be assumed next 1-2 years</u>	<u>Functions to be assumed by end of CU/MIT Program</u>
<u>1. Financial Services</u>	Manual system for CU/MIT accounts. Trial balance prepared which is verified at MIT.	Overhead system for Center operating, with rate negotiated annually.	Fully integrated system which provides regular and comprehensive financial reports to management.
A. Accounting	Other Center accounts kept manually, according to requirements of sponsor.	Computerization of all accounting functions Cost centers developed for computer, report production, library, etc.	Cost centers fully operational.

B. Legal Affairs Contract/Grant Management	Contracts reviewed by CU faculty, and MIT as requested. DRTPC contracts and proposals approved by Director and Board of Directors.	Contract manager hired Proposal and contract review systems formalized. Negotiation procedures defined.	System in place which: reviews proposals and contracts, seeks necessary authorizations, reviews sub-contracts and purchase orders, monitors other activities, and sees that contractual obligations are met
CURRENT STAFF: 6 (3 from CU/MIT)			EXPECTED STAFF: 14

<u>2. Administrative Services</u>			
A. Personnel	Policy manual and organization plan complete Recruiting started for larger staff and reassignment of duties in accordance with organization plan. Continuous training by MIT staff	Evidence of successful recruitment and compensation. Annual wage and salary review process begun by Center. Annual performance review. Personnel files maintained and computerized.	Full staff recruited (according to needs of Center) Policy manual and organization plan updated as required. Reviews continued. Records maintained accurately.

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TABLE 11 (continued)

Category	Functions performed now	Functions to be assumed next 1-2 years	Functions to be assumed by end of CU/MIT Program
<u>2. Administrative Services (continued)</u>			
b. Support Services	Maintenance, security, transportation systems operational at current level.	Establish systems for storage, inventory, and maintenance of supplies and equipment.	All systems functioning.
CURRENT STAFF:	16 (3 from CU/MIT)		EXPECTED STAFF: 19
<u>3. Public Relations</u>			
	Travel arrangements, conference management, and other services provided.	Capacity expands. as Center grows for conference management, for interaction with press and government agencies.	
CURRENT STAFF:	4 (3 from CU/MIT)		EXPECTED STAFF: 5
<u>4. Computer</u>			
	System manager and initial staff appointed. Basic operating system in place, including maintenance contracts. Training programs planned and material ordered.	Most CU and DRTPC participants using system. Allocation of costs to users and Center operating units. Software and hardware expansion with suitable maintenance provisions. Fee structure developed which comprises operating costs and development costs. Mechanisms established for outside users.	All systems functioning.
CURRENT STAFF:	7		EXPECTED STAFF: Unknown at present

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TABLE 11 (continued)

Category	Functions performed now	Functions to be assumed next 1-2 years	Functions to be assumed by end of CU/MIT Program
5. <u>Library</u>	Initial efforts at collection building underway. CU/MIT and DRTPC reports transferred to library.	Acquisition and service policies defined. Distribution system for Center reports established.	Holdings accessible via computer. Fully interactive with other information centers at Cairo University and in Egypt.
CURRENT STAFF: 3 (one on leave until fall of 1983)			EXPECTED STAFF: 3
6. <u>Reports and Publications</u>	Limited amount of report production and reproduction capacity. Three word processing units in place.	Acquisition of larger capacity reproduction equipment. Formats for various types of publications established. Graphic capability established. Editing and translating capability expanded. Second installment of word processing equipment.	Full capacity to design, edit, prepare, reproduce and translate Center publications.
CURRENT STAFF: 6 (1 from CU/MIT)			EXPECTED STAFF: 15
Total current staff: 42			Total expected staff: 63+

TABLE 12

COMPUTER DEVELOPMENT AND RESOURCE FLOWS

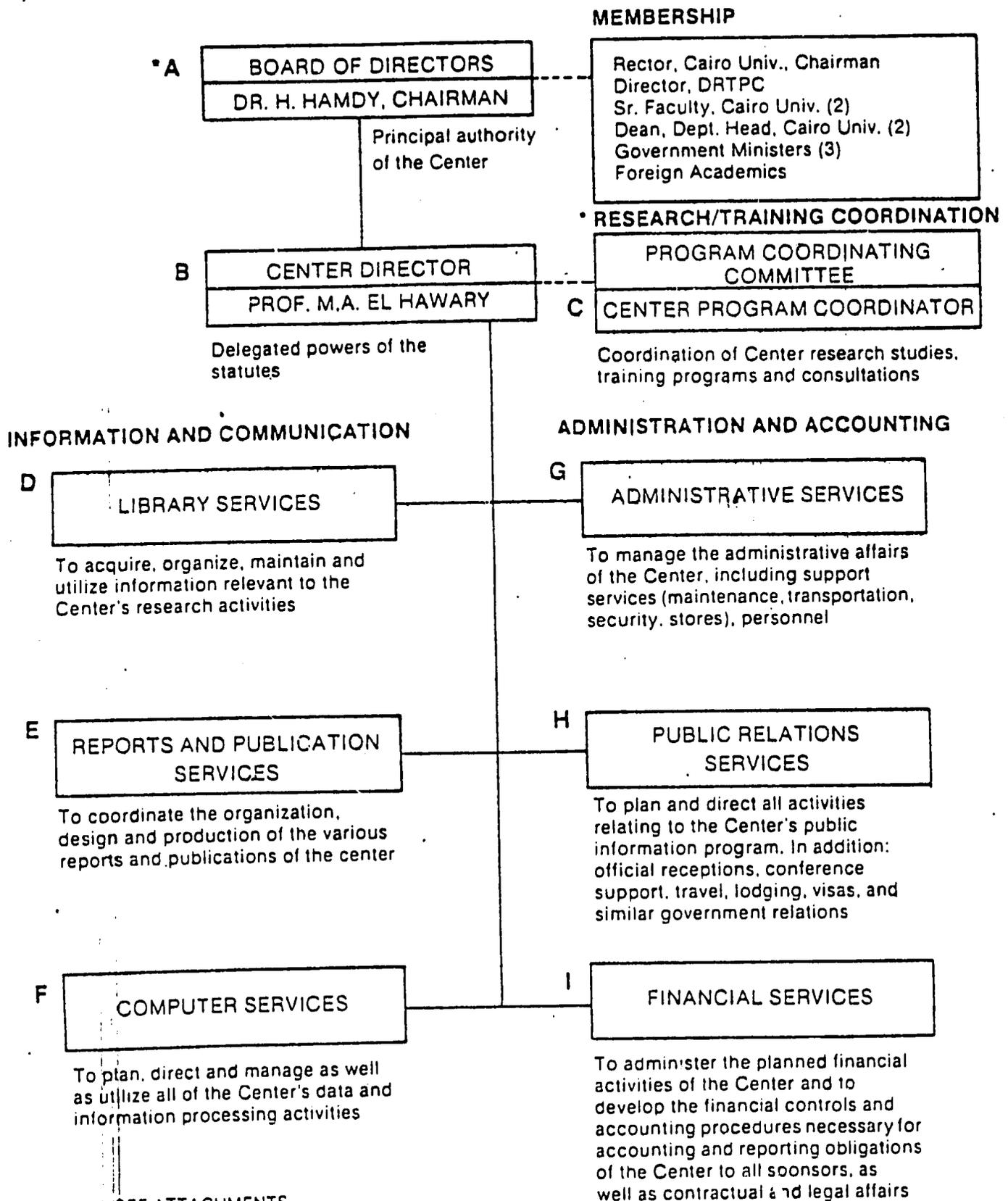
		Summer 1981	Winter 1981	Summer 1981	Winter 1982	From CU/MIT Program	From Other DRTPC Funds
System Design and Procurement	MIT	Trip to Cairo Preparation of RFQ by MIT expert	Requested & obtained AID approval	Procurement & shipment		\$250,000 procurement \$12,000 study	
	CU	Input from several faculty			Design of second procurement		
Design of Electrical Specifications	MIT		Reviewed CU recommendations				
	CU	Prepared several studies	Received and reviewed bids	Installed low cost option	Requested higher cost option for next phase		Included in cost of renovation
Renovation of Facilities & Installation	MIT		Reviewed CU recommendations (including maintenance contracts)				
	CU	Requested bids	Reviewed proposals and accepted Giza Systems	Proceeded with work	Work complete and system installed	LE42,000 install. LE51,200/ year maintenance	LE 110,000
Training and Staff Development: Computer Division	MIT			Training for interim mgr. at MIT		\$8,000	
	CU		Interim director and manager named		Other staff selected and training programs designed		
Training and Staff Development: Word Processing	MIT			MIT staff in Cairo for training (3 weeks)		\$5,000	
	CU		Center staff at MIT for training (6 weeks)				

APPENDIX B

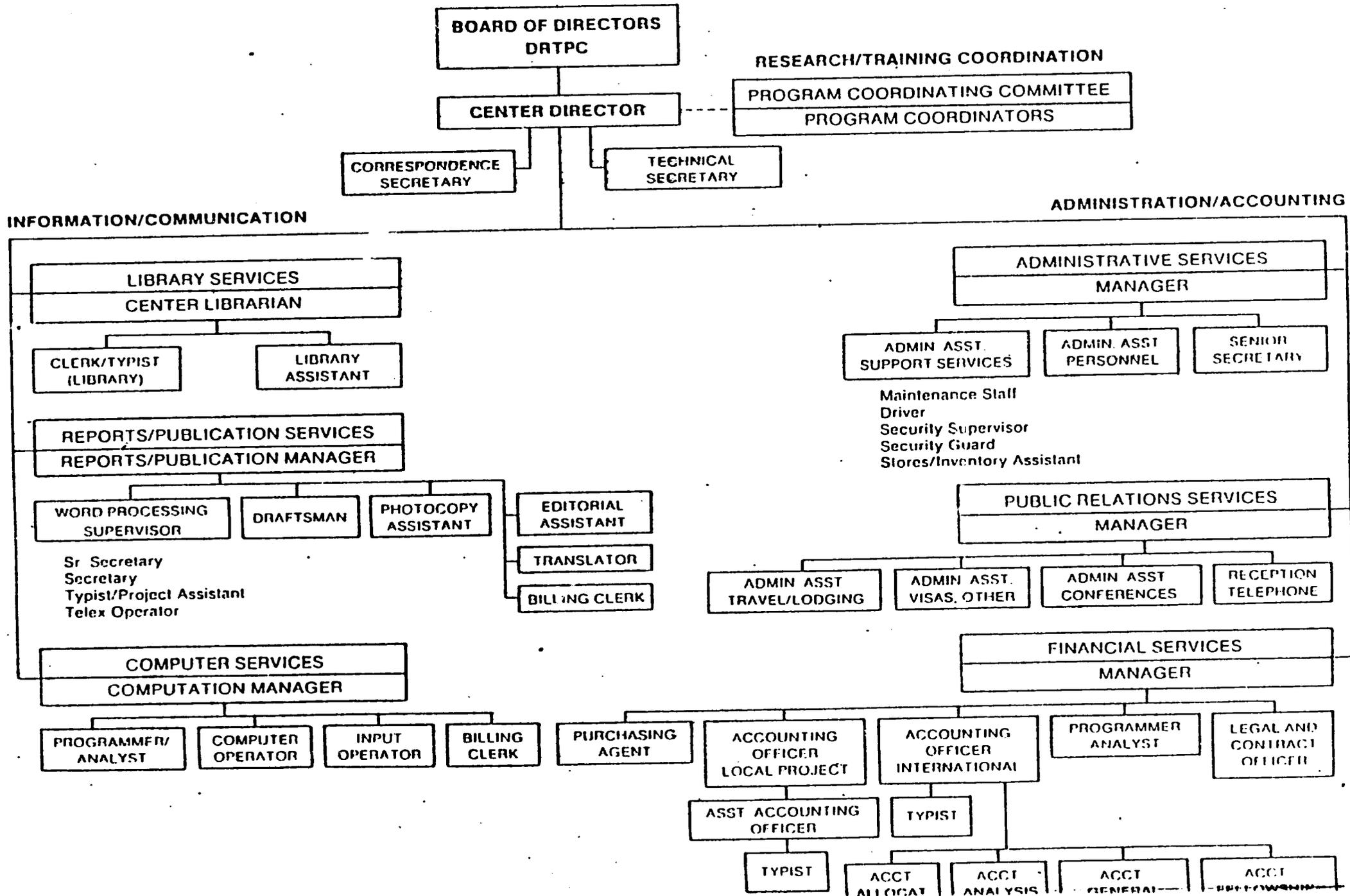
ORGANIZATION PLAN FOR THE
DEVELOPMENT RESEARCH AND
TECHNOLOGICAL PLANNING CENTER

Professor M.A. El Hawary, Director
Report to the Board of Directors,
Center of Development Research and
Technological Planning Center, Cairo University
May, 1982

ORGANIZATIONAL STRUCTURE OF THE CENTER OF DEVELOPMENT RESEARCH AND TECHNOLOGICAL PLANNING (DRTPC); CAIRO UNIVERSITY



CLASSIFICATIONS/STAFFING OF THE CENTER OF DEVELOPMENT RESEARCH AND TECHNOLOGICAL PLANNING (DRTPC): CAIRO UNIVERSITY



ATTACHMENT A-3

Cairo University Center of Development Research and Technological Planning

CLASSIFICATION DESCRIPTIONS

Director's Immediate Office
(see Attachment B)

Administrative Services
(see Attachment G)

1. Correspondence Secretary
2. Technical Secretary

23. Administrative Services Manager
24. Administrative Assistant, Support Services

Program Coordinating Committee
(see Attachment C)

25. Maintenance Staff Member
26. Driver

3. Program Coordinator

27. Security Supervisor

Library Services
(see Attachment D).

28. Security Guard

4. Center Librarian
5. Library Assistant
6. Clerk-Typist (Library)

29. Stores and Inventory Assistant
30. Administrative Assistant, Personnel Affairs
31. Senior Secretary

Reports and Publications Services
(see Attachment E)

Public Relations Services
(see Attachment H)

7. Center Reports and Publications Manager
8. Word Processing Supervisor
9. Senior Secretary
10. Secretary
11. Typist/Project Assistant
12. Telex Operator
13. Draftsman
14. Photocopy Assistant
15. Editorial Assistant (English)
16. Translator (English)
17. Billing Clerk (Reports)

32. Public Relations Manager
33. Administrative Assistant, Travel/Lodging
34. Administrative Assistant, visas, similar Government Relations
35. Administrative Assistant, Conferences, Meetings
36. Receptionist/Telephone Operator

Computation Services
(see Attachment F)

Financial Services
(see Attachment I)

18. Center Computation Manager
19. Programmer/Analyst
20. Computer Operator
21. Input Operator
22. Billing Clerk (Computation)

37. Financial Manager
38. Legal Affairs and Contract Officer
39. Purchasing Agent
40. Accounting Officer, Local
41. Assistant Accounting Officer, Local
42. Typist, Local
43. Accounting Officer, International
44. Typist, International
45. Accountant, Allocation
46. Accountant, Analysis
47. Accountant, General Ledger
48. Accountant, Fellowship/Travel
49. Programmer/Analyst (Accounting)

ATTACHMENT A-4

DRTPC Organizational Plan: Salary, Budget and Estimated Starting Salary Ranges

<u>Director's Office</u>	<u>Est. Starting Range L.E.</u>	<u>Administrative Services</u>	<u>Est. Starting Range L.E.</u>
Correspondence Secretary	160-200	Administrative Manager	325-375
Technical Secretary	200-220	Admin. Asst., Support	
(2)	<u>360-420</u>	Services	225-250
		(5) Maintenance Staff	50-100
<u>Library Services</u>		(5) Driver	150-175
Center Librarian	275-325	(1) Security Supervisor	125-150
Library Assistant	200-220	(3) Security Guards	75-100
Clerk Typist (Library)	135-170	(1) Stores/Inventory Contr.	175-200
(3)	<u>610-715</u>	Admin. Asst., Personnel	260-300
		Senior Secretary (Admin.)	200-250
<u>Center Reports and Publication Services</u>		(19)	<u>2535-3200</u>
		<u>Public Relations Services</u>	
Reports and Publications Mgr	350-400	Public Relations Manager	325-350
Word Processing Supervisor	300-375	Admin. Asst., Travel/	
(1) Senior Secretary	200-250	Lodging	250-275
(2) Secretary	160-200	Admin. Asst., Visas	250-275
(4) Typist/Project Asst.	135-170	Admin. Asst., Conferences	250-275
(1) Telex Operator	150-170	Receptionist/Telephone Oper.	150-175
Draftsman	175-200	(5)	<u>1225-1350</u>
Photocopy Assistant	135-170		
Editorial Assistant	200-250	<u>Financial Services</u>	
Translator (English)	200-250	Financial Manager	500-550
Billing Clerk (Reports)	170-190	Legal Affairs/Contract	
(15)	<u>2740-3335</u>	Officer	300-325
<u>Computer Services</u>		Accounting Officer,	
Computation Manager	350-475	(International)	350-400
(2) System Analyst/		Acct., Allocation	170-190
Programmer	300-350	Acct., Analysis	250-270
Computer Operator	175-195	Acct., General Ledger	250-270
Input Operator	135-170	Acct., Fellowship	170-190
Billing Clerk (Computer)	170-190	Accountant (Local)	200-250
(6)	<u>1430-1730</u>	Asst., Acct. Officer	170-190
		Typist (Local)	135-170
		Purchasing Agent	150-175
		Programmer/Analyst	250-275
		Typist/Secretary (Int'l.)	135-170
		(13)	<u>3030-3425</u>
		TOTAL	(63) 11,930-14,175
		Approx. Payroll	12,000-14,000/mo

OBJECTIVE OF CENTER AND AUTHORITY OF BOARD OF DIRECTORS

A Center for Development Research and Technological Planning will be initiated in Cairo University.

The main objective of the Center is to develop and support research studies, training programs and consultation which help achieve the development goals of Egypt. In due time, the Center will evolve to take the form of a development and technological planning institute which may offer academic degrees in addition to performing the above mentioned objective in such a way as to maximize the utilization of the academic resources of Cairo University.

The Center will engage in the following activities:

- A. Provide a technical research base, help in training Egyptian government cadres involved in planning and implementation of development projects.
- B. Improve academic resources in Egypt in order to apply research for the analysis and solution of development problems.
- C. Create a permanent framework, through which to direct applied research and training capacity towards solving development problems and technology adaptation for development purposes in Egypt.
- D. Provide methods for analyzing programs of economic, social and technical development with the help of associated institutions.
- E. Provide technical consultation to the Egyptian Government ministries in identifying and modeling development problems and devise applicable solution programs.
- F. Train Egyptians at associated foreign institutes.
- G. Organize conferences, symposiums and meetings consistent with the above objectives.

BOARD OF DIRECTORS

The Board of Directors is the principal authority of the Center and may make any decision to realize its goals within the regulations of the Center, namely to:

- A. Determine policy outlines for the Center;
- B. Approve the plans which the Center will follow to achieve its objectives;
- C. Issue administrative, financial and technical statutes of the Center upon the recommendation of its Director;
- D. Review and approve the annual draft budgets for the Center and the projects;
- E. Review regular reports of the Center's progress;
- F. Identify and select activity proposals in the areas of interest to the Center and government ministries and agencies;
- G. Authorize the Director to sign agreements or contracts with persons, establishments, companies and organizations in order to carry out project development activities;
- H. The Board of Directors may delegate prerogatives to the Chairman and/or the Director.

Board members are appointed by the Cairo University Rector for a period of two years that can be renewed. The Board may also invite representatives of other foreign cooperating institutions to attend its meetings as non-voting members. The Board shall meet at least once monthly and the Chairman may also convene additional meetings provided invitations are sent 3 days before the meeting, with the agenda and copies of memos on the subject to be submitted to the Board.

BOARD MEMBERSHIP

In accordance with University President's decree number 136 of May 20, 1982, the University President, after reviewing

The President of the Republic's Decree, Law No. 49 for the year 1972 concerning the Organization of Universities and its amendments, and

the President of the Republic's Decree No. 809 for the year 1975 promulgating the Executive By-Laws of the University Organization Law and its amendments, and

The Decree of the University Supreme Council taken in its meeting of the 17/5/1982, endorsing the DRTPC Basic By-Law

DECIDED

ARTICLE I: A Board of Directors for DRTPC shall be formed under our Chairmanship and the Membership of the following:

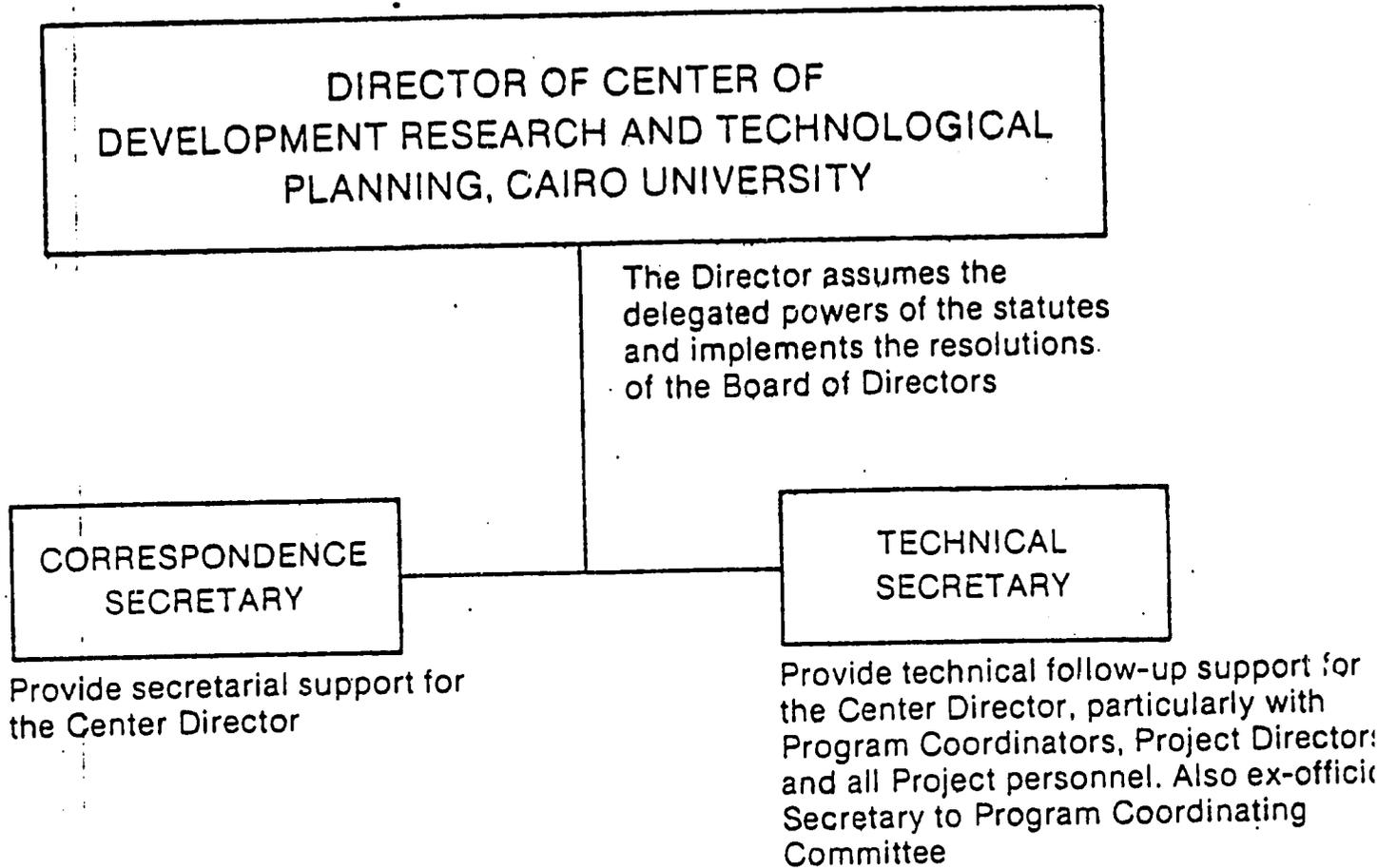
1. Engineer Maher Abaza, Minister of Manpower & Electricity
2. Professor Mohamed Zaki Shafei, Professor of Economics, CU, Former Minister of Economics, and Former Dean of the Faculty of Economics and Political Science, CU.
3. Professor Hassan Ismail, Professor of Irrigation and Hydraulics, CU, Former Minister of Education and Scientific Research, and Former Rector of Cairo University.
4. Professor Salah Shahbender, Professor of Surgery and Dean of the Cancer Institute.
5. Professor Ahmed Ebada Sarhan, Professor of Statistics, Former Dean of the Statistics Institute, and Former Director of the Computer Center.
6. Professor Mohamed Abdel Rahman El Hawary, Professor of Transportation Planning, Head of Public Works Department, Faculty of Engineering, CU and DRTPC Director.

ARTICLE II: The Concerned Authorities have to enforce this Decree upon the date of its issuance.

At its next regular meeting, the Board of Directors may recommend to the Rector, Cairo University, further name(s) for membership on the Board.

ATTACHMENT B

B. DIRECTOR OF CENTER AND IMMEDIATE OFFICE STAFF



Appointment and Duties of the Director of the Center

Professor Mohamed Abdel Rahman El Hawary, Head of Public Works Department, Civil Engineering, Faculty of Engineering, at Cairo University has been appointed by Dr. Hassan Hamdy Ibrahim, Rector of Cairo University as Director, Development Research and Technological Planning Center (DRTPC) for a period of 2 years, subject to renewal, effective April 4, 1982.

The Director of the Center assumes the delegated powers of the statutes and in particular carries out the following tasks:

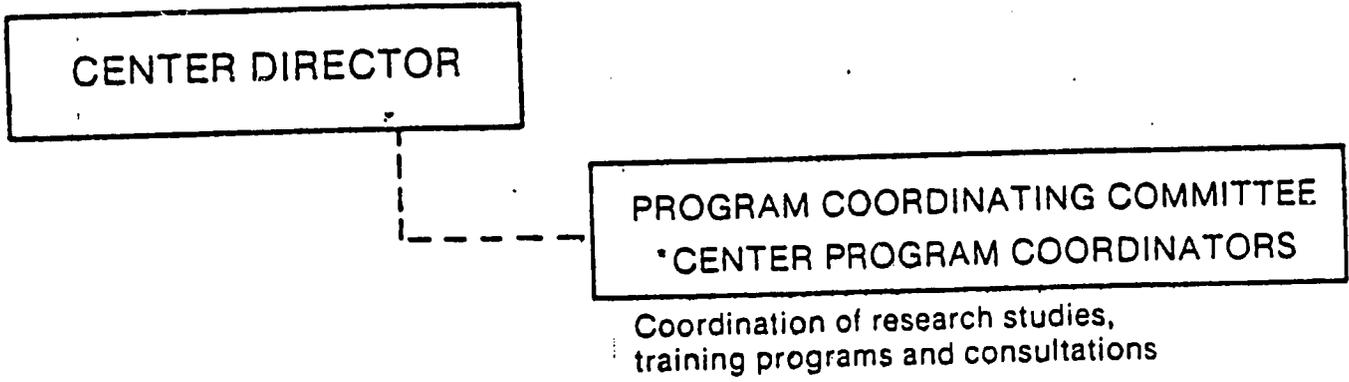
- A. Implements the resolutions of the Board of Directors.
- B. Proposes the Center's plan of activities to be reviewed and approved by the Board.
- C. Prepares the Center's budget and its balance sheet and submits it to the Board of Directors.
- D. Supervises the activities of the Center, and develops new areas of activity to achieve its objectives.
- E. Administers day to day operations and ensures effective cooperation with government agencies and related institutions within and outside Cairo University.
- F. Represents the Center in its relations with organizations, individuals or specialized agencies.
- G. Implements the general policies and plans approved by the Board of Directors and submits reports to them on the progress of the implementation.
- H. Proposes new research areas and training programs for the Center and submits them to the Board of Directors for deliberation and approval.
- I. Signs agreements or contracts which have been reviewed and authorized by the Board of Directors.
- J. Proposes the Center's organization structure, its statutes and procedures of operations and submits them to the Board for approval.

The Director's office will consist of the Director, a Correspondence Secretary and a Technical Secretary. The duties of these secretarial positions are described in the attached classification descriptions.

Classification Descriptions (Attached)

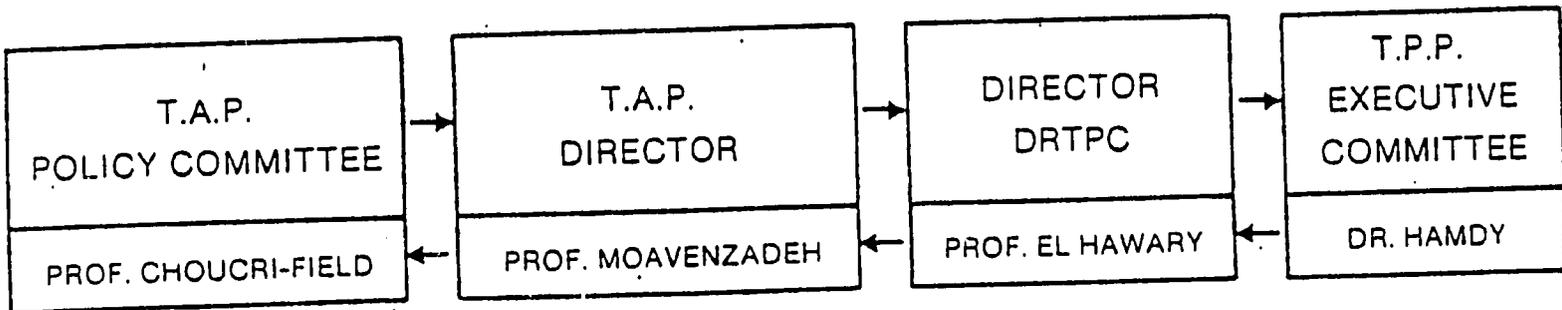
Correspondence Secretary
Technical Secretary

P. PROGRAM COORDINATING COMMITTEE AND CU/MIT PROGRAM
PROGRAM COORDINATING COMMITTEE



* Coordinators appointed by Center Director in areas of research directed by Board of Directors

CU/MIT PROGRAM



To assist Cairo University in developing the capabilities to contribute to the formulation and implementation of science and technology policies.

4/2

Program Coordinating Committee

A Coordinating Committee will be formed to be chaired by the Center's Director and will have as members the program coordinators. The Committee will be responsible for the proper coordination of the different projects of the Center.

Program coordinators will be designated by the Director for each major area of interest to the Center and Government Ministries and agencies selected by the Board of Directors.

A description of the functions and responsibilities of a program coordinator is attached.

CU/MIT Program

The CU/MIT program is considered one of the main programs of the Center. The Director of the Center may invite representatives of the CU/MIT program, or other similar programs, to attend meetings of the Program Coordinating Committee as non-voting members.

The main objective of the CU/MIT Technological Planning Program is to assist Cairo University in developing the capabilities to contribute to the formulation and implementation of science and technology policies. The program is funded through US-AID and has progressed through planned stages since 1977. The first phase of the program consisted of a number of projects in a wide range of scientific fields involving faculty from both MIT and Cairo University and staff from various government ministries. The second phase, approved in 1978, continued the development of research efforts under the CU/MIT program and began efforts in the establishment of the Center for Research Development and Technological Planning (DRTPC), the organization which would direct and manage research efforts over the long run. The Center was established on February 28, 1979. The plan will lead to eventual assimilation of the CU/MIT program at the conclusion of the US-AID contract with CU/MIT as one of a variety of international collaborations being managed by the Center.

This third phase provides for continued research efforts in the CU/MIT project and more intensive efforts to enable the Center to provide the major leadership role in research and administrative efforts. In this phase, a transition will occur in focus of administrative efforts from the CU/MIT program to the Center; this will involve transfer of both staff and functions. The transition from the CU/MIT program to the Center will require close cooperation and effort between the TAP Policy Committee (MIT), the Director of TAP (Dr. Moavenzadeh), and the TPP Executive Committee (Cairo) and the DRTPC Director (Professor El Hawary).

4/3

CENTER OF DEVELOPMENT RESEARCH AND TECHNOLOGICAL PLANNINGCAIRO UNIVERSITYTITLE Program CoordinatorBASIC FUNCTION AND RESPONSIBILITY: To coordinate the work of the Center in a particular field of expertise.CHARACTERISTIC DUTIES AND RESPONSIBILITIES:

1. Prepare a general outline of the field and content of the program.
2. Nominate work groups for programs and projects from Cairo University.
3. Direct work groups in preparing research, consulting and training plans in the field.
4. Identify projects within the field.
5. Consulting tasks in the field of program.
6. Nominate members of research groups to achieve project results.
7. Follow up on progress in the field of expertise.
8. Collaborate with other projects to assure harmony in the program.
9. Plan the overall research, training, consulting and conference activity in the field of expertise.

SUPERVISION RECEIVED:

General direction is received from the Director of the Center including participation as a member of the Center's Program Coordinating Committee.

SUPERVISION EXERCISED:

General Direction is given to Principal Investigators, and other staff members assigned to certain tasks like training courses, conferences, technical preparation, internships, etc.

QUALIFICATIONS:

Generally a senior faculty member of Cairo University or non-academician of comparable professional status.

Best Available Document

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Organizational assistance provided by MIT and Cairo University toward the administrative development of the Center

In the following sections of this report; the role that various MIT and Cairo University administrative departments have played in the institutionalization process will be explained in detail. Emphasis will be made on the progress achieved during the past year and the projected plans for the future. In reviewing this material it will be seen that strong potential exists for major constructive assistance.

This contribution has been difficult to quantify in the past since much of the professional time, materials, and other services provided by Cairo University and MIT have been donated without expense to the program. This effort is being reviewed with a view toward coordinating these areas of assistance. This will allow the program to chart qualitative progress toward institutionalization on a more regular and systematic basis.

Accounting

During the past two years the Center has received funds from a wide variety of sources, and has also funded several in-house projects. This has given them broad experience in the various kinds of accounting systems which must be coordinated in order to develop a sound accounting structure for the DRTPC. It has also led to a clear understanding of the difficulties involved and the kinds of assistance needed.

Assistance from MIT had been previously provided to the Liaison Office on an ad hoc basis by the MIT Comptroller's Office to establish procedures and train Egyptian staff. It was felt that by observing the administration of the CU/MIT contract by MIT that the Center would have a model on which to base its

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own future financial management. As the Liaison Office staff acquired more expertise they assumed more responsibility in the accounting matters for the CU/MIT program. As a result, they have achieved a level of competence such that all international accounts for the DRTPC have been delegated to the senior Egyptian accountants working on the CU/MIT program. However, with the increase in the types of accounting activities foreseen for both the CU/MIT program and the Center (fellowships, more sophisticated cost allocation procedures for photocopy, telex, secretarial services, etc., potential use of the computer system), further assistance will be required from MIT. To review the situation, Mr. Philip Keohan, the Comptroller from MIT, visited Cairo in March 1982 for discussions with the Center staff, USAID, and Cairo University administration. A follow on visit by two members of the accounting staff was made in the fall of 1982. During this visit new accounting systems were implemented and ~~an~~ the preparation of an / accounting manual ~~has been prepared~~ ^{was initiated.} These systems for the Center have been developed jointly with counterpart Egyptian administrators at the Center, based upon their perceptions of need.

Contract Administration

As in the accounting area, the projects administered by the Center to date have given the Center's administration an appreciation for the issues involved in contract management, and the potential areas for problems which must be resolved over the short and long term. Mr. George Dummer, the Director of MIT's Office of Sponsored Programs, visited Cairo with Mr. Keohan and discussed the needs of the Center with regard to contract management. As with the accounting system, Mr. Dummer perceived a need for a senior individual to be designated as the contact at the Center for contractual matters. This person would communicate directly with personnel at OSP at MIT for advice on contract negotiation, implementation, and administration.

A channel has been set up whereby MIT (at the request of the Center) will review all proposals prepared by the Center for submission to outside sponsors, or received by the Center from CU faculty who already have outside funding and are interested in having their projects administered under the auspices of the Center. Mr. Dummer has also agreed to assist in the preparation of contracting policies and procedures for the DRTPC, using MIT guidelines as a model. A number of procedures have already been established in written form by MIT (proposal and budget preparation, guidelines for entering into relationships with outside sponsors) and will be modified for the Center's use. MIT's written procedures/issued in connection with the new initiative fellowship programs.

Personnel

Since the establishment of the Liaison Office in 1977, the CU/MIT program has benefitted from direct involvement in the program by Mr. James Culliton, Director of Personnel at MIT. Although no direct reimbursement for his services has been required, the following has been accomplished:

- (1) Establishment of a personnel policies and procedures manual for the Liaison Office, which combines Egyptian and U.S. practices and regulations.
- (2) Development of an "Organization Plan for the DRTPC" in collaboration with Dr. M. El Hawary.
- (3) Advice to the Center, reviewing its staff structure and integrating it with the Liaison Office.
- (4) Continually updated wage and salary investigations which have successfully kept the Liaison Office staff at competitive levels of compensation.

Establishment of Computer System

From the period June 1981-December 1981, a mini-project was implemented that led to the successful procurement of a computer system for the Center. Two MIT counterparts were identified at the School of Engineering's Joint Computer Facility, the faculty supervisor and the facility's director. The Egyptian counterparts for this effort were the present and former Directors of the Cairo University Statistical Center. During meetings in Cairo, extensive discussions were held with several administrative personnel at Cairo University and with researchers on the CU/MIT and Center research projects. An appropriate system for the Center was carefully designed, bids were solicited, and approval obtained from USAID for purchase of the system. The Cairo University counterparts have successfully assumed responsibility for investigating such areas as power supply, renovations to the facility, and installation and maintenance agreements with local suppliers. The most knowledgeable and capable systems programmer was transferred from the Cairo University Statistical Center to the DRTPC to assist in the installation.

Cairo University's participation in the design of the system and its agreement to fund the renovations and maintenance costs represents not only a demonstration of effective skills in managing an enterprise such as the above, but also a willingness to assume financial responsibility for the ongoing operation of the facility. Extensive advice was also obtained from CU/MIT program faculty participants, especially in regard to power requirements. This represents the kind of unremunerated assistance that those associated with the CU/MIT program are willing to provide to the Center's institutionalization effort.

The computer will not only serve the needs of the project researchers at the DRTPC, it will also be used for word processing and other administrative functions. Several staff members have completed computer courses at the Cairo University Statistical Center, and the Director of the Center has donated additional

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computer time for their use pending installation of the Center's system. Three of these staff members, upon successful completion of courses in Cairo, traveled to Boston to further their training in the U.S. The new manager of the system will participate in a training program at the manufacturer's facility in the near future.

Establishment of Library

The first library staff and structure established for the Center was carefully evaluated during the summer and fall of 1981. It was decided by the Board of Directors that a much stronger and efficiently designed facility should be developed, and a new librarian was appointed. Cairo University assigned to this position its most capable and qualified librarian as an indication of its support to this effort. She prepared a proposal outlining her growth plan for the library which was favorably received. She was asked to expand upon certain aspects of this report, and a preliminary implementation schedule was prepared in January of 1981. Current activities of the library focus on evaluating the material already on hand at the Center, establishing acquisition and service policies consistent with the goals of the Center, and carefully investigating other library facilities in Cairo in order to avoid duplication.

The librarian is also preparing a plan to utilize the space made available by the Center, and to obtain the necessary furnishings and equipment. It is anticipated that the Library will also handle dissemination of the Center's publications, and efforts are being made to consolidate this activity.

The Director of the MIT Libraries has been approached in regard to prospective support from MIT in this area. MIT has had extensive experience in setting up libraries overseas as well as at remote locations on campus. The Director himself has offered to review the Center librarian's proposal for space utilization since this is an area of personal expertise. It was agreed that for an initial visit by the Center librarian to MIT a full program of observation and discussion of topics of interest with MIT experts would be prepared. Should the library development program accelerate, MIT would be prepared to offer an even broader range of support activities.

Fellowship Administration

Several MIT departments have provided substantial advice to those at Cairo University involved in this phase of the activity, for example, the Office of Sponsored Programs in regard to proposal format, the Center for Advanced Engineering studies for program administration, and the Foreign Students Office for other administrative support.

The appointment of Dr. Hamed El Sinbawy as Fellowship Advisor at the Center has provided a key focus for concentration of these efforts and future progress. Dr. Sinbawy has traveled to MIT in the spring of 1982 to visit with these departments and others to further clarify policies and procedures.

Conclusions

1. Support by MIT and Cairo University administrative departments has been one of the most constructive elements in the effort toward institutionalization. Efforts should be made to coordinate this involvement in a manner that more clearly quantifies the extent and value of this assistance.
2. Support has proven to be most effective when it has been provided in response to Cairo University requests for assistance, when these requests arise from specifically perceived needs.
3. Assistance from MIT has been most effectively implemented when there is a competent staff in place in Cairo to put systems in effect immediately, and when these systems are developed jointly with counterpart personnel from Cairo University.
4. The willingness of high level administrators at MIT to participate in the program has created an equal willingness on the part of Cairo University to provide the time and expertise of its own top administrators, as well as financial support for several of these activities. Furthermore, Cairo University has delegated to the Center those personnel from their own organization who they felt have the most potential for development. This expression of support on the part of Cairo University should be reciprocated by the CU/MIT program in the form of continued and increased funding for several of these activities.

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NEW INITIATIVES

Fellowships and Internships

One of the most outstanding indicators of progress toward institutionalization has been the successful implementation at Cairo University of the new initiative activities. Although originally the nature of these activities was proposed by MIT, the Egyptian administration of the program took the initiative for identifying those which were of highest priority, namely research support to Cairo University Junior faculty members ("postdoctoral fellows"), support to doctoral candidates at Cairo University, and ministry internships for Cairo University faculty. The Cairo University Executive Committee designed and administered the selection process, including solicitation of proposals, design of proposal format, nomination of final candidates by the Deans of various faculties at Cairo University, and approval by a joint MIT/Cairo University committee.

Continuation of all funding was made contingent upon a satisfactory reporting of progress. To monitor the fellowship effort, a faculty advisor, Dr. Hamed El Sinbawy, was appointed by the Cairo University Executive Committee and a DRTPC support staff member was designated as his administrative assistant for the task.

The success of this effort indicates that the Center has the ability to put mechanisms in place quickly and effectively to utilize funds in new areas of education and research. The composition of the fellows' research topics shows a marked diversification into new areas for the Center. During the first year a total of 19 faculty members, 9 doctoral candidates, 9 faculty advisors to the doctoral candidates, and approximately 30 other graduate student research assistants have been involved in these activities, representing nine departments at Cairo University and four government agencies not previously affiliated with the CU/MIT Program. In the second year of the Program new awards were made to 7 post doctoral fellows, 8 doctoral fellows and 5 interns.

Therefore, a definite broadening of the research base, one of the major goals of institutionalization, is well underway.

One of the doctoral fellows completed a six month program of research in Cambridge, The Harvard/MIT Division of Health Sciences and Technology provided space, access to laboratory facilities and a faculty advisor to the fellow for his thesis-related research. The fellow assumed responsibility for outlining his program and establishing a suitable framework for conducting his research. Other fellows have submitted letters of inquiry to various other departments at MIT and have received favorable responses. This demonstrates that the caliber of candidates selected by the program in Egypt has been high enough to attract MIT assistance at little or no cost to the program.

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