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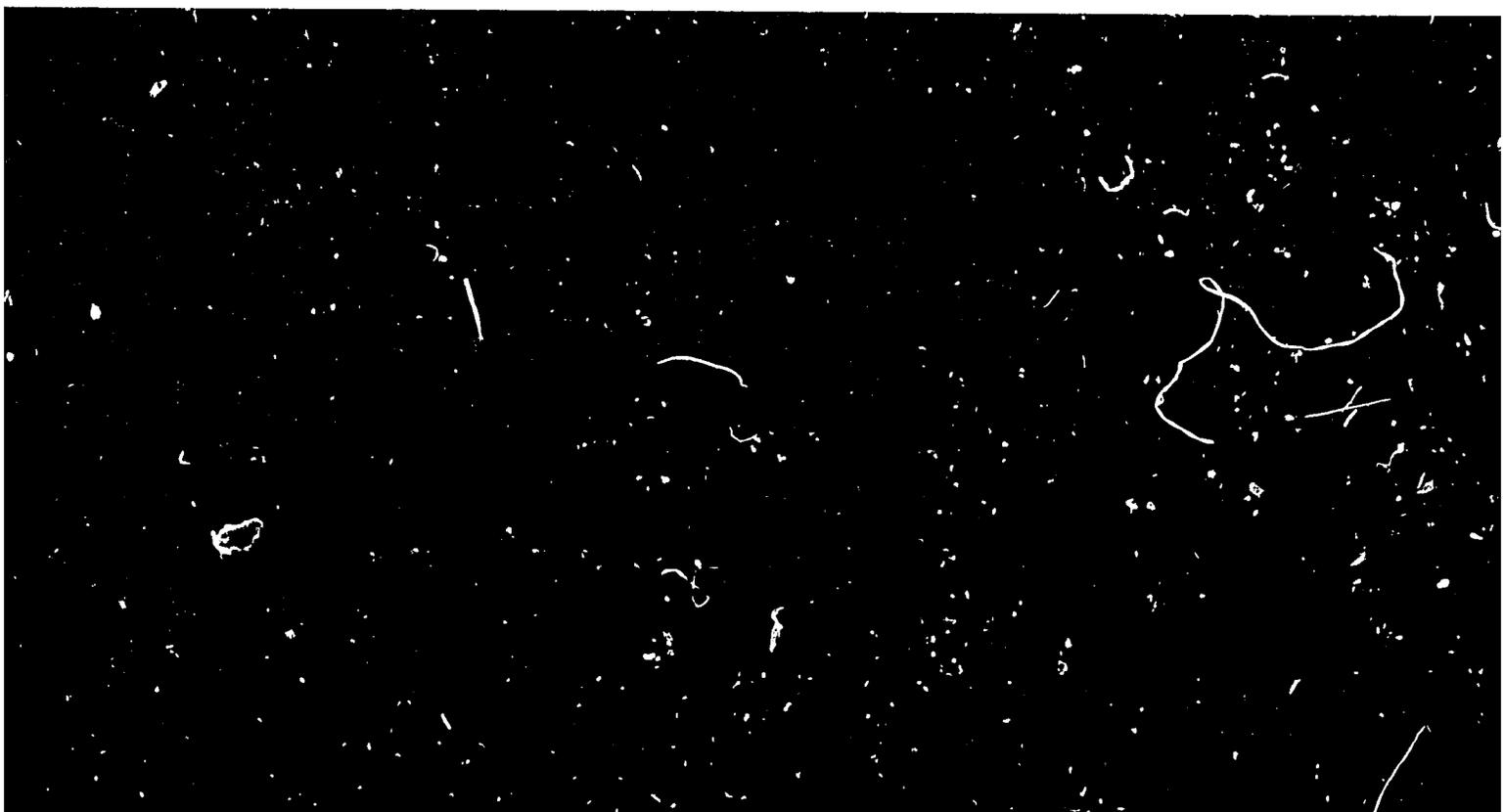
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THE HASHEMITE KINGDOM OF JORDAN
THE MINISTRY OF COMMUNICATION

FINAL REPORT OF
MANAGEMENT CONSULTING SERVICES
TO THE TELECOMMUNICATIONS
CORPORATION

Prepared for
HIS EXCELLENCY
MUHIEDIN EL-HUSSAINI
MINISTER OF COMMUNICATIONS



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FEBRUARY 1974

ARTHUR YOUNG & COMPANY The logo for Arthur Young & Company, featuring the letters 'A' and 'Y' in a stylized, bold font. The 'A' is positioned above the 'Y', and both letters are partially overlaid by a circular globe showing the continents of North and South America.

ARTHUR YOUNG & COMPANY

1025 CONNECTICUT AVENUE, N. W.
WASHINGTON, D. C. 20036

February 28, 1974

His Excellency Muhiedin El-Hussaini
Minister of Communications and Chairman
of the Board
The Hashemite Kingdom of Jordan
Amman, Jordan

Your Excellency:

We are pleased to submit our final report upon the completion of our management consulting services contract with the Ministry of Communications to assist the Ministry in creating a Telecommunications Corporation. This report provides an historical development of the contract, reviews the work performed, discusses the problem areas encountered and those that still plague the Corporation and, finally, recommends a program of action to carry forward the work of the Corporation.

We deeply appreciate the courtesies extended to us by the Government, the Ministry, the Telecommunications Corporation and its staff during the seventeen months that our consulting team was on site.

We are pleased to report that we have satisfied all the requirements set forth in our work statement. More important, we believe, is that the work performed by our consulting team met the professional standards of our Firm. We are also pleased by the fact that our team was able to assist the Corporation in activities substantially beyond and in addition to the scope of the contract.

We believe that the critical problem now confronting the Corporation is a management rather than a technical one. The Corporation has a severe lack of experienced executive and middle management staff capable of planning, organizing and monitoring the complex operations of a modern, developing telecommunications organization such as that now being developed in Jordan. A consequence of this situation is the absence of that cohesive force within an organization that permits it to function as an integrated unit.

We regret that the Corporation, during the lengthy period that our consultants were on site, was unable to begin and to proceed with the difficult tasks of implementation and that, as a result, the Corporation has been unable to derive the full benefits of our efforts. We are, however, heartened by the fact that the Council of Ministers has now approved the Corporate Regulations and that,

consequently, the Corporation can now proceed with the difficult work ahead. The selection of key staff and the staffing of the Corporation are the necessary preliminary steps that must be taken immediately. We feel that the implementation plan for the Corporation, which we assisted Corporate staff in developing, will provide you, the Board of Directors and the Director General with a firm basis as well as necessary supporting information with which to ensure the successful future development of the Corporation.

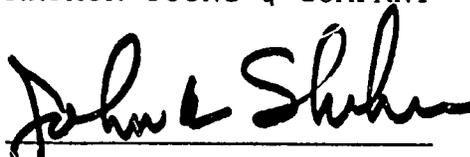
In this report we discuss the problems which faced us and the Corporation and which have thus far prevented the Corporation from fulfilling the objective of establishing a viable Corporate organization and to, thereby, meet the ambitious Telecommunications objectives of the Kingdom. We feel that the Telecommunications Corporation is a vital key to meeting the goals of the Three Year Development Plan of the Hashemite Kingdom of Jordan. Our report also describes a set of actions which we believe the Corporation must undertake, on both immediate and long term bases, if it is to be capable of meeting these objectives.

May we again express our appreciation for the cooperation and assistance rendered to us by all with whom we had the opportunity to work. It is our privilege to have been of service to the Hashemite Kingdom of Jordan.

Very truly yours,

ARTHUR YOUNG & COMPANY

By



John K. Sheehan, Director
General Government Services

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I. INTRODUCTION

I. INTRODUCTION

This is the final report of the Management Consulting Services Contract between the Ministry of Communications of the Hashemite Kingdom of Jordan and Arthur Young & Company.

The purpose of the Management Consulting Services Contract, as defined in its work statement, was "to assist in the management and organizational aspects" of the program for the expansion of telecommunications in Jordan, and the creation of a telecommunications corporation.

The project was initiated on September 6, 1972 with the arrival in Jordan of the Arthur Young & Company Team Leader and the Home Office Coordinator. All formal task work was completed by December 10, 1973. The submission of this report is the final effort required to fulfill the terms of the Management Consulting Services Contract with the Ministry of Communications.

The contract work statement calls for us to submit a final report describing the services we have rendered. A draft of the report was reviewed by officials of the Ministry of Communications and the Telecommunications Corporation; it was also reviewed by the Board of Directors in its final draft form prior to this formal submission.

1. OBJECTIVES

The objective of this final report is to present a detailed discussion and review of the progress of our Management Consulting Services Contract during the sixteen active months of the life of the project; to evaluate its impact on the Telecommunications Corporation; to assess the degree of success in meeting original objectives and to recommend a plan of action for the more immediate and longer term activities which we believe are necessary to meet the original goals.

Arthur Young & Company has noted on numerous occasions the belief that the work performed by our consultants provides a firm foundation upon which the Telecommunications Corporation must now build a viable and working organization and structure. The Telecommunication Corporation must devote considerable efforts of its own on a sustained basis over the next several years in order to create a smoothly functioning and efficient organization. We believe that the management of the Corporation has finally accepted this premise; hopefully it will act accordingly.

The scope and complexity of the management consulting services contract, coupled with the political environment in which the project had to be performed, requires that we issue a detailed final report. The contents of this report reflect statements, evaluations and discussions which appear in the detailed monthly status reports submitted as well as in other special reports and memoranda. Nevertheless, the report should serve a unique management purpose for both the government of the Hashemite Kingdom of Jordan and the U.S. Agency for International Development. Hopefully the Government of Jordan will use this report to address and eliminate the difficulties faced by both the Telecommunications Corporations and our consulting team, some of which still plague the Corporation. The U.S. Agency for International Development may use this report as a guide to any future financial assistance to the Ministry of Communications in the hope that better management and utilization may be made of funds which may be committed.

Obviously, a matter of very serious concern to Arthur Young & Company is the distinct possibility that the few officials in Jordan and/or AID familiar with the project---from inception to execution of the contract through its completion, including the myriad of details which are necessary for thorough understanding of all the circumstances surrounding and influencing it---would not be associated with the effort at some later date. This report is submitted partially in the hope of avoiding any future misunderstanding of the circumstances involved and the results achieved.

2. ORGANIZATION OF THE REPORT

Section II of this report provides an historical treatment of the evolution of this management consulting engagement; it is intended to provide a frame of reference for Section III which describes the progress of the consulting engagement, the problems faced and the results achieved.

Section IV of the report details the findings and recommendations developed by our consultants over the seventeen month period of on-site and direct involvement by the team with Ministry of Communications and the Telecommunications Corporation management, and its participation with them in a wide range of management and operational matters. The recommendations and findings described in this report include both the immediate and longer term activities which we believe are required to enhance the viability of the Telecommunications Corporation and to ensure that it develops into a healthy structure.

* * * * *

Arthur Young & Company takes this opportunity to express its appreciation to His Excellency the Minister of Communications, Mr. Muhiedin El-Hussaini; the Under-Secretary of the Ministry of Communications, Mr. Hikmet Khamash; the previous Director General of the Corporation, Dr. Jamil Ayoub; the present Director General, Mr. Walid Sharaf Eddin; the Counterpart to the Consultant Team, Mr. Mousa Himmo; members of the Board of Directors of the Telecommunications Corporation; and all other members of the staff who gave of their time to make this project a success. The courtesies and hospitality extended by the Government of Jordan to the Consultant Team is deeply appreciated.

Arthur Young & Company also expresses its appreciation for the assistance rendered by Mr. William Wollé, former Director USAID Amman, Mr. A. Sweiss of USAID Amman, and Mr. Frederick Simons, USAID Representative, Amman. Their continued interest in the project insured the maintenance of a challenging working environment.

II. PROJECT SCOPE

II. PROJECT SCOPE

This section of the report describes the evolution of this management consulting project. It covers the time span from Arthur Young & Company's Phase I effort, or Feasibility Study, conducted in 1969 through the completion of our orientation and review activities on this project, which were completed in mid-September 1972. The purpose of this review is to provide a perspective or framework for the review of project efforts and project status, which are the subjects of Section III. The historical treatment is thus both brief and limited. We have not attempted to provide a chronology of the Jordan Telecommunications Improvement Project; rather, our treatment is limited to discussions pertaining to the Corporation and the management consulting project.

1. THE INITIAL ASSESSMENT

The findings of an Arthur Young & Company consulting team, under a contract to the Ministry of Communications dated 4 September 1968, were provided in a six volume report that was submitted to the Ministry in August, 1969. The Summary Volume included observations which reflected Arthur Young & Company's belief that the development of a strong, viable Telecommunications Corporation was essential to ensuring, first, that telecommunications operations would be self-sustaining and, second, that an adequate level of service be provided.

The purpose of the Phase I consulting efforts, as set forth in the report, was the development of a series of recommendations for the structuring and implementation of the proposed Corporation. Specific recommendations were provided covering the roles and functions of the Corporation's Board of Directors, proposed regulations under which it would operate, proposed legislation for its implementation, etc. The report also included a series of proposals in the areas of organization and personnel, accounting and budgeting, as well as technical requirements.

The consulting work which had been performed, buttressed by discussions with key Ministry officials, provided the basis for the development in Phase II of a program for the implementation of these recommendations.

(1) The Original Program

The original or 1969 plan of action for implementation of the recommendations and for the orderly development of the Corporation was summarized in the Summary Report Volume. Briefly, a program of 18-21 months was proposed during which a total of approximately 81 man-months of consulting effort would be provided. An alternative involving an additional 11 man-months of effort was also suggested. Although a dollar value was not placed on the proposal, it is evident that a program of from \$500,000-600,000 was envisioned. It should be noted that the proposed development plan stressed the importance of providing Jordanian counterparts to the six-man consulting team on a full-time basis. Further, it implied that counterparts were essential, first, to ensuring successful implementation and, second, to keeping consulting efforts and costs to the relatively modest levels proposed.

The plan summarized in the report set forth a series of 17 major activities that would be performed including efforts related to both training and implementation. Although not specified in the report, most of the 17 major activities also included a number of specific task and subtask efforts. The scope of work recommended, as specified in the proposed plan of action, is illustrated by the following summary of efforts by category of expertise:

	<u>Man-Months</u>
. General Technical Specialists	25
. Telephone Operations Consultants	12-1/2
. Telephone Engineering Consultant	12-1/2
. General Management and Accounting Consultant	15
. Financial Consultant	11
. Supervision	
- Technical	2-1/2
- Management	2-1/2
	<hr/> 81

It must be emphasized that these estimates were based on the assumption that significant efforts would be provided by Jordanian counterparts.

(2) The Project as it Evolved

As noted previously, the feasibility study/preliminary review report was submitted to the Ministry of Communications in August 1969. Arthur Young & Company files show that a series of meetings were held, both in Jordan and the United States, involving our Firm and officials of the Ministry and National Planning Council, as well as with USAID representatives.

During this period, the original proposal was substantially refined and extended as a result of further efforts by the consulting team and as a product of discussions with Jordanian and USAID officials. By the summer of 1971, the proposed project had evolved into a major effort of some 30 tasks and approximately 120 man-months (10 man-years) of effort over a two-year period. This proposal called for in-depth levels of consulting advice and assistance in the development and implementation of plans, systems and procedures, etc., as well as training and direct technical assistance efforts. It should be noted that this version of the proposal had, in the view of those who developed it, been "pared to the bone" and represented a "realistic" vis-a-vis optimal level of effort and scope.

This proposal, which was discussed extensively with both Jordanian Government and USAID officials during the summer and early fall of 1971, carried a total price of US \$865,000 (including \$815,000 for professional services and \$50,000 for expenses) and JD 30,000. These discussions revealed that, although both Jordan and USAID recognized that at least this level of effort was warranted by the circumstances, the services which could be provided would be limited by the available funds, specifically to the \$251,000 balance of funds still available from AID Loan No. 278-H-006. This

proposal, too, envisioned substantial assistance and participation by counterpart personnel from the Ministry.

In the fall of 1971, discussions between Mr. Ralph Lewis of Arthur Young & Company, officials of the Jordanian Government and USAID resulted in the preparation of the contract under which current efforts were conducted. In the process of developing the current 17 task work plan, several of the original 30 work tasks were eliminated, and others were combined. Most significant, however, were (1) the substantial reductions made in the depth of treatment proposed for the individual-tasks, (2) elimination of the training efforts, (3) substantial reduction in technical assistance efforts, and (4) severe restrictions on implementation activities to be performed. It was also agreed by the parties that an increase in the level of participation and/or the number of Jordanian counterparts would be required.

It is important to note that none of the parties had any illusions about the sufficiency of the consulting services set forth in the contract as finally executed on 31 December 1971. On the contrary, it was recognized that in-depth treatments could not be provided with but 41 man-months of consulting -- and these beliefs were again expressed to us by both AID and Ministry officials during our orientation efforts in August and September 1972.

In summary, the management consulting effort, as conceived in the early summer of 1971, called for a major consulting project of some 10 man-years of work. In evolving to the finalized work task plan, it was necessary to eliminate, or at least substantially reduce several key activities which had been included in the "full-scale" proposal that all parties had agreed represented an objective, reasonable basis for assisting the Corporation to develop into a viable, ongoing concern. The relatively essential efforts that had been eliminated or significantly reduced included:

- . Direct technical assistance/training of counterpart and other personnel
- . Implementation efforts related to a number of tasks
- . Training activities,

In addition, both scope and depth of consulting efforts were limited substantially from those which, it was recognized, were required to ensure the successful development of a corporation.

In retrospect, it seems clear that good intentions and optimism, by all of the parties concerned, may perhaps have triumphed over reasoning and good judgment.

Another consideration of particular importance to Arthur Young & Company appears to have delayed execution of the Contract by the parties. Mr. Lewis, acting as spokesman for the Firm, had stated categorically that Arthur Young & Company would not initiate management consulting efforts until an "acceptable" Director General was appointed. Ultimately, his view prevailed and this condition was added to the Contract as Article III, Paragraph (6) which states that services would commence following "notification that a qualified Director General, a man of proven ability, who has successfully managed a telecommunications operation has been employed." The purpose of this provision was to protect the Firm from an unsatisfactory situation in which extrication might be difficult or impossible.

The nomination of Dr. Ayoub as Director General did not satisfy the Firm that this contract provision had been met. Although he had excellent academic credentials, his management experience and the scope of his corporate exposure were substantially less than we had expected. The immediate reaction of key Arthur Young & Company executives (Messrs. Lewis, McGerdy and King) was to exercise the provisions of the Contract and to advise the Ministry that he was unacceptable.

Before doing so, however, several meetings were held with AID officials who stressed the importance of the effort to Jordan and to U.S.- Jordan relations. They also noted the long delay in nominating any candidate for the position and they described certain situations or conditions within Jordan about which we had been unaware.

Finally, a decision was made to initiate efforts subject to the provision that a detailed on-site home office review be made at the end of three months, at which time it would be determined whether it was in the Firm's best interest to continue. This decision was transmitted to the Minister of Communications in a cable of 11 July 1972. Circumstances were such that this three-month review trip, originally scheduled for the late November to early December time frame, was postponed until February 1973.

In late February, a two-man home office review team arrived in Jordan to conduct an eight-day review and evaluation effort. This team consisted of Mr. Sheehan, who had assisted Mr. Kurkjian in the first weeks, and Mr. Donald H. King, Arthur Young & Company's Director of Governmental Consulting. A Special Interim Report, dated 1 May 1973, was issued as a result of that trip. The final home office review trip was completed by Mr. Sheehan in September 1973.

2. PROJECT WORK PLAN AND SCHEDULE

Negotiations between the parties pertaining to the project went forward during the final months of 1971, and the Contract was eventually signed on the last possible day, 31 December 1971. We have been told that the long period leading to execution of the Contract reflected the disagreement and resistance of certain Jordanian Government officials. We have also been told that the Jordanian Government's approval of the contract was at least in part the result of pressure from USAID related to the AID loan agreement. The significant point in the foregoing is that the situation, as we understand it, illustrated that a reservoir of

resistance to the concept of a corporation existed some two years ago. In our view, a degree of such resistance persisted throughout the period of execution of this engagement. The approval of the Regulations by the Council of Ministers in January of 1974 hopefully implies the start of a new era and life for the Corporation.

Arthur Young & Company representatives held conversations with and received correspondence from Ministry and other Jordanian Government officials on several occasions during the first half of 1972. But, it was not until July 1972 that we were instructed by the Ministry to begin our management consulting efforts. This delay was primarily due to efforts by the Government of Jordan to find a suitable Director General for the Corporation.

Upon receipt of notification to initiate services, Arthur Young & Company formalized the project management and Team Leader assignments which had previously been made on a tentative basis. In addition, various Jordanian and AID resumes and other forms were prepared and processed. Immediately upon receipt of the necessary clearances, a two-man consulting team consisting of Messrs. Kurkjian and Sheehan departed for Jordan, arriving in Amman for work on 5 September 1972.

(1) Summary of Work Plan and Schedule

Exhibit I* is a summary of the 17 Work Tasks called for under the terms of the contract. As indicated above, project work efforts were initiated in the U. S. during August 1972 and in Amman one month later.

The task statement summary in Exhibit I indicates the breadth but not the depth of the work activities to be conducted. The complete work task statements contained in the contract, of course, provide substantially more details concerning precisely what was to be done. However, the Contract does not indicate the depth of treatment which was

* All exhibits are included in the Appendix.

to be afforded each of the work activities. In our view, the Contract was essentially of the *level of effort* type and, as indicated previously, we were assured that this view was also held by responsible Jordan Government and AID officials. Essentially, this view was that a limited, fixed amount of funds was to be devoted to the completion of a series of work activities. The depth and scope of treatment afforded each of these activities was to be dictated by priorities established for the allocation of the consulting resources available from these funds. Priorities were, in turn, to be established based on the exigencies of the changing situations as they unfolded, including the availability of responsible counterpart personnel.

As indicated previously, the concept which evolved during the 1970-1971 negotiations called, first, for the management consulting efforts to be concentrated in development activities, with a heavy advisory component. Second, training and implementation were to be provided to the extent resources permitted. Finally, it was agreed that Ministry personnel would provide substantial assistance in actual data gathering, preliminary analysis, etc. It was upon these bases that actual work efforts were initiated in Jordan in early September 1972.

(2) Initial Project Efforts and Review

Prior to departing for Jordan, Messrs. Kurkjian and Sheehan of Arthur Young & Company met several times with USAID officials, had several meetings with Messrs. Lewis and McGordy who had been responsible for the preliminary study and reviewed all available reports and materials.

Upon their arrival in Jordan, Messrs. Kurkjian and Sheehan immediately initiated efforts, beginning with a series of meetings and discussions with AID and Ministry officials, other contractors, as well as other involved parties such as the Royal Scientific Society. After completing the preliminary

administrative details of arranging for office space, telephone, secretarial support, etc., the substantive part of the engagement was initiated.

Discussions were continued with officials such as the Minister, Dr. Mohamed El-Bashir; the Undersecretary, Mr. Hikmat Khammash; the Director General, Dr. Jamil Ayoub; the Assistant to the Undersecretary for Financial Affairs, Mr. Himmo, and other officials. Additional meetings were held with Computer Sciences Corporation and Federal Electric Company personnel to become acquainted with the scope of the Jordan Communications Improvement Project and to get a first-hand appreciation for critical problem areas.

The result of this review and additional discussions with Mr. Himmo indicated that there were two critical activities not covered in the Contract which should be addressed as soon as possible. These efforts, described in greater detail in a 16 September 1972 memo to Dr. Ayoub from Mr. Sheehan, were, first, to provide advice and technical assistance in the development of a Project Management Office and, second, assistance in the development of the Regulations under which the Corporation would operate.

The initial three-week review also indicated that other adjustments should be made in the allocation of consulting manpower resources among the various tasks. Consequently, a tentative revision was prepared at that time; however, it covered only the first seven months of the project, the period ending 31 March 1973. The original and tentative staffing plans and schedules received additional attention from Mr. Kurkjian during the next several weeks and these, as well as other alternatives, were discussed with Dr. Ayoub and Mr. Himmo. In late October 1972 a revised project work plan, staffing proposal and task schedule was developed and reviewed with Dr. Ayoub and Mr. Himmo. Staffing and project work then proceeded on the basis of this document.

In May 1973 the schedules were again revised to reflect changes in the work statement.

In April 1973 discussions were held with the Director General and the Counterpart to revise the work statement in the light of progress made to that date and because of other factors bearing on corporate involvement in the project. It was obvious to our consulting team that Tasks 8 and 14, Systems and Procedures and Rate Setting respectively, required more attention and higher levels of effort than those which has originally been allocated in the work statement. Therefore, we recommended foregoing Tasks 9, 12, 13 and 16 (Outline Engineering Practices, Training Programs, Data Processing Planning, and New Telecommunication Services respectively) and instead allocating the five and one half man-months of effort for Task 8 was raised from the 7.5 man-months originally scheduled to 11.5 man-months; the level of effort for Task 14 was raised from 2 to 5 man-months of effort. This permitted our consulting team to perform these tasks in far greater depth than otherwise would have been possible.

Exhibit II contains a comparison of the tentative schedules set forth in the Contract with those which were developed in October 1972 and May 1973. The column captioned "Planned Man-Months" reflect the October 1972 plan while that titled "Revised Man-Months" shows the May 1973 final schedule plan. Special note should be made concerning several items and figures shown on the exhibit.

- . The task listing includes additional efforts, Tasks 3A and 3B, which cover efforts in connection with the PMO and in the development of the Corporate Regulations.
- . Efforts during the first six months in connection with Task 17, providing day-to-day assistance, ran at a rate substantially higher than that programmed in the October 1972 plan. Mr. Kurkjian's records indicate that about two-thirds of this time reflected efforts in connection with the Regulations, including providing special responses to requests by the Board and the Director General.

- . Home Office "supervision," although relatively high during the first six months of the project, eventually ran at originally budgeted levels.
- . The revised schedule shows more man-months of effort than estimated in the work plan and staffing schedule of the Contract. This was possible because the rates actually charged for consulting services were somewhat less than those set forth in the Contract. Careful planning and selection of staff eliminated considerable travel between the United States and Jordan.

The recommended changes to the work statement were also discussed with AID officials in both Amman and Washington and their verbal approvals were obtained. The approval of AID officials was obtained during a meeting held on 1 May 1973 in Washington.

The exhibits do not reflect the substantial additional efforts made by our consulting team during their nearly 17 months of work on-site. As noted above, lower consulting rates were charged by Arthur Young & Company than those which had been estimated in the original contract and, consequently, it was possible for us to render a total of 42 man-months of effort instead of the 40 man-months called for in the contract. More significant, however, was the fact that, except in the final month, the consulting team consistently worked 48 hour week as compared to the 42 hour break stipulated in the contract. This permitted the consulting team to provide far more man-months of effort than called for in the contract.

Among the major non-contract tasks performed were the following:

- . Developed mail handling procedures and practices
- . Developed an implementation plan
- . Assisted the Corporation and the Royal Scientific Society in developing the computerized billing system
- . Assisted the engineering and operations staff in improving telephone operations

- . Conducted seminars. A total of 12 seminars were conducted to assist corporate staff in understanding Task 8 outputs
- . Assisted in revising and finalizing the corporate regulations.

The above were in addition to Tasks 3A and 3B described above. However, the most important impact of the added efforts contributed by our consulting team was to increase both the scope of the work performed in Task 8 as well as the depth of treatment afforded the various systems developed in it.

* * * * *

In this section of the report we discussed how the project evolved and we described the original work plan and project schedule. We also outlined changes in scope which were made during the course of our efforts. Section III provides a detailed assessment of the project.

III. DESCRIPTION OF PROJECT EFFORTS

III. DESCRIPTION OF PROJECT EFFORTS

This section of the report provides details about the Arthur Young & Company management consulting team's efforts on behalf of The Ministry of Communications and the Telecommunications Corporation. It begins with a brief summary overview and history of the consulting efforts to provide a frame of reference for the detailed chronological history of the project which then follows. This history, provided primarily on a task-by-task basis, includes brief assessments of the performance on and status of each of the work tasks.

1. SUMMARY REVIEW

In late July 1972, project efforts were begun following receipt from the Ministry of formal notification to initiate consulting services. Periodically during the balance of July and through August 1972, Messrs. King, Kurkjian and Sheehan of Arthur Young & Company met several times with AID officials in Washington, D.C. This group also met on several occasions with Messrs. Lewis and McGordy of Arthur Young & Company, both of whom had been involved in the Phase I study completed in 1969 and in subsequent negotiations. They were able to provide valuable background information about the proposed scope of the project as well as information about the Ministry, relationships with AID, etc. Finally, the group reviewed all available reports and materials, including the Phase I report.

Efforts during this initial period of almost two months' duration were also devoted to the preparation of applicable Ministry and AID forms and to their processing for approvals. A variety of reference materials and supplies were gathered for shipment to Jordan. Finally, efforts were also initiated to locate additional qualified consulting staff, including a subcontractor who could provide specific technical skills.

On 5 September 1972, a two-man team consisting of the Team Leader, Mr. Kurkjian, and the Home Office Supervisor, Mr. Sheehan of our Washington, D.C. Office, arrived in Amman and immediately began the Jordan-based orientation and review activities called for in the Contract, specifically Tasks 2 and 3. The next several weeks were devoted to a series of meetings with key Ministry of Communications personnel, various Government officials and others, such as local AID representatives, contractor personnel, etc. Those meetings included discussions of the recommendations which had been included in the Phase I report.

As a result of these review efforts, a memorandum was prepared for the Director General, dated 16 September 1972, in fulfillment of the requirements of Task 3, "Review and Update the Consultants' Phase I Recommendations." In this memorandum we recommended immediate initiation of work on two additional tasks: Task 3A, "Assist in Formulation of Corporate Regulations" and Task 3B, "Assist in Setting-Up a Project Management Office."

In late September Mr. Sheehan departed Jordan, and Mr. Kurkjian's efforts during the balance of the month were devoted to providing general advice and assistance (Task 17) as well as to initial work efforts on the Regulations. Also in late September, but only after considerable time and effort, a counterpart (as called for in the Contract) was assigned by the Ministry. The assignment of Mr. Himmo was a most fortunate selection.

By early October the draft version of Corporate Regulations, previously prepared by Mr. Himmo, had been updated and translated for review by the Director General and submitted to the Board of Directors. In support of this effort, several memoranda were prepared by the Team Leader describing the key management structure and providing job descriptions for key Corporate positions.

Arrival dates for the second and third members of the consulting team were postponed from 15 October and 1 December, respectively, to 15 November and 26 January. These postponements were the direct consequence of the slow progress which had been made in dealing with the Regulations. Difficulty in locating and assigning counterpart personnel also contributed to delaying the assignment of these consultants.

The Board's delay in dealing with the Regulations stemmed, in large measure, from the desire of its members to formulate the conceptual corporate model best suited to the needs of the country. Board members felt that the special nature and characteristics of the Corporation required the formulation of such an operating conceptual model by the Board to form the basis for subsequent organizational development. However, their activity required more time than originally anticipated, which subsequently contributed to increasing the delay in developing the Regulations. On the positive side, the effects of the above described efforts were to improve the interface and working relationship between the Board and Corporate management and to foster a deeper understanding by all parties of Corporate problems and needs. These, in turn, helped to improve the guidance and assistance which were provided in efforts to meet the ultimate objectives of the Corporation.

Following the arrival of the second team member, Mr. Arcuri, on 15 November 1972, it was possible to complete the Project Management Office (PMO) work which had been specified in the 16 September memorandum. This study and its recommendations were published in a report, "A Study of the Project Management Office, Telecommunications Corporation," issued in January 1973. Exhibit III lists all the reports produced on this engagement.

Upon completion of the PMO study, efforts were initiated on Tasks 4 and 5. Task 4, "Prepare Suggested Plans for the Progressive Take-over of the Communications Facilities," progressed satisfactorily at the beginning, primarily because of the assignment of Mr. Abu El-Huda as task counterpart, who provided needed

assistance in the difficult data collection efforts. The Council of Ministers' Decree on 16 January 1973, which called for the transfer of all communications functions from the Ministry of Communications to the Corporation and the loan of Ministry employees connected with these functions, made it necessary for us to re-examine the efforts of Tasks 4 and 6. Since Task 6 dealt with valuation of the assets to be taken over by the Corporation, a decision was made to integrate and combine Tasks 4 and 6.

Subsequently, in early February 1973, as a result of a thorough review of the quantity and quality of the data which had been collected to that date, it was decided that Task 4 efforts by the consulting team should be temporarily suspended. Instead, it was determined that more effective mechanisms for data collection were required to ensure completeness and accuracy. These efforts were assigned to the counterpart with, for the time being, the consulting team's activities being limited to a monitoring function. In support of this decision, a report titled "Interim Report, Tasks 4/6: Takeover Plans and Appraisal of Equipments Being Taken Over" was prepared and submitted in mid-February. This report was followed by a memorandum on 3 March 1973 outlining the detailed steps and recommended mechanisms to collect, verify and value the data required for Tasks 4 and 6. The mechanism instituted was the formation of committees -- staffed by Ministry employees and chaired by Mr. Abu El-Huda -- to collect, verify and organize the data.

Work on Task 5, "Advise on the Selection of Key People and Develop Job Classifications and Pay Structures," was initiated on about 1 December 1972. Following his arrival in Jordan in late January, the third member of the team was assigned to assist the Team Leader in these efforts. The task was completed during March 1973, and a three-part report was prepared and issued during March and April. Part I of the report deals with corporate organization and the key management structure, Part II with the middle management structure of the Corporation, and Part III is concerned with its pay structure. Data used in Task 5 included

those developed during reviews which were made of the organizations, job and functional descriptions and pay structures of other corporations in the Kingdom.

In late February, a two-man Arthur Young & Company Home Office review team consisting of Messrs. King and Sheehan arrived to conduct a brief but intensive review of consulting efforts. Mr. King is the Firm's Director of Government Consulting. A special Interim Report addressed to the Director General was prepared and submitted in May of 1973 partly as a result of that review trip.

Preliminary work efforts on Task 7, "Establish Long-Range Planning Techniques," were begun in mid-March. These efforts began with the identification of data requirements followed by the initiation of the collection process. A task counterpart was assigned to assist in these efforts, but he was withdrawn at task completion in spite of our recommendations that he proceed with immediate implementation. The stated reason for this action was the need of the Planning Department for his supervisory talents.

During March, in-depth work efforts were also initiated on Task 8, "Design and Implement the Systems, Procedures, Practices, Forms, Reports and Controls in All Functional Areas." With the mid-April assignment of the fourth team member, an accountant, the task was fully underway.

In the spring of 1973, a set of recommendations were submitted to the Director General in which the Team Leader recommended elimination of Tasks 9, 12, 13 and 16 and allocating the 5.5 man-months thus made available to Tasks 8 and 14. Extending the manpower budget for Task 8 to a total of 11.5 man-months permitted us to increase the level of consulting effort to approximately 16 man-days per subtask.

Throughout the period of the contract, the consulting team repeatedly stressed, principally to the Director General, the fact that the Task 8 systems development efforts should only be viewed

as a foundation upon which the Telecommunications Corporation would then itself have to build the detailed structure of procedures, practices, forms and controls essential for an efficiently operating organization. This concept appears to have eluded management until very late in the project.

In June of 1973, recommendations were submitted to the Director General asking, first, that subtask (p) of Task 8, "Radio, Carrier, Microwave and Satellite Practices," be confined to Carrier systems only since the hardware contractors dealing with the Microwave and Satellite systems had provided or were to provide the Corporation with modern practices. Second, we recommended deleting subtask (q), "Routine Preventive Maintenance," from the work statement since maintenance practices were being addressed in the other subtasks of Task 8 where appropriate and applicable. The Director General accepted our recommendations and the 15-20 man-days thus saved were devoted primarily to subtask (o), "Transmission Standards and Practices," which were urgently needed by the Corporation.

The activity in Task 8 which presented the most significant problem to the consulting team was subtask (g), "Customer Billing, Credit and Collection System." The problems stemmed from the unusually lengthy and extensive coordination efforts which were required with the Royal Scientific Society (RSS) team working on the design of the computerized system. Lack of experience of the RSS staff was the major contributing factor to this situation.

Another problem encountered in Task 8 involved subtask (f), "Purchasing, Inventory, Supply and Warehouse System." There were two aspects to this problem. These were:

- . Lack of coordination between Arthur Young & Company consultants and the International Telecommunication Union (ITU) consultant who was also working in this area.
- . The absence of a Parts Number System or Parts Catalogue which prevented the implementation of an effective inventory system. Corporate efforts in this area were sporadic and, consequently, a Parts Number System still does not exist, in effect rendering the procedures developed almost useless.

In September 1973, following several strong recommendations by the Team Leader, a series of indoctrination or training efforts were initiated. A total of 12 seminars of two hours duration each were conducted by our consulting team covering the "engineering" practices aspects of Task 8. Lack of enthusiasm on the part of the attendees, coupled with lack of Corporate support, prevented this program from being as successful as we had hoped or as the personal sacrifices of our consultants warranted. Additionally, Corporation management never saw fit to schedule the important series of seminars we had recommended covering accounting and administrative procedures and practices. Unfortunately, these areas will present significant difficulties to the staff when implementation commences.

No formal work efforts were performed in connection with Tasks 10 and 11, "Advise on Personnel Department Functions" and "Advise on Legal Advisor Functions," respectively; such advice was rendered as necessary. However, only a minimal level of such assistance was actually provided and none of the recommendations of the consultant were implemented.

As stated earlier, Tasks 9, 12, 13 and 16 were deleted from the formal work statement following approval by AID and the Director General.

In September 1973, the Director General, Dr. Jamil Ayoub, resigned and Mr. Walid Sharaf Eddin was appointed as his replacement. Mr. Sharaf Eddin's lack of direct and in-depth experience in telecommunications and the management of a telephone company implies a heavy burden of learning on his part. This, coupled with the need to manage the Corporation on a day-to-day basis, places heavy demands on his time. This and other factors are discussed further in the following section.

The change in management did not materially affect the consulting team, however, except with respect to its Task 17 efforts. There were two reasons for this:

- . The project was less than three months from completion when the management change took place and, thus, the bulk of consulting resources available for the project had already been expended.
- . The consulting team had worked much too long independently and without counterparts to be affected by changes in management philosophy.

Rate Setting, Task 14, presented serious and substantial problems to the consulting team, primarily having to do with lack of dependable data in useful form. This problem was overcome after repeated requests for more substantive involvement by the Corporation. Our consultants felt that the data were available if people were willing to take the time and trouble necessary to retrieve them. Subsequently, events and results substantiated this view. The report prepared following completion of this task provides a detailed analysis of the financial status of the Corporation and recommends rates which could make the Corporation self-sufficient by 1976. However, implementation of these recommendations will require prompt action by the Board and the Council of Ministers since they call for business community and Government users (1) to pay higher rates, and (2) to pay their bills far more promptly than has been the practice. These could be difficult social and political problems to overcome.

Task 15, Directory and Directory Services, was completed without any delays or problems.

The level of effort originally established for Task 17, "General Day-to-Day Assistance," was substantially underestimated. We estimate that in excess of 60 percent of the Team Leader's time was devoted to this activity during the first six months. It should be noted, however, that certain of these activities were directly supportive of other task efforts, particularly Task 5.

As expected, the level of general assistance involvement decreased during the March to August 1973 period. With the appointment of the new Director General in September 1973, the

level of involvement once again increased. During November and December 1973, considerable assistance was once again provided directly to the Board of Directors as part of the Board's comprehensive review of project status.

As a result of the Board's in-depth review, a task force of Corporation staff was organized to prepare a management and implementation plan which would also serve the purposes of the upcoming AID project reviews. The Team Leader was asked to assist and guide the committee. The plan in the Management and Implementation Report included a list and schedule of activities that the Corporation must undertake on its own in order to implement the consultant's recommendations. During his meetings with the Board, the Team Leader emphasized the need for the Corporation to take certain positive steps toward the creation of a working organization. He noted that, without such steps, there would be little incentive and justification for outside organizations, such as AID, to provide the additional financial support so badly needed by the Telecommunications Corporation to further the immediate and long term objectives defined in the Three Year Development Plan.

Exhibit IV presents the project schedules which guided the project throughout the execution phase, the final nine months of the project. Although there were minor slippages in individual tasks, Exhibit IV is valid in its essentials.

Exhibit IV shows that a total of 1.5 man-months of effort were available in Task 17 to monitor implementation and prepare the final report. Since the Corporation implemented virtually nothing, monitoring was a very limited activity. Consequently, the Team Leader recommended to the Board that, under the circumstances, submission of a draft of the final report be delayed until the later part of January 1973 in order to provide time for corporate management and the Board of Directors to take some positive actions to get the Corporation on the road to viability.

Exhibit IV shows that a total of 1.5 man-months of home office supervision were called for in the contract. In addition to the home

supervision he provided an ongoing basis from his Washington office, Mr. Sheehan was also a member of the two-man team that initiated the project in September of 1972. He and Mr. King visited Jordan for an extensive project review in late February 1973 and Mr. Sheehan again visited Jordan for a final project review in September 1973 at a time when the Corporation had undergone a change in top management and the general situation appeared least conducive to future progress.

The following subsection provides substantial elaboration about the work efforts which have been summarized in the preceding paragraphs.

2. PROJECT EFFORTS BY MAJOR TASK EFFORT

During the first several months of effort in Jordan, through mid-November, the total team -- Arthur Young & Company and Corporation -- consisted of but three individuals: the Director General, the Team Leader, and his counterpart, Mr. Himmo. Primary emphasis during this phase was on responding to requirements and requests of the Board, particularly with respect to organization and Corporate Regulations. For this reason, *visible* progress and outputs were minimal. Nevertheless, much was accomplished, particularly of a preliminary nature with respect to several of the work tasks.

Following the arrival of the second team member, Mr. Arcuri, in mid-November, the team's efforts went forward at a more rapid rate and the first major project products were delivered. Progress slowed briefly during the Christmas season, when the Team Leader returned for a review trip to the U.S., and during the period immediately preceding and following transfer of communications functions and responsibilities to the Corporation on 16 January 1973.

By late January, the pace of work and progress had increased to its former level and this was accelerated when the third member of the team arrived. The excellent foundation of information, knowledge, rapport, etc., which had been established in the early months of the project, began to pay dividends in the form of

systems, reports, etc., at an increasing rate. The addition of a fourth consultant in late April had almost immediate and visible results.

Exhibit III includes a list of reports prepared by Arthur Young & Company. The report issuance dates shown in the exhibit indicate the high rate of progress through the summer months of 1973. The pace slowed abruptly in October 1973 for obvious reasons. Also, two of the four consultants on the project completed their assignments at that time. By December 10, 1973, all formal task work had been completed. Subsequent efforts involved only the Team Leader and these were confined primarily to preparation of this Final Report and to providing the Board with ad hoc assistance.

Below are brief descriptions of the work performed on each of the major task efforts. Because of the nature of the efforts involved in Tasks 1 and 2, these activities are not discussed below; nor are Tasks 9, 12, 13 and 16 addressed because, as previously indicated, they were deleted during the course of the project.

(1) Assist in Preparing Corporate Regulations (Task 3A)

Consulting assistance in the preparation of the Corporate Regulations was a task which was added to the work plan as a result of the initial review by Messrs. Kurkjian and Sheehan. The reasons for this decision and the scope of the proposed effort were set forth in the memorandum of 16 September 1972 to the Director General. At that time, it was estimated that perhaps as much as 10 days' effort would be required; but requirements levied by the Board, the long delays in reviewing the Regulations, and the need to respond to the Board and Corporate needs on an ad hoc basis grossly inflated actual requirements. In his October 1972 schedules, Mr. Kurkjian increased the estimate to 22 man-days of effort. Although an exact accounting cannot be made, it is now estimated that as many as 100 man-days were eventually devoted to efforts in connection with the Regulations.

As previously indicated, work on the Regulations was initiated in late September 1972. The Regulations, which

had been prepared in draft form by Mr. Himmo, were translated, thoroughly reviewed and revised prior to submittal to the Board. This review included detailed analysis of the regulations of other corporations in the Kingdom. In addition, applicable laws and required Government procedures were considered in preparing the draft set of Regulations.

In support of the proposed Regulations, a memorandum was prepared on 2 November 1972, titled "Telecommunications Corporation Organization -- Part I." This memorandum, subsequently revised on 26 November 1972 as a result of Board review, provided the basis for further Task 5 efforts. During November, the Team Leader also prepared a short paper for the Board describing the roles and authorities of a Board of Directors vis-a-vis those of a chief executive officer (i.e., the Director General).

A draft Corporate organization chart was also prepared during November in support of the proposed Regulations showing all important departments and subdepartments, the key positions, interfaces, etc. In addition, job descriptions were prepared for the 12 key positions. The objective of preparing these top management job descriptions was (in anticipation of Board approval of the proposed organizational structure) to provide the Director General with the information necessary to proceed with staffing the key positions.

During the months of December through February, our Team Leader continued to be involved in and with the Board's deliberations on the Corporate Regulations, although at a diminishing level of involvement. Efforts in connection with the Regulations were related primarily to organizational aspects. At Board direction, considerable effort was devoted to revising the top management organization of the Corporation and in preparing new job descriptions for these key positions.

As a result of delays in obtaining approval of the Regulations, particularly those dealing with organization and personnel, the arrival date of the third team member was postponed to late January 1973; he had originally been scheduled for 1 December 1972. This action was taken because of the dependence of Tasks 5 and 8 on the Regulations.

Late in March 1973, because of the delays in dealing with the Regulations (see discussion on third page of III), a four-man subcommittee was formed, at the request of the highest authorities of the Government, to draft a set for submittal to the Council of Ministers. The subcommittee, which included three members of the Board and Mr. Kurkjian, completed its assignment in four days of intensive efforts. The proposed Regulations were submitted to the Council of Ministers on 3 April 1973.

Sixteen months after initiation of our efforts in Jordan to create a Corporation, a set of Regulations was finally promulgated by the Council of Ministers. This delay in adopting the Regulations had several serious impacts on the Corporation, the most important of which was the demoralizing effect on the Corporate staff. In addition, the delay caused a serious drain on consulting resources. It was necessary, particularly in the October-to-mid-December 1972 time frame and again in late March 1973, for Mr. Kurkjian to spend considerable amounts of time in attending Board meetings, preparing materials requested by the Board, and in providing additional consulting assistance in refining the Regulations themselves. None of this assistance, which amounted to more than one man-month of effort, had been programmed in the original work plan and schedule. In short, the efforts were among the more difficult and time-consuming ever experienced, albeit we believe that our efforts were both necessary and valuable.

(2) Assist Project Management Office (PMO) (Task 3B)

Work on Task 3B, which was also added as a result of the initial review efforts in September 1972, was initiated by Mr. Kurkjian in October, but the major emphasis did not take place until the arrival of Mr. Arcuri in mid-November. A total of approximately 17 man-days of consulting effort were eventually provided as compared to the 20 man-days budgeted to assist with the establishment of the PMO, develop systems and procedures and provide general guidance.

Efforts in connection with this task first involved the establishment of reporting requirements, definition of roles and responsibilities, delineation of the scope of the PMO's authority and responsibility, and other matters basic to its effective operation. Assistance included the preparation of letters to contractors and other parties directly involved in on-going communications projects, preparation of an agenda for the first comprehensive meeting, and the development of project monitoring and status reporting forms and devices, and other operating procedures.

The fact that PMO did not operate in the manner we had hoped, represents (apart, of course, from the situation with respect to the Regulations) one of the major disappointments experienced on the project.

(3) Prepare Suggested Plans for the Progressive Takeover of the Communications Facilities (Task 4)

With the exception of the Regulations, no single work task received the attention and concern that were devoted to Task 4. The major problems encountered were almost total lack of readily available data and/or means of validating those data which were provided.

Because of the heavy workload which had been involved in Tasks 3A, 3B, 5 and 17, it was not possible to begin efforts on Task 4 until mid-December 1972. Another factor

delaying the start of the task was the previous work commitments of the assigned counterpart which delayed his availability until 3 December 1972. The data collection efforts were initially designed in three sequential steps:

- . Collection of: building, site and space data; general resource data; data pertaining to materials, equipment, furniture and equipment.
- . Collection of contracts and other valuation data.
- . Review and verification of the data collected for the development of a master plan.

It was apparent in the early stages of the data gathering efforts that the Task 4 data would also be important inputs to Task 6 and to Task 14.

In the interval prior to issuance of the 16 January 1973 Decree transferring communications functions to the Corporation, the data collection efforts went forward slowly. Initially, the problem was simply one of obtaining the Ministry's cooperation in the collection activities. Subsequently, it was found that few of even the most basic data were available, particularly in readily usable forms. Another problem which developed during this period was that of verifying data which had been reported. Validation checks indicated that an intolerable level of error was involved and that verification and/or completely revised procedures were in order.

The January 1973 action of the Council of Ministers in transferring telecommunications functions to the Corporation eliminated, or at least lessened, the need for early completion of this task. Since the Corporation became responsible for the facilities and assets, some jointly with the Ministry of Communications, a decision was made to interface Tasks 4 and 6 more closely and, in effect, to combine them. The products of these combined efforts were an inventory of

assets, asset appraisals, etc., as well as the master takeover plan.

By mid-February 1973, our review of the initial data gathering efforts of December and January, as well as the data themselves, had been completed. These review activities led to redefinition of the data collection requirements and methodology. The initial efforts had progressed far too slowly and the quality of the data collected was unsatisfactory.

As a result of the review, it was decided to discontinue the active day-to-day participation of our consultant on the data collection efforts. Instead, a series of task forces were structured for each of the specific data gathering efforts and for validation and analysis. Each of the task forces was placed under the direct control of our Task 4/6 counterpart, with the consultant's role being limited to providing monitoring and technical assistance. The composition of the task forces, the specific procedures to be employed, etc., are described in detail in the Task 4/6 Interim Report. Originally, planning had called for completion of task force efforts by mid-June. Because of delays beyond our control, the assigned consultant was unable to reinitiate his in-depth analysis effort until the latter part of July 1973.

It should be noted that as early as October 1972, several AID officials had expressed concern over the lack of specific takeover plans. We did not share their concern. We believed that viable, useful takeover plans could not be developed in the absence of definitive data. Nor did we feel that the Corporation was then in a posture to go forward with the major job of takeover. We felt then, as we still do, that organizational development, assets determination and valuation, systems and procedures development, etc., should also be integral

to takeover plans. We also believe that subsequent events bear out these views.

Three reports were prepared in the course of this task, the final two in August and September 1973 when the work was completed. The August report was titled and provided a "Plan for the Progressive Takeover of Telecommunications Functions and Facilities." The September report was titled "Appraisal, Valuation of Assets Being Taken Over and Recommendations for Service Improvement."

(4) Advise on the Selection of Key People and Developing Job Classifications and Pay Structures (Task 5)

Work on the Regulations, particularly those dealing with personnel, necessitated early work efforts on the organizational aspects of the Corporation. The top management positions received particular attention, especially during early December 1972 when the first major efforts on Task 5 were initiated. Earlier efforts, beginning in late September, had been undertaken within the context of Task 3, which called for a detailed review of the corporate organization recommended in the 1969 Phase I report. The most intensive consulting efforts on this task took place during the January through March 1973 time frame, particularly after the arrival and assignment of the third team member in late January. Also, it should be noted that a substantial amount of the work which had previously been performed for or at Board direction proved to be useful in the task efforts.

The Task 5 report, which was published at the conclusion of our efforts in March 1973, consists of three parts which were:

- . Corporate organization and job descriptions of key management positions (Part I).
- . Organization and job descriptions of middle management positions (Part II).

. Pay structure (Part III).

The Task 5 reports were the only reports which were studied in great detail by both the Director General and the Board and which were reviewed and discussed by them in-depth with our consultants. Although all parties agreed with the recommendations contained in the final reports for Task 5, the recommendations were never implemented completely and decisively. Consequently, a well-defined organizational structure has not yet been created. The absence of approved corporate Regulations were among the main reasons which have been advanced for this situation.

We believe that significant damage was done to the Corporation in terms of its image and in staff morale when the organizational structure and middle management staffing was announced by the Director General, Dr. Jamil Ayoub, in August 1973. The whole matter was then de-emphasized almost immediately when the new Director General took over in September.

Finally, we feel a professional responsibility in noting that the importance of proceeding with structuring and staffing the organization as a necessary preliminary step to implementation has never been totally accepted by Corporate management. Why this should be so, we cannot say; we have repeatedly emphasized our concerns and have stated on numerous occasions that immediate resolution of this situation is absolutely necessary.

(5) Assist on Building, Space, and Equipment Takeover, Appraise Facilities and Equipment, Etc. (Task 6)

There are three aspects to this task, all of which are essential to ensuring that the Corporation begins and continues as a viable, profit-making entity. These are the takeover actions, appraisal of facilities, and service improvement recommendations. These aspects are inexorably

interrelated. Long-range planning, rate setting, new services, etc., are all dependent upon the policies which are established as well as asset valuation. Rate setting, in particular, was dependent on the outputs of this task.

This task, too, was plagued by data collection and quality control difficulties. The problems were so serious and the cooperation of the staff of the Corporation so unsatisfactory at the beginning of our efforts in the spring of 1972 that we had serious doubts as to whether the task might ever be completed satisfactorily. Nevertheless, we persisted and the Task Forces continued with their data collection, verification, and valuation efforts. Additional assistance in the form of a temporary counterpart was also secured which reduced the workload on the consulting team. Nevertheless, serious data gaps still remained at the conclusion of the data collection efforts. Where gaps existed, the consultant and the counterpart completed these with "best estimates" based on their knowledge and experience. This procedure was necessary in order to complete the task as scheduled. It should be noted and emphasized that the asset data in our Task 6 reports represent the only compilation, comprehensive or otherwise, of telecommunication assets available to the Government.

(6) Establish Long-Range Planning Techniques (Task 7)

Preliminary activities on this task were initiated during February 1973, but in-depth efforts were deferred until mid-March. Because of resource limitations, the task had been budgeted for 65 man-days of effort, which was soon found to be totally inadequate under the circumstances. Specifically, we found that adequate planning techniques did not exist and that planning data were not available. In addition, there was almost a complete lack of interface between technical and financial requirements, which was not surprising nor uncommon for a governmentally structured organization.

An appreciation for the magnitude of the task faced by the consulting team can be gained by comparing the 2-1/2 man-months of efforts programmed for this project with the time normally required to *update* a fundamental plan where data are reasonably available and staffs are trained in the use of existing procedures. Obviously with the time available, only a minimal effort was mounted. The effort was limited to the development of procedures for preparation of corporate fundamental plans. We estimated that a minimum of 10-12 man-months of additional consulting efforts would be required to complete this task to the depth really required, including assistance in the preparation of the first plan, but not including the associated data collection activity.

In September 1973, the Corporation requested Arthur Young & Company to submit a proposal to undertake the development of a Fundamental Plan. The urgency in submitting the plan was stressed and, consequently, our proposal was submitted within five days of the request. A decision was made by the Board to defer proceeding with preparation of the fundamental plan since a project of its scope would require the Corporation to undertake a public tender. Nevertheless, the need, the very basic need, for a plan of this nature remains. It would be difficult to overemphasize the need for this plan if today's confused situation is to be replaced by a more orderly development of the telecommunication system of the county. We believe that the value and impact of a fundamental plan are not fully appreciated. Simply maintaining the current poor level of telecommunications services currently afforded the citizens and institutions of Jordan will require the development of at least a rudimentary form of functional plan. Stated another way, the basic problem is to reverse the obviously continuing degradation of services; improvement of services must await reversal of the present trend. A well conceived and executed fundamental plan is basic to establishing a new direction. But, the Corporation currently lacks the knowledge of how to proceed to prepare one, and more important, how to implement it. The result of this situation is that a serious gap exists between the telecommunication

plan described in the Three-Year Development Plan and the direction and actions of the Telecommunications Corporation. This is likely to have unfortunate consequences to the balanced economic growth of the Kingdom.

(7) Design and Implement Systems, Procedures, Practices, Form, Reports, and Controls in All Functional Areas (Task 8)

Task 8 consisted of some 19 separate subtasks, 8 of which can be characterized as accounting and financial related, whereas the other 11 can be characterized as operating in nature. (The specific efforts are listed in Exhibit I.)

When the original Contract estimates were revised, in the Fall of 1972, the most significant increases in budgeted man-months were made in this task. The original manpower budget in the Contract called for approximately 195 man-days of effort (7-1/2 man-months) which was increased to 240 man-days (or 9 man-months) in the 16 September 1972 budget update. The estimate was once again increased, this time to 285 man-days (or 11.5 man-months), as a result of our 9 May 1973 memorandum to the Director General.

Early efforts on Task 8 subtasks involved the work of the RSS on the billing, credit, and collection system and that of the ITU expert on materials and supplies. Work continued on these systems during the 17 months that the team was on-site. Coordination effort with the RSS team effort proved particularly time consuming. We estimate in excess of one man-month of consulting effort was required for this purpose. Lack of experienced personnel prevented RSS from developing an acceptable computerized billing system. Their final system design was eventually defined early in December 1973, almost 20 months after initiation of the project by RSS and the Ministry of Communications.

As detailed in our February status report (18 March 1973), we had serious concerns about the progress and status of both

the customer billing and material supply systems. We were particularly concerned about the time which had been devoted to review and monitoring of the RSS efforts and that which, it appeared, would be required in subsequent months. At that time, only 135 man-days of consulting had been programmed for the eight accounting and financial systems design subtasks, or about 17 days per subtasks. Consequently, we felt that continued efforts to coordinate with RSS on a subtask already in excess of budget were likely to adversely affect the work in other subtasks.

During March, work was begun by the consulting team on other Task 8 systems and procedures. The assignment of the fourth team member, Tarif Kamal, in mid-April as scheduled, brought the level of the task efforts to their peak. The schedules shown in Exhibit IV were maintained in their essentials, except for the disruptions associated with the October War. As mentioned earlier, one subtask was deleted and another reduced in scope and the resources thus saved were devoted to the Transmission Standards subtask.

The Task 8 efforts were too complex and lengthy to present a detailed analysis without overburdening this report. However, it should be noted and emphasized that the most unfortunate aspect of this task was the absence of counterparts. Of course, lack of counterparts was not unique to this task but the impact was especially severe because of the nature of the work performed. The problem of counterparts is discussed in greater detail in a subsequent subsection.

Aside from the problems of coordination in connection with the work of the RSS and the ITU expert cited earlier, the task efforts proceeded smoothly. The additional efforts that were devoted to this task were sufficient for the consulting team to prepare adequately detailed systems, procedures and practices.

The consulting team was able to detail a counterpart, who had originally been assigned to work on Task 6, to translate four of the accounting related subtasks to Arabic. These represented the only translation undertaken, a situation which must be resolved eventually if our products are ever to be implemented. Corporate management failed to realize the importance of translation and thus never made the needed concerted efforts necessary to acquire the translators called for in the contract.

(8) Advise on Personnel Department Functions (Task 10) and Advise on Legal Advisor Functions (Task 11)

These two tasks, budgeted for 15 and 10 days, respectively, were not scheduled for performance in any particular time frame since the advice was expected to be provided on a day-to-day basis over the term of the project. No formal report on either task was issued, as was the case on most of the other work efforts.

(9) Rate Setting (Task 14)

The work statement of the Contract originally called for 55 man-days of consulting assistance to be provided in the area of rate setting. In the 9 May 1973 plan, this figure was increased to 125 man-days of consulting. When efforts were initiated, procedures for rate setting did not exist nor were the required data available in usable form. Also, because of the ministerial status of communications in Jordan, there were no systems or special study mechanisms for relating rates to Corporate financial status, long-range plans, asset valuation, etc. The establishment of a meaningful rate structure also included the detailed analysis of other possible sources of revenue and long-range financing and their implications.

In spite of the additional efforts devoted to this task, the consulting team was able to meet only the minimum needs of Corporate staff in establishing basic rate setting systems

and procedures. A minimum of 2-3 additional months of effort would be required to ensure the design and implementation of ongoing systems, performance of special studies and the training of a nucleus staff for periodic rate updating.

The major problem encountered in this task was the collection of financial data related to income, expenses, interest payments, and payments toward the capital of the loans. Substantial efforts were expended in the collection of these data but, in some cases, best judgment estimates still had to be made. Such estimates are specifically identified in the task report.

Our analysis indicated that substantial rate increases, particularly in the commercial and government sectors, were required. The task report presents the extent of subsidization required by the government under prevailing conditions. Our analyses indicated that, based on a rate of return of 8.6%, the Corporation could break even in 1976. It is important to note that, throughout our efforts, we were unable to obtain basic policy guidance from management, including definition of a fair rate of return, a date by which the Corporation should be self-sufficient, etc. with which to guide the study efforts.

As mentioned earlier, changing the existing rate structure may present the Government with serious problems.

(10) Directory and Directory Assistance (Task 15)

Both the Contract and the schedules called for approximately 30 man-days of management consulting to be provided for assisting with the Corporation's directory and directory activities. Given the current state of telecommunications activities and facilities in Jordan, this level of effort was considered adequate. Training in the U.S. or elsewhere was left to be a more practical alternative to that of providing

additional consulting services. In our view the best approach would now be to contract such an activity to outside firms in the United Kingdom or the United States which specialize in providing directory services.

(11) General Day-to-Day Assistance (Task 17)

The amount of general day-to-day assistance which was required, particularly by the Team Leader, was substantially higher than originally planned. This assistance was necessary for the development of the Regulations, for dealings with the Board, and with respect to operation of the Corporation when the Ministry's communications responsibilities were shifted to the Corporation on 16 January 1973. Other root causes of increased involvement by the team were delays in locating competent personnel to fill several of the counterpart positions, changes in top management and final review by the Board.

Special note should also be made of the following which have been categorized as Task 17 efforts:

. Facilities Visits

As schedules permitted, the Team Leader and staff made visits to a number of Ministry and other government agencies. Among the more important of these were the Departments of Finance and Statistics, Engineering, Operations, etc. Visits were also made to several exchanges, radio stations, the earth station, general post office, general stores, etc.

. Attendance at Meetings

Particularly during the closing months of 1972, Mr. Kurkjian attended and/or had prepared materials in anticipation of being called to a number of meetings of the Board. In addition, he attended a meeting of the National Planning Council in which he reviewed the status of the project and participated in the open discussions which followed relative to progress, problems, etc. Other members of the team also attended a variety of meetings including several called by the PMO as well as a number involving the ITU expert, the RSS data processing team, etc. These activities, although worthwhile and useful, were time consuming, and therefore made it necessary for

the team to work longer hours than called for in the contract in order to meet our commitments.

. Project Review

Several days were spent in late February and early March by the Team Leader and his associates with an Arthur Young & Company Home Office management review team. This review which had originally been scheduled for early December, proved quite useful. A final Home Office review took place in September 1973 at a rather critical time in the life of the Corporation. Also, the Team Leader made three review trips to the United States for Discussions with AID and Arthur Young & Company management.

. AID Amman Review

Throughout his 17 months on site, the Team Leader met frequently with Mr. W. Wolle, former Director, AID and with Mr. Simons, AID Representative Amman. These meetings were extremely useful and necessary. The need for such meetings was reduced as the project approached its completion date.

. Monthly Status Reports

Detailed monthly status reports were prepared and regularly submitted to the Director General with copies to AID-Amman and the Home Office. A Special Interim Report, comparable in scope to this final report, was issued in May 1973.

The contract estimated a total of 60 man-days of day-to-day assistance which was revised upward to 105 days (or 4 man-months) in the September 16 budget update. Through April 1973, the Team Leader's eighth month in Jordan, a total of approximately 110 man-days of general assistance had been provided. If this rate had continued during the next 10-12 months, and there was every reason to believe that this would be required, a total of about 90 man-days of additional consulting effort would have been needed. Since the budget had already been exhausted, these resources could only have been obtained by reducing the efforts devoted to other tasks. The Team Leader avoided this situation through longer hours of work.

(12) Home Office Supervision

As previously indicated, Home Office administration and supervision ran at budget levels. Home Office supervision averaged approximately 2 man-days per month which, in aggregate, represented about 7% of the total man-days provided.

3. THE PROJECT IN PERSPECTIVE

Arthur Young & Company believes that it more than fulfilled the letter of its Contract with the Ministry of Communications. However, we were unable to contribute to meeting the spirit of the Contract to the extent we wished. The Contract called for assisting the Ministry of Communications and the Government of Jordan in creating a viable Telecommunications Corporation capable of taking over and managing the telecommunications of the Hashemite Kingdom of Jordan and providing modern facilities in the future. Obviously, these objectives had not been completed at the conclusion of our efforts. There were many factors which contributed to this situation. The more important of these are presented below:

(1) There was, perhaps, a lack of total commitment by others associated with us in creating and supporting the Telecommunication Corporation. A prime example is the time it took to obtain approval of the Regulations to allow the Corporation to function independently of the Ministry and to recruit the personnel it needed so desperately.

(2) For a variety of reasons, the Board of Directors did not establish early proper relationships with corporate management. We believe that the Board, perhaps because of its lack of confidence in the first Director General, tended to become too heavily involved in day-to-day management aspects rather than confining itself to policy making and to monitoring of corporate performance. Also, in our opinion, the Board waited too long to begin a serious and in-depth review of our consulting efforts and their likely effects on the Corporation.

The Board undertook such a review only at the conclusion of the contract period. This type of review should have been an ongoing activity.

(3) Corporate management, originally consisting of the Director General and the Counterpart (who was later made Assistant Director General for Administration) and later augmented by several middle management staff, lacked in-depth experience in the complex functions and roles of corporation management. This is understandable since a telecommunications corporation was a new activity in the country. In our opinion, corporate management did not fully realize and appreciate the impact of the consulting team's efforts, the important role that corporate staff should play, and the complex interrelationships involved. The management staff simply did not appreciate the long-term applications of their lack of involvement and non-management. We believe that the same situation still persists and that unless it is corrected quickly there is little reason to believe that the Corporation will be able to implement the procedures, practices, and systems that have been developed.

(4) The consulting team was never managed by the Corporation in the manner which, on a project of this scope and impact, it should have been. This lack of management manifested itself in the following ways:

- . Very few formal project review meeting were held
- . Lack of formal and critical review of the products generated by the consultant
- . Lack of counterparts assigned to work with the consultants (This is discussed in greater detail below.)

The Counterpart was unable to function effectively because he was never given the authority and resources needs. In addition, he was burdened with a heavy administrative load which had no relationship to the project. In the absence of effective management, the consulting team was left to chart its own

course and to proceed also independently of Corporate management. The result of this situation was to create a knowledge gap which it will now be difficult to bridge without additional and direct participation by consultants.

(5) A related factor which increased the severity and impact of the knowledge gap mentioned above was the absence of key counterparts detailed to work with the consulting team on a full-time basis. The reason advanced by the Corporation for this situation was lack of trained personnel. We did not, nor do we now, fully accept this as a totally valid reason. We believe that reasonably trained personnel were available and could have been useful as counterparts. The number of counterparts assigned to the project consisted of one senior and three junior members of the staff who were available on a part-time basis. In our status reports and in discussions with management, a major issue was made of this situation but to no avail. The end result was, therefore, that the consulting team created still another pile of reports which were without the benefit of timely review by the Corporate staff.

(6) Corporate management did not make an adequate effort to staff key and middle management positions although, admittedly, compromises would have been required. The absence of approved Regulations contributed significantly to this situation. Another contributing factor was lack of confidence of the Board in the previous Director General as well as a phenomena which allowed members of the Corporate and Ministry staffs to bring outside pressure on management. The resultant effect was to create an organization which is neither a ministry nor an independent corporation.

(7) Implementation of our various recommendations is the area in which the corporation has had its poorest record of accomplishment. Management, in our opinion, failed to realize the magnitude of the effort required. As a result, it did not undertake the planning and staffing required to get on with the job. Our monthly status reports regularly

noted this limitation and recommended action. In July of 1973, the Team Leader submitted a "Suggested Plan for Implementation," a product not called for in our statement of work, which went unheeded. We volunteered to conduct seminars after hours, so as not to slip our schedules; we were finally able to obtain management approval to schedule only one set of seminars in the series of three which we had recommended. However, these seminars were not as effective as we had hoped because of disinterest on the part of both attendees and management. Finally, we are convinced that the corporation and its staff made no effort whatever to initiate review or to understand the contents of our reports as a preliminary step to implementation. As a result, minimal utilization has been made of the results of the resources expanded on this contract.

Another related problem which was never resolved was the failure to assign translators to convert the numerous reports produced during the project into Arabic. The result is that at least one-third of the reports generated cannot be utilized in their present English versions because of the language barrier.

(8) Perhaps our most serious concern was that the Corporation was not able to create the sense of dedication, urgency, team spirit, and hard work so necessary if an organization is to function effectively. Normally, we would have expected the staff of the Corporation to work longer and harder than our consultants since the Corporation had a larger stake in the project and had to begin at a lower plateau of knowledge and experience. Our efforts to make the Corporation staff work longer hours were never successful. A serious contributing factor to this situation was the failure to approve the Corporate Regulations calling for salary increases to match the longer hours of work. This resulted in a laissez faire attitude on the part of the staff of the Corporation.

In spite of these problems, the project was completed within the time and financial schedules committed by Arthur Young & Company. More important and to the point, we believe, is the fact that the team performed exceptionally well and delivered high quality products to the Corporation.

IV. FINDINGS AND RECOMMENDATIONS

IV. FINDINGS AND RECOMMENDATIONS

In the preceding sections of this report, we discussed the project scope and summarized the consulting efforts devoted to this engagement, including an assessment of the status of each of the major work tasks. The purpose of this section is to detail specific recommendations and actions which, on the basis of its 17 months of service, the consulting team believes are essential to insuring, first, short term improvements in corporate posture and operations and, second, its development as an effective operating entity.

The recommendations set forth in this report have been categorized in two ways: immediate and long-term. Immediate recommendations have to do specifically with those actions and undertakings which are necessary to utilize the large body of products and recommendations which resulted from the consulting work performed. Long-term actions and efforts are those which will utilize the immediate actions as a base upon which to build future procedures and practices as a means of fostering the growth and maturity of the Corporation. Arthur Young & Company believes that long-term consulting services are not warranted and should not be considered unless and until the Telecommunications Corporation has met and achieved the immediate goals set forth in connection with the immediate recommendations cataloged below.

1. RECOMMENDATIONS AND ACTIONS TO MEET IMMEDIATE GOALS

The term "Implementation Team" is employed throughout this subsection to describe an independent group responsible for assisting and guiding Corporate efforts and for carrying out the on-going functions of monitoring and evaluation. The idea of using such a team (Task Force might also be an appropriate term) is likely to represent a new concept or mode of operation to some readers. In our view, such a team could be composed of consultants, members of the Telecommunications Corporation staff, representatives of other Government ministries or agencies, etc., or it might be some combination of these. The relevant point is that a group of this nature

is required to carry out the functions cited above and to do so, to the extent possible, free of outside influences and pressures and insulated from day-to-day operating responsibilities.

As indicated above, the immediate actions which are addressed in this subsection are those which are required to establish the base or foundation for effectively utilizing the systems, procedures, and other products produced by the consulting team. Clearly, the burden of implementation must now rest with the Corporation and its staff. Consequently, our recommendations are discussed in terms of tasks that the Corporation must perform with direct assistance and day-to-day guidance provided by the Implementation Team. These tasks are described in the report, titled "Suggested Plan of Implementation," which was submitted in July, 1973. The following tasks are felt to be essential.

(1) Complete Corporate Organizational Structure and Select Key and Middle Management Staff

The organizational structure proposed in our Task 5 Report should be implemented as soon as possible, including review and revision, as required, of job and position descriptions. Additional job and position descriptions should also be prepared where necessary. The Implementation Team would assist the Corporation staff in its responsibilities to revise existing job descriptions, prepare additional job and position descriptions, as well as in evaluating candidates and assisting in selection of employees. The Team should also conduct indoctrination and training seminars for top and key middle management staff to acquaint them with their specific areas of responsibilities and authority and to define organizational interfaces.

Completion of this task is expected to require from two to three man-months of Implementation Team effort.

(2) Finalize Corporate Staffing

This activity is expected to be one of the more difficult as well as critical tasks to be faced since its execution will affect both the future of the Corporation and the 2,000 people

who now perform telecommunications functions in the Ministry. The staffing plan developed in this task will specify the individuals who will be transferred to the Corporation, the Corporate budget and thus the long-term financial status of the organization, the extent of government subsidies which may be required, and other critical operating variables.

The Implementation Team would assist the Corporation in determining its staffing requirement and in planning the transition period. We estimate that the Corporation requires no more than 1,300 - 1,400 of the 2,000 people now on the payroll and efforts in this task would be devoted to determining who should be retained and who should not, specific position assignments, etc. These activities can be expected to require a minimum of two months of effort by the Implementation Team.

(3) Conduct Critical Review of Systems, Procedures, Practices Controls, Etc.

The Corporation should perform a critical review of the systems, procedures and practices which were prepared by the Consulting Team in executing Task 8. A detailed evaluation of each system and procedure is required to determine its applicability and relevancy in the corporate environment. Since task counterparts were not assigned to work with the consulting team during the period in which these procedures and practices were being developed, this important function has not yet been adequately reflected in the products which were delivered.

The Implementation Team would assist the Corporation staff in understanding the details of the procedures and practices and, particularly, their interrelationships. This objective would be accomplished in two ways: first, by individual explanations conducted within the context of the work environment and, second, by means of group training/indoctrination seminars for staff who would be directly involved with the actual implementation efforts (see [4] below). It should be possible

to complete this task in from four to six man-weeks of effort by the Implementation Team.

(4) Implement Systems, Procedures and Practices Developed in Task 8

This work effort will be the most difficult and time consuming faced and its successful completion will demand a major commitment by the Corporation--both in terms of the resources devoted and the full support of its management. The "Management and Implementation Plan," recently prepared at the request of the Board will provide the basis for proceeding with this difficult task. The Consulting Team does not believe that the Corporation is now in a position to undertake this effort on its own without the direct participation of consultants or other specialists or, perhaps, through the acquisition of new employees who are knowledgeable and experienced in the various areas. These individuals would form the Implementation Team, which would be responsible for reviewing the implementation plan prepared by the Corporation and for assisting the Corporate staff in its execution. The Team would also monitor implementation efforts, guide and advise the staff and would recommend modifications and changes where necessary.

The task can be expected to require approximately six man-months of effort by members of the Implementation Team.

The total Implementation Team effort required to complete the four tasks described above is estimated to be approximately 12 man-months. It is also estimated that the work efforts could be completed in a period of about 18-20 months.

2. RECOMMENDATIONS AND ACTIONS TO MEET LONG-TERM GOALS

In February, 1973, Mr. McNaron of AID requested that Messrs. King and Sheehan develop detailed estimates of the increase in consulting services necessary to ensure that the Corporation develop into a self-sustaining, ongoing concern. Updates of these estimates, which

were developed in March and April of 1973, are described in the following paragraphs. However, it should be emphasized that our development of these estimates, as requested, in no way implies that we would concur with a recommendation to provide the added consulting services at this time. We do not believe that the progress made in the past 17 months to create an operating and viable organization has been such as to engender much confidence in the Corporation's ability to absorb or effectively employ additional consulting resources.

It must be emphasized that the recommendations for additional services contained in the balance of this subsection pertain primarily to management consulting assistance, i.e., the areas of the Firm's competence. We have specifically avoided discussing possible assistance in technical skill areas such as engineering, operations, traffic, etc.

During the past 17 months we have had the opportunity to evaluate the particular needs of the Corporation in its efforts to develop into a viable concern which can simultaneously earn a profit and provide improved telecommunications services to the people and institutions of the Hashemite Kingdom of Jordan. The basic dimensions of this need can now be described.

As stated in the beginning of this section, we do not believe that the following long-range recommendations should be initiated until the tasks described immediately above in connection with immediate goals have been satisfactorily completed.

It was evident before the Contract was signed that the available consulting manpower resources, although adequate for a minimum-level project, were nevertheless insufficient to perform what might be termed a "top notch" effort. Nor, in our view, were they sufficient to do the type of job we prefer to do. Although we are pleased with our performance on this engagement, as discussed in Section III, our view of actual project requirements has only moderated slightly in the past 17 months.

Various constraints and special conditions were described in the Special Interim Report prepared last May for the Director General. Unfortunately, many of these are still applicable today and any future consideration with respect to commitments should take them into account. Among the more important of these are the following:

- . The Corporation has had to assume responsibility for a telecommunication operation, organization and facilities which were not adequately managed in the past.
- . The Corporate management, as a result, will be required to achieve significant improvements in service in a short period of time, a difficult task even under the best of conditions.
- . Trained staff is not available in sufficient quantity in the Ministry to fill the key management and supervisory positions. This implies that implementation of new concepts, systems and procedures must proceed in a well planned manner to match goals to the availability of staff.
- . Planning and implementation schedules should take into consideration customs and habits of work that are unique to Jordan. (This does not mean that poor work habits should be justified as representing a social phenomena).
- . In creating the Corporation it was found that concepts, systems and procedures existing in the Ministry provide a totally inadequate base upon which to build and, consequently, everything had to be developed "from the ground up." This fact, coupled with the staffing limitation discussed above, meant that the consulting team was required to bear the burden of performing specific work tasks in all of the necessary details instead of the corporate staff.
- . It is necessary to create greater levels of team spirit, organizational esprit de corps, sense of urgency, dedication and hard work in the corporation. To achieve these will require considerable management effort and talent.
- . In the early phases of life of the Corporation, it will be necessary to interface directly with government agencies and departments operating under laws and regulations different from those of the Corporation's. Delays will be a natural consequence of those dealings which in turn will

impact on Corporate schedules. Such delays may be outside the control of a consultant or the Corporation.

The recommended add-on activities described in the following pages involve, primarily, extensions of the tasks defined in the Contract statement of work. The add-on activities would carry corresponding tasks to greater depths of detail essential to ensure that the Corporation is created and launched under the best possible circumstances.

There are several underlying premises upon which the additional activities discussed below are based. Specifically:

- . The selected tasks, as well as their emphasis, are oriented toward implementation. This is imperative if the Corporation is to maximize the benefits available from consulting efforts.
- . Substantial and direct participation by the Corporation in each of the activities is assumed. This implies the direct and active involvement of Corporate staff as integral members of each study team which may be created.
- . Most of the proposed activities are continuations of tasks included in the earlier statement of work. The recommended activities are designed to carry the tasks to greater levels of detail, to provide expanded scope, and/or to provide for staff training.

The recommended additional activities are described in the following paragraphs which also provide estimates of the added level of effort for each activity. The relationships of these added activities to the work set forth in the statement of work is also indicated. The activities are provided in order of priority.

(1) Detailed System and Operating Procedures

This activity is designed to provide the Corporation with fully operational systems and procedures, based on the procedures developed as part of Task 8. The added efforts would cover systems, procedures, forms, reports, practices and controls -- as well as implementation -- in the areas listed below.

- . General accounting system with a corporate set of accounting records
- . Cost accounting system for maintenance and capital improvement operations
- . Financial management reporting system
- . Capital property record system
- . Payroll system
- . Inventory and materials control system
- . Commercial practices and procedures
- . Service order routines.

All of these systems were included within the scope of Task 8, but only to the very limited degree described in Section II of this report. Estimated level of effort is 10 man-months, or an average slightly more than one month per system.

(2) Personnel Policies and Procedures

Prepare detailed personnel policies and procedures, complete preparation of job descriptions for all supervisory personnel; establish testing and evaluating procedures; assist in staffing. Assistance in staffing would include a substantial level of effort to advise Corporate Management on the selection of personnel from the Ministry of Communications (and elsewhere) for transfer (hire) to the Corporation. The proposed activity, involving a continuation of Task 5, has an estimated level of effort of four man-months.

(3) Prepare the Fundamental Plan

Prepare, in cooperation with Corporate staff, the first detailed fundamental plan for the long-range development and growth of communication facilities throughout Jordan. The added efforts would include specific identification of technical and financial requirements, possible sources of revenues and long-range financing and their implications on the financial

status of the Corporation. The efforts would be a substantial increase in both the scope and depth of Task 7. Estimated level of effort is 12 man-months.

(4) Develop Corporate Budgeting System

In cooperation with the Corporation, prepare the corporate budget and establish a multi-year corporate budgeting system including operating and capital budgets. The task would also include the development of all of the necessary procedures, forms, controls and organization necessary for budget preparation.

This is a new activity which was not covered by the earlier statement of work. Estimated level of effort is four man-months.

(5) Provide Additional Day-to-Day General Assistance

As noted in Section III, general consulting assistance was required throughout our project. Such a need would exist in any future consulting effort and the minimum requirement is considered to be four man-months.

(6) Prepare Long-Range EDP Plans

Prepare, in cooperation with the Corporation and the Royal Scientific Society, long-range data processing plans for the Corporation. The first areas to be addressed in the development of specifications would involve:

- . Procurement/purchasing
- . Inventory control
- . Payroll
- . Accounting.

Only limited assistance was provided in the area of billing and collection and these efforts were outside the scope of our

work statement. Consequently, the proposed extension represents a considerable expansion of Task 13.

The estimated level of effort is four man-months.

(7) Plan and Assist in Training Efforts

In this new subtask, the consultant would:

- . Assist in the preparation of a long-range training plan
- . Provide on-the-job training in the areas of:
 - Administration and administrative services
 - Accounting
 - Budgeting
 - Personnel
 - Marketing and Commercial Services
 - Financial planning.
- . Set up the administrative operations of the Training Institute, which is presently under construction.

The estimated level of effort is four man-months.

(8) Monitor the Implementation of Consulting Recommendations

This activity would involve monitoring of all systems, procedures and operations resulting from the activities discussed above to ensure their adequacy for corporate operations and, more importantly, their effective operation by employees of the Corporation.

Estimated level of effort is six man-months

(9) Summary

The additional work effort required to meet the immediate objectives are eleven man-months of effort.

	<u>Man-Months</u>
. Finalize Corporate Organization	2
. Finalize Corporate Staffing	2
. Critical Review of Procedures	1
. Implement Procedures	<u>6</u> 11

The additional work effort recommended, which we deem is necessary to create a viable and functioning corporation, is estimated to be forty-eight additional man-months of effort for the long-range recommendations.

	<u>Man-Months</u>
. Detailed systems and operating procedures	10
. Personnel policies and procedures	4
. Preparation of fundamental plan	12
. Development of corporate budgeting system	4
. Day-to-day assistance	4
. Prepare long-range EDP plans	4
. Training assistance	4
. Monitor implementation	<u>6</u>
	TOTAL 48
	GRAND TOTAL 59

EXHIBITS

SUMMARY OF WORK TASKS

<u>TASK</u>	<u>DESCRIPTION</u>
1	<u>Orientation in the United States</u> Team leader one week of familiarization, obtaining reference materials, supplies, etc.
2	<u>Orientation in Jordan</u> Visit installations, attend meetings, arrange office, etc.
3	<u>Review and Update Phase I Recommendations</u> Review Phase I recommendations, particularly organizational. Conduct discussions with the M.C.
4.	<u>Prepare Suggested Plans for Progressive Takeover of the Communications Facilities</u> Prepare a master plan for transition: personnel, equipment, space, plant, warehouses, contracts, finance, etc.
5	<u>Advise on Selection of Key People and Develop Job Classifications and Pay Structure</u> Assist in interviewing and evaluating candidates for top 16 positions. Examine present pay practices and job classifications; analyze Civil Service rules and regulations; review pay structure in other government agencies, etc.; develop pay scale for each job classification and analyze fringe benefits.
6	<u>Assist on Building Space and Equipment Takeover, Appraise Equipment Being Taken Over, and Make Short- and Long-Range Recommendations for Service Improvement</u> Review buildings, equipment, furnishings, vehicles and tools of the P.T.&T. and reach agreement on items to be taken over. Enumerate property; establish bases for valuation; recommend changes to improve service.

7 Establish Long-Range Planning Techniques

Assist in establishing techniques to develop a basic plan for facilities, service and procedures -- i.e., statistical methods and economic studies for formulating a long-range plan. Studies will include major studies and decisions with respect to: planned requirements and demands for communications, types of equipment, costs, locations and time schedules for plant additions. Prepare detailed construction program, financing plan, personnel recruitment and training plans, etc.

8 Design and Implement the Systems, Procedures, Practices, Forms, Reports and Controls in All Functional Areas

Develop a series of systems and procedures specifically tailored to the organization and its employees, prepare instructions, instruct employees and follow-up. Programs will include:

- . General accounting system
- . Cost accounting system
- . Financial management reporting system
- . Operating and capital budget system
- . Capital property record system
- . Purchasing, inventory, supply and warehouse systems
- . Customer billing credit and collection system
- . Payroll system
- . Commercial practices and procedures
- . Traffic operating practices
- . Service order routines
- . Outside plant construction
- . Customer station installation and repair
- . Central Office maintenance
- . Transmission standards and practices
- . Radio, carrier, microwave and satellite
- . Routine preventive maintenance
- . Sales and marketing
- . Emergency procedures

9 Outline Engineering Practices

Work with staff to develop practices and standards for improving engineering practices and standards. Assist in training and development of engineering personnel.

- 10 Advise on Personnel Department Functions
Assist in organizing the personnel department and also assist in establishing personnel policies and procedures.
- 11 Advise on Legal Advisor Functions
Assist the Corporation's management with early-phase legal problems.
- 12 Review Present and Proposed Training Programs
Assist in coordinating training activities, review proposed training programs, monitor training, review programs, etc.
- 13 Review Data Processing Needs - Current and Future
Review data processing needs.
- 14 Rate Setting
With the corporation staff, review and analyze rates and charges; study rate structure; propose new structure.
- 15 Directory and Directory Services
Develop modern directory program.
- 16 Consider Establishing New Services
Study possible added services with respect to costs, profit, etc.
- 17 Provide Day-to-Day Assistance
Provide ad hoc assistance.

CONSULTANT ALLOCATION

TASK	TASK NAME	CONTRACT M/M	PLANNED M/M	REVISED M/M	DISTRIBUTED CONSULTANT ASSIGNMENT M/M PER TASK					TASK
					KURKJIAN	ARCURI	RUNKLE*	KEMAL	OTHER*	
1	Orientation in the U.S.	0.2	0.2	0.2	0.2					1
2	Orientation in Jordan	0.3	0.3	0.3	0.3					2
3	Review/Update Consultants Phase 1 Recommendations	0.3	0.6	0.6	0.6					3
3a	Prepare Regulations	0.0	0.3	0.3	0.3					3a
3b	Project Management Office	0.0	0.7	0.7		0.7				3b
4	Take Over Plans	2.0	2.0	2.0	0.5	1.5				4
5	Job Descriptions	4.0	4.0	4.0	2.0		2.0			5
6	Valuation of Assets	5.5	5.5	5.0	1.0	4.0				6
7	Long-Range Planning	2.5	2.5	2.5	1.0		1.5			7
8	Systems and Procedures	7.5	9.5	11.5	2.0	4.0	2.5	3.0		8
9	Engineering Practices	1.5	1.5	0.0	-					9
10	Advise on Personnel Functions	0.6	0.6	0.6	0.6					10
11	Advise on Legal Advisor Functions	0.4	0.4	0.4	0.4					11
12	Propose Training Programs	2.0	2.0	0.0	-					12
13	Data Processing Planning	1.0	1.0	0.0	-					13
14	Rate Setting	2.0	2.0	5.0	0.5	1.5			3.0	14
15	Directory Services	1.2	1.2	1.2		1.2				15
16	New Communication Facilities	0.7	0.7	0.7	-					16
17	General Assistance Director General	2.3	4.0	4.6	4.6					17
		34.0	39.0	39.0	14.0	13.0	6.0	3.0	3.0	
	Contingency	3.0	00.0	00.0						
TOTALS		37.0	39.0	39.0	14.0	13.0	6.0	3.0	3.0	= 39
* Subcontractor Personnel										

MANAGEMENT CONSULTING SERVICES

LIST OF ARTHUR YOUNG & COMPANY PUBLICATIONS

	AYA NO.	TITLE	TASK	DATE ISSUED
1	AYA-E-01 •	A Study of the Project Management Office - Telecommunications Corporation	3B	Jan. 1973
2	AYA-4/6-02	Interim Report Tasks 4/6, Takeover Plans and Appraisal of Equipments Being Taken Over	4/6	Feb. 1973
3	AYA-4/6-03	Plan for Progressive Takeover of Telecommunications Functions and Facilities - Part I	4/6	Aug. 1973
4	AYA-4/6-03A	Appraisal, Valuation of Assets Being Taken Over and Recommendations for Service Improvement - Part II	4/6	Sept. 1973
5	AYA-E-06 •	Correspondence and Mail Handling and Control Procedures	N/A	March 1973
6	AYA-8-07	Policy Statement Revenue Accounting, Billing, Credit and Collection	N/A	March 1973
7	AYA-8-08	Brief Descriptions of Task 8 Reports	8	April 1973
		"Advise on the Selection of Key People and Develop Job Classifications and Pay Structure"	5	
8	AYA-5-03	Part I - Corporate Organization - Key Management Structure		Feb. 1973

• Reports with E in the number code are reports beyond the scope of the work statement

	AYA NO.	TITLE	TASK	DATE ISSUED
		"Advise on the Selection of Key People and Develop Job Classifications and Pay Structure"	5	
9	AYA-5-04	Part II - Corporate Organization - Management and Corporate functional Descriptions		March 1973
10	AYA-5-05	Part III - Corporate Salary and Wage Structure and Benefit Programs		May 1973
11	AYA-7-08	Establish Long Range Planning Techniques	7	May 1973
		"Design and Implement the Systems, Procedures, Practices, Forms, Reports, and Controls in All Functional Areas".	8	
12	AYA-8-10	Part I - General Accounting System		July 1973
13	AYA-8-11	Part II - Cost Accounting System		Nov. 1973
14	AYA-8-12	Part III - Financial Management Reporting System		July 1973
15	AYA-8-13	Part IV - Operating and Capital Budget System		July 1973
16	AYA-8-14	Part V - Capital Property Record System		Oct. 1973
17	AYA-8-15	Part VI - Purchasing, Inventory Supply and Warehousing System		May 1973
18	AYA-8-16	Part VII - Customer Billing, Credit and Collection System		Oct. 1973

	AYA NO.	TITLE	TASK	DATE ISSUED
		"Design and Implement the Systems, Procedures, Practices, Forms, Reports, and Controls in All Functional Areas".	8	
19	AYA-8-17	Part VIII - Payroll System		Oct. 1973
20	AYA-8-18	Part IX - Commercial Practices and Procedures		May 1973
21	AYA-8-19	Part X - Traffic Operating Practices		July 1973
22	AYA-8-20	Part XI - Service Order Routines		June 1973
23	AYA-8-21	Part XII - Outside Plant Construction		June 1973
24	AYA-8-22	Part XIII - Customer Station Installation and Repair		May 1973
25	AYA-8-23	Part XIV - Central Office Maintenance Standards and Practices		June 1973
26	AYA-8-24	Part XV - Transmission Standards and Practices		Sept. 1973
27	AYA-8-25	Part XVI - Carrier General Instructions		Aug. 1973
28	AYA-8-27	Part XVIII - Sales and Marketing		June 1973
29	AYA-8-28	Part XIX - Emergency Procedures		Sept. 1973

	AYA NO.	TITLE	TASK	DATE ISSUED
30	AYA-E-29 [•]	Suggested Plan of Implementation	N/A	July 1973
31	AYA-4/6-03B	Part II Exhibits	4/6	Oct. 1973
32	AYA-14-30	Rate Setting	14	Nov. 1973
33	AYA-15-31	Directory Services	15	Dec. 1973
34	-----	Review of the Management Consulting Services Rendered the Ministry of Communications ("Confidential")	N/A	Nov. 1973
35	-----	Special Interim Report to the Director General	N/A	May 1973
36	-----	Final Report	N/A	Feb. 1974

SCHEDULES

TELECOMMUNICATIONS CORPORATION- MANAGEMENT CONSULTING SERVICES

NO	TASKS	MONTHS												TOTAL MAN MONTHS	CONSULTANTS IN MAN-MONTHS								
		SEPT.	OCT.	NOV.	DEC. '72	JAN. '73	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.		SEP.	OCT.	NOV.	DEC. '73	SUREJIAN	ARCURE	GENAL	RUNBLE	OTHER
1	ORIENTATION IN THE UNITED STATES																	0.2	0.2				
2	ORIENTATION IN JORDAN																	0.3	0.3				
3	REVIEW AND UPDATE THE CONSULTANT'S PHASE 3 RECOMMENDATIONS																	0.6	0.6				
4	ASSIST IN PREPARING REGULATIONS																	0.3	0.3				
5	ASSIST PROJECT MANAGEMENT OFFICE																	0.7		0.7			
6	PREPARE SUGGESTED PLANS FOR THE PROGRESSIVE TAKEOVER OF THE COMMUNICATION FACILITIES																	2.0	0.8	1.8			
7	ADVISE ON THE SELECTION OF KEY PEOPLE AND DEVELOP JOB CLASSIFICATIONS AND PAY STRUCTURES																	4.0	2.0			2.0	
8	ASSIST ON BUILDING SPACE AND EQUIPMENT TAKEOVER, APPRAISE EQUIPMENT BEING TAKEN OVER AND MAKE SHORT AND LONG RANGE RECOMMENDATIONS FOR SERVICE IMPROVEMENT																	7.0	3.0	4.0			
9	ESTABLISH LONG RANGE PLANNING TECHNIQUES																	2.8	1.0			1.8	
10	DESIGN AND IMPLEMENT THE SYSTEMS, PROCEDURES, PRACTICES, FORMS, REPORTS AND CONTROLS IN ALL FUNCTIONAL AREAS																	11.5	2.0	8.0	3.0	2.8	
11	ADVISE ON PERSONNEL DEPARTMENT FUNCTIONS																	0.6	0.6				
12	ADVISE ON LEGAL ADVISOR FUNCTIONS																	0.4	0.4				
13	RATE SETTING																	5.0	0.8	1.5			3.0
14	DIRECTORY AND DIRECTORY SERVICES																	1.2		1.2			
15	GENERAL DAY-TO-DAY ASSISTANCE BOARD OF DIRECTORS																	4.6	4.6				
16	MONITOR IMPLEMENTATION-PREPARE FINAL REPORT																						
**NOT INCLUDED IN CONTRACT WORK STATEMENT																							
		*ORIENTATION IN THE U.S. NOT SHOWN. LEVEL OF EFFORT, HOWEVER, IS SHOWN.																					
		NOTE TASKS 9, 12, 13, 16 ARE DELETED												TOTAL	39	14.0	13.0	3.0	6.0	3.0			

ARTHUR YOUNG & COMPANY AMMAN, JORDAN

MAY, 1973