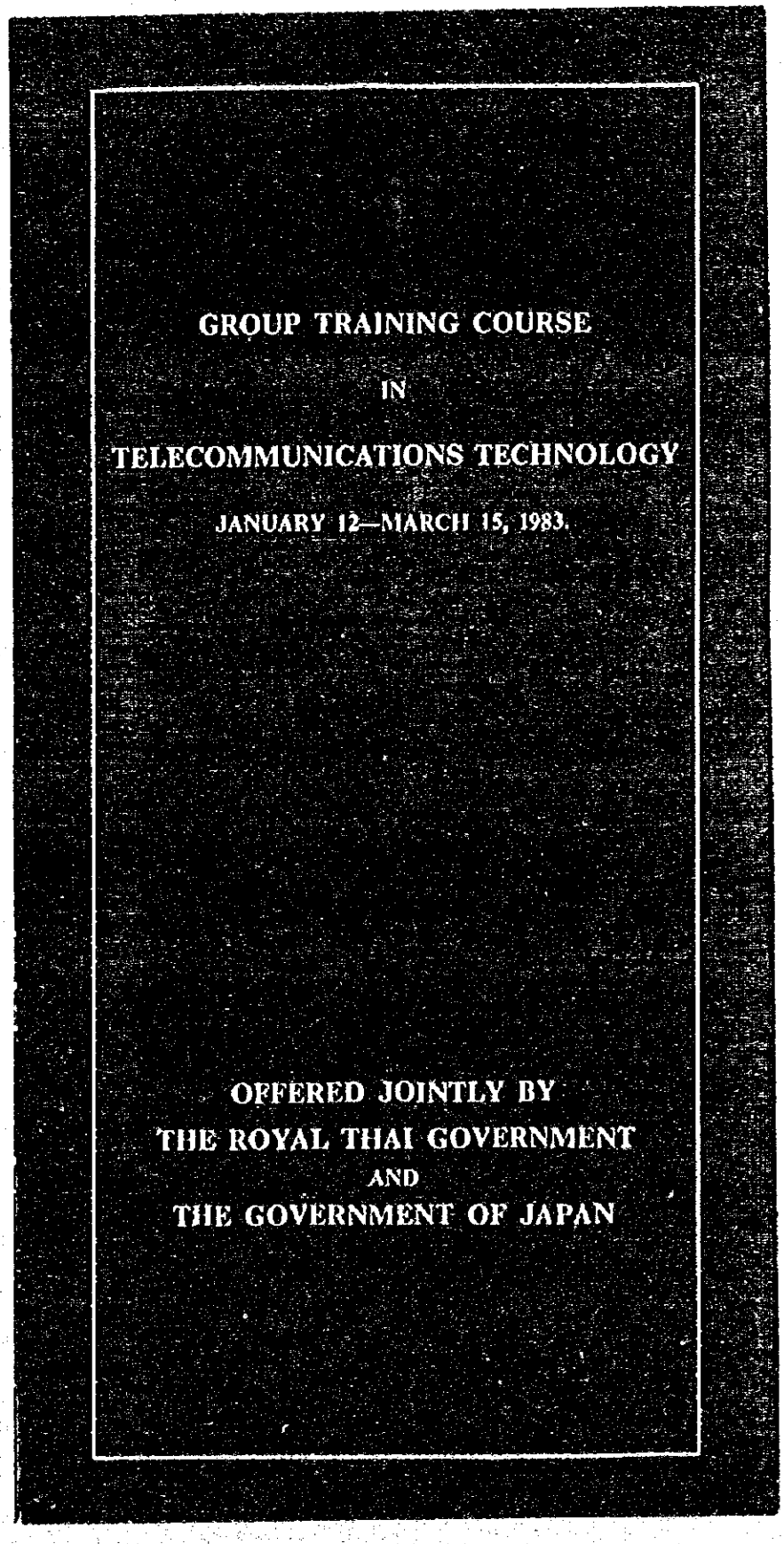
(2) KMITのGT


GROUP TRAINING COURSE
IN
TELECOMMUNICATIONS TECHNOLOGY
JANUARY 12—MARCH 15, 1983.
OFFERED JOINTLY BY
THE ROYAL THAI GOVERNMENT
AND
THE GOVERNMENT OF JAPAN

GROUP TRAINING COURSE IN TELECOMMUNICATIONS TECHNOLOGY

JANUARY 12 - MARCH 15, 1983

The Group Training Course in Telecommunications Technology will be conducted jointly by the Royal Thai Government and the Government of Japan as part of its Technical Cooperation Programme.

Arrangements for conducting the course are made by the Department of Technical and Economic Cooperation (DTEC) and the Japan International Cooperation Agency (JICA) in collaboration with the King Mongkut's Institute of Technology (KMIT) and other related organizations in Thailand.

PURPOSE

The purpose of this course is to provide participants with comprehensive theoretical and practical training in telecommunications technology so that participants will be able to acquire sufficient knowledge in this field.

QUALIFICATIONS

Applicants should:

(1) be nominated by their governments in line with Procedures for Application;

(2) have completed, at least, the associate degree or diploma in science or engineering or equivalent;

(3) have sufficient command of spoken and written English;

(4) be under forty (40) years of age;

(5) have appropriate physical fitness;

(6) have at least one year working experience in telecommunication field.

DURATION

9 (nine) weeks from January 12—March 15, 1983.

LANGUAGE

The course will be conducted in English.

INSTITUTION

The course will be conducted by:
Faculty of Engineering
Ladkrabang Campus
King Mongkut's Institute of Technology
Bangkok 10520, Thailand.

PROCEDURES FOR APPLICATION

(1) A government desiring to nominate an applicant for the course should fill in and forward three (3) copies of the Nomination Form for each applicant to the Government of Thailand through the Royal Thai Embassy or Consular Representative in their countries or send directly to the Thai Aid Programme, Department of Technical and Economic Cooperation, 962 Krung Kasem Road, Bangkok 10100, THAILAND, not later than November 20, 1982. For the convenience in accommodation arrangement, it is recommended to nominate in even number.

(2) the Royal Thai Government, after consulting with the Government of Japan, will inform the applying governments whether the nominees are acceptable in the course not later than December 10, 1982.

ALLOWANCE AND EXPENSES

The following allowance and expenses will be borned by the Royal Thai Government and the Government of Japan:

(1) Economy class air ticket between the international airport designated by DTEC and Bangkok will be sent to the applicants in advance by the representative of the Thai International Airline in the participant's country. Air ticket for the return trip will be arranged by DTEC.

(2) Living allowance at the rate of ฿ 450 per day (equivalent to US $ 20) will be paid to the participants when arriving Bangkok.
This living allowance is to cover board and lodging, local transportation and other personal daily expenses.

(3) In accordance with relevant regulation, free medical treatment will be provided for participants who become ill after arrival in Thailand.

FACILITIES

The following facilities will be provided by the Royal Thai Government through the Department of Technical and Economic Cooperation:—

(1) Arrangement for the training programme;
(2) Immigration including the arrangement for the extension of the permit to stay in Thailand;
(3) Orientations (Briefing upon arrival);
(4) Accommodation reservation and arrangement.

CERTIFICATE

Participants who successfully complete the course will be awarded a certificate of attendance by DTEC and a certificate of academic achievement from KMIT.

OTHER INFORMATION

(1) Participants are required to arrive in Thailand on the date designated by DTEC after the confirmation of acceptance. However, the date will be finally confirmed through the airticket sent to the participants.

(2) Participants should assume responsibility for other expenses occured during travel between the participants' home country and Thailand.

(3) Participants shall make their own arrangements for any financial matters of private nature not provided for by the DTEC.

(4) On arrival at Bangkok International Airport, participants will be met by a representative of DTEC. Necessary care of the participants, thereafter, will be taken by DTEC and KMIT throughout the duration of the course.

(5) Participants are required to observe strictly the course schedule.

(6) Application to change or alter the training subject or to extend the training period will not be accepted.

(7) Participants are requested not to bring any member of their families. The living allowance paid by the Royal Thai Government and the Government of Japan is sufficient only to cover normal living expenses for one person. No allowance of any kind will be paid for their dependants.

(8) For administrative uses, participants are requested to bring four (4) copies of their photograph.

(9) Further information concerning the course is available at the following address:

The Thai Aid Programme
Department of Technical and Economic Cooperation
962 Krung Kasem Road, Bangkok 10100, Thailand.
Tel. 2810552, 2821188.

TENTATIVE PROGRAMME

A. **Lectures and Laboratories**

Telegraph System
Automatic Message Switching
Facsimiles
Telephone Switching Systems
Transmission System
Telephone Outside Plant Engineering
Rural Telephone
Computer and Its Application

Radio Communication
Navigational Aids
Microwave Communication
Optical Communication
Television Broadcasting System
Satellite Communication

B. Practical Projects

C. Study Tour and Observation Visits :—

Telephone Organization of Thailand
Communication Authority of Thailand
Aeronautical Radio of Thailand
Public Relation Department
Television Stations
Industries
and others

Printed at the Secretariat of the Cabinet Printing Office
Sam Sen Road, Bangkok Thailand.
Mr. Prayong Panin, Printer and Publisher, 1982

7．第三国研修実施概要

（1） ケニアにおける第三国研修（日本政府／ＫＰＴＣ間合意議事録）

(1) 出 席 者　　省 略

(2) 開 催 地　　ＣＴＳ

(3) 期　　間　　１９８０年１１月２５日及び２６日

(4) 研修実施期間　第１回目のコースは１９８１年３月末よりＣＴＳにて実施されるものとし、具体的期日はＪＩＣＡとＫＰＴＣとの間で合意されるものとする。

(5) カリキュラム　次の３コースを実施することとする。

a. エンジニア・コース

b. シニアテクニシャン・コース

c. テクニシャン・コース

(6) 参 加 者 数

最大限２５名とし、６０％をケニア人研修員に、４０％をそれ以外の研修員に割当てる。

(7) 割当国の選定

割当国の選定はケニアが行なう。

(8) ジェネラル・インフォメーション

省 略

(9) ジェネラル・インフォメーションの送付方法

日本政府は本件コースがＫＰＴＣにより実施される旨各割当国に通報する。その後、ＫＰＴＣはジェネラル・インフォメーションを各割当国に送付する。

(10) 宿舎の手配

日本政府は各研修員に対し、日額３５０ケニア・シリングを支払う。各研修は、支給された手当をもってホテルに宿泊するが、希望すればＣＴＳ内の宿舎を利用することもできる。

(11) 航空券の送付

ＪＩＣＡナイロビ事務所は各研修員に対し航空券を送付する。

(12) ケニア人カウンターパートの本邦への受入

本件研修に直接携るケニア人担当者を２～３名本邦に受入れる。

(13) 教室及びケニア人講師の手配

ＫＰＴＣは必要な教室及びケニア人講師を手配する。

(14) その他のアレンジ

ナイロビ／ＣＴＳ間の交通手段はＫＰＴＣが手配する。ＪＩＣＡナイロビ事務所は研修員の滞在費及び研修経費を一括してＫＰＴＣに支払う。

(15) 日本人派遣専門家の数

日本政府は短期及び長期専門家を派遣する。

(16) ＫＰＴＣに対する供与機材

日本政府は本年度５００万円程度の機材を、また、来年度は3,０００万円程度の研修用機材をＫＰＴＣに対し供与する。右機材の選定及び研修プログラムの検討のため作業部会が設定された。

(17) 会計処理方法

① ＣＴＳはＪＩＣＡナイロビ事務所宛経費見積りを提出する。

② 上記見積りに基づきＪＩＣＡナイロビ事務所はＣＴＳに経費を支払う。

③ ＣＴＳは受入諸費と研修諸費に分けて経費を支出する。

④ ＣＴＳは精算報告をＪＩＣＡナイロビ事務所宛提出するとともに、受入諸費が余った場合にはそれを返却する。

(18) 第１回目のコース

作業部会の協議に基づき、第１回目のコースは３月下旬よりエンジニアを対象としたコースを実施するものとする。

(19) そ の 他

① 日本政府は短期専門家派遣に係る費用を全て負担する。日本政府は長期専門家に係る費用の内、医療費及び住居費を除いた全ての費用を負担する。

② 協力の期間は当面３年間とし、その後は両者の合意により延長し得るものとする。

③ ＣＴＳに設置された６ＧＨ$_2$ のマイクロウェーブ施設を研修の基礎とするが、他の科目も必要あらば追加できるものとする。

④ ＫＰＴＣは第１回目の割当国として次の各国を選定した。

ウ ガ ン ダ	2 名
タ ン ザ ニ ア	1 〃
レ ソ ト	1 〃
マ ラ ウ ィ	2 〃
スワジランド	2 〃
ボ ツ ワ ナ	1 〃
ザ ン ビ ア	1 〃

（2） タイにおける第三国研修

昭和５２年７月２７日
総裁決裁（研）第７－１１２１号

(イ) 通信技術集団コース　第三国研修実施計画

1. はじめに

本集団コースに日・タイ両国技術の協力により第三国研修計画の一環として、開発途上国の当該分野の技術の向上と関係各国の友好促進を目的として開催するものである。

コースの運営はモンクットモ工科大学の協力によりＪＩＣＡ及びＤＴＥＣが行う。

2. 目　　的

本コースの目的は研修費に対して、通信技術の理論及び実路の全般的知識を付与することである。

3. 参加資格

(1) 当該国政府の推せんにより所定の手続をへて応募したもの
(2) 科学・技術分野の短期大学卒業者又は同等の能力のある者
(3) 当該分野の実務経験が一年以上ある者
(4) 英語を理解する者
(5) ４０才以下の者
(6) 健康な者

4. 語　　学

コースは英語で実施する。

5. 研修場所

Faculty of Engineering, Ladkrabaug Camrpus
King Menahuts Institute of Technology

6. 定　　員

１６名

7. 対象国及び割当人数

(1)マレイシア (2)シンガポール (3)インドネシア (4)フィリッピン
(5)バングラディシュ (6)ネパール (7)スリランカ (8)ビルマ
} 各国２名　計１６名

8. 研修時期及び期間

昭和５３年２月２０日から１０週間

9. 研修科目

(A) 講義・実習・実験

(1) 電　話

(2) 電　報

(3) ラジオ通信

(4) マイクロウェーヴ

(5) テレビジョン

(6) 衛星通信

(B) 視　察

(1) タイ電話公社　(2) Public Relation Depurtment 施設　その他

(C) 研修旅行（３泊４日）

ナコンサワン、ランパン、チェンマイの通信施設

10. 経　費

(A) 日本側負担分（１バーツ＝１５円換算）

(1) 渡航費（バンコクより往復エコノミー）

(i) クアラルンプール	B 5,260	(¥ 78,900)
(ii) シンガポール	B 6,530	(¥ 97,950)
(iii) ジャカルタ	B11,460	(¥171,900)
(iv) マニラ	B10,290	(¥154,350)
(v) ダッカ	B 6,290	(¥ 94,350)
(vi) ネパール	B 8,830	(¥132,450)
(vii) コロンボ	B 8,780	(¥131,700)
(viii) ラングーン	B 3,100	(¥ 46,500)
計	B60,540	(¥908,100)

(2) 滞在費

@B 250（¥3,750）×70日×8名＝B 140,000（¥2,100,000）

(3) 支度料

@B 1,000（¥15,000）×8名　＝B 8,000（¥120,000）

(4) 書 籍 費

@B 600(¥9,000)×8名=B 4,800(¥72,000)

(5) 研修雑費

(i) 授 業 料 @B 4,000(60,000)×8名 =B 32,000(¥480,000)

(ii) 研修旅費(バンコック←→チェンマイ航路)

@B 1,100(16,500)×8名 =B 8,800(¥132,000)

(iii) 会 議 費 @B 50(¥750)×16名×3回=B 2,250(¥ 33,750)

(iv) 保 険 料 @B 200(¥3,000)×8名 =B 1,600(¥ 24,000)

日本側負担分合計(1)+(2)+(3)+(4)+(5) B 257,990(¥3,872,100)

(B) タイ側負担分

上記日本側負担分以外で研修実施に必要なすべての経費

11. JICAの業務

(A) 本 部

(i) 実施計画の作成及び予算に関する業務

(ii) G・Iの作成

(iii) 上記G・Iを外務省を通じ対象国にオファー

(iv) 要請書を受理し、外務省を通じてタイ側に送付

(v) タイ側回答を受理後、要請国に外務省を通じて通報

(vi) バンコック事務所に移管

(vii) 航空券の発行及び送付に必要な手続

(viii) BKK事務所に対する実施経費の示達送金

(B) バンコック事務所

(i) 相手国政府(DTEC)及び受入先(KMIT)と協議し受入審査を行い、DTECから受理した結果を大使館・外務省ルートで回答する。

(ii) オリエンテーション

(iii) 経費の支払い(研修費及び受入先)

(iv) 生命保険・治療保険の付保業務

(v) エバリュエーション

(vi) 実施経費に関する業務(前渡資金とする)

(イ) 経費の示達申請

(ロ) 研修実施に関する一切の経理事務

(ｲ) 本部への受払報告

(ﾛ) タイにおける第三国研修（昭和５２年３月５日　外務大臣発　在タイ大使宛　経協技１第４５８号）

1) わが国が技術協力の一環として実施する第三国研修は、研修実施引受国（本件の場合、タイ政府）が主体的に研修を行い、これに係る経費を、日本政府が負担する形式で行うものである。

当方としては第三国研修を貴任国において今会計年度内に実施することと致したいので、右形式での実施につきタイ政府に正式に申し入れありたく、先方において異存のない場合には、可及的速やかに正式文書による合意を取りつけられたい。

2) 右形式によれば当然のことながら本件第三国研修の候補者の選考、受入決定、講師の手配等、本件実施に係わる主要事項はすべてタイ政府が行ない、当方は募集手配、受入通報の外、インフォメーションの作成及び送付等の手続き及びタイ側分担分を除く一切の経費負担を行うことにより支援することとする。尚、また貴館及びＪＩＣＡ海外事務所よりは、先方に適宜助言する等、側面的な援助を与えること、あるいは実施推進方督励することなども必要と思われる。　以下略

（参考）　タイが望む他分野の第三国研修

医学・農業・農業関連産業等の分野で実施したいとしている。ちなみに皮膚病研究所において、皮膚病の研修についてタイ独自に近隣諸国から研修員を受入れており、日本からも順天堂大学の関係者が講義を受持っている由である。（５年の実績を有する。）本研修は現在のところ、基礎的なものにすぎないが、日本の協力を得て内容を高度にしたいとしており、第三国研修制度の枠内で実施できないかとの打診がタイ側からあった。

先進国及び国際機関によりタイで実施されている第三国研修

(1) 西ドイツ　１９８１年K.M.I.Tカラバンキャンパスにおいて西ドイツの経費負担でバングラデシュ研修員１０名を対象に電気通信技術の研修が２カ月実施された。

(2) ニュージーランド　１９８１年農業普及の手段としてのコミュニケーション分野（ビデオテープ、映画等の視聴覚機材による教育・宣伝）の研修がアセアン５カ国１０名（タイから５名参加）を対象に１カ月の日程でカセサート大学で実施された。ニュージーランドは講師派遣の他、研修経費を負担し機械供与を行っている。本研修は各国持回りで開催の趣きである。

(3) アメリカ合衆国　農業、保険衛生、社会福祉、公共事業、教育、経済計画、国家行政の分野の研修が、タイを除く各国の研修員２０名程度を対象に１～６週間行われている。（１０年間の実績がある）

(4) ＵＮＥＳＣＯ　イ．経済計画及び国家行政　　ロ．教育　　ハ．保健衛生
　　ニ．社会福祉
(5) ＵＮＤＰ　イ．経済計画及び国家行政　　ロ．社会福祉　　ハ．工業
　　ニ．農林水産　　ホ．保健衛生
(6) ＵＮ／ＩＣＡＯ　イ．公共事業
(7) ＷＨＯ　イ．保健衛生

(ハ) 経費の支払方法・支払時期等

昭和５３年１月２３日付　バンコック事務所長発研修事業部長宛

件名　昭和５２年度第３国研修実施にかかる経費示達申請

1. 省　　略
2. 経費の支払方法、支払時期等についてはＤＴＥＣタイ援助計画課と協議した結果、別添の通り行う予定であるところ御了承いただきたい。

昭和５３年１月２３日付
バンコック事務所長発研修事業部長宛
昭和５２年度第三国研修実施にかかる経費示達申請

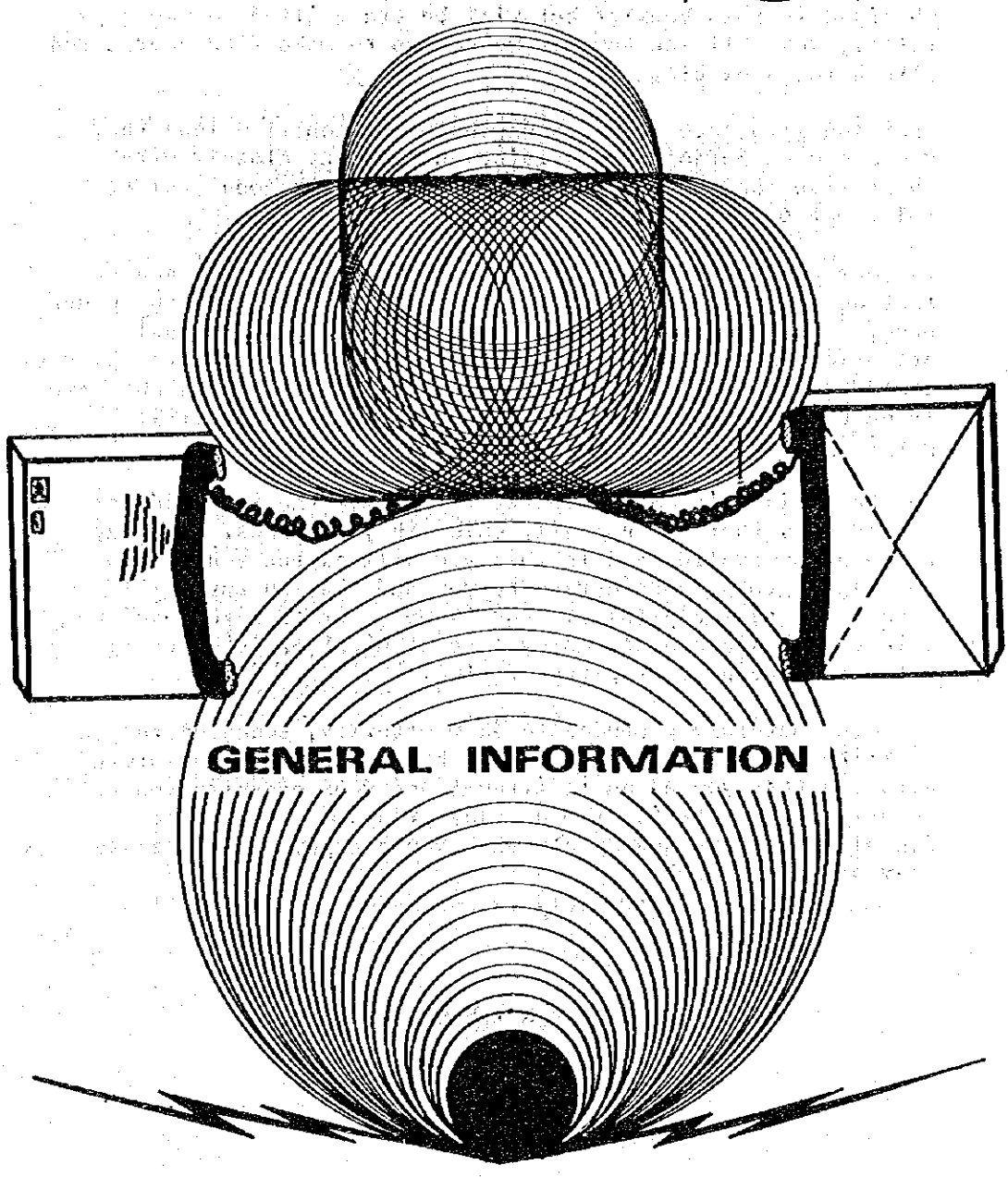
	科　目	金　額	支払方法（流れ）	支払時期	備　考
1	航空運賃	1,455,580円	JICA →JALBKK支店	研修開始以前	PTA方式により、研修開始１週間前に各国の日本大使館宛送付する。
2	滞在費	3,230,500円	JICA →DTEC →研修員	第１回支払：到着時 第２回支払：３月１８日 第３回支払：４月１８日	２月１９日～３月１８日分（２８日）　５２年度 ３月１９日～４月１８日分（３１日）　５３年度　４１日 ４月１９日～４月３０日分（１２日）　３０日
3	支度料	182,000円	JICA →研修員	到着時	支度料については、DTECの規程によって、タイ援助計画による研修員には支給されないため（研修期間が６ケ月以上の者には支給される）、JICAより研修員に直接支給する。
4	書籍費	109,200円	JICA →DTEC →KMIT	研修開始以前	DTECは本研修にかかるOPERTION EXPENSESとして、KMITに対し、B170,000（@B10,000×17名）を支払う予定でがるが、このこの中には書籍費が含まれているので、当方計画による書籍費分経費（予算）をDTECに支払う事とする。
5	保険料	119,700円	(1)保険料 JICA →大正マリン(株) (2)厚生費 JICA →研修員	研修開始以前 治療後随時	
6	研修旅費	273,000円	JICA →DTEC →KMIT	研修開始後適時	３泊４日程度：チェンマイ周辺　パタヤ周辺　各１回（観光バスチャーターによる見学旅行）
7	会議費	54,000円	JICA →DTEC →KMIT	研修開始後適時	開、閉講式ならびに中間エバリエーション用会議費とする。３回分 @18,200×3回＝54,600円

8． 第三国研修実施機関概要

(1) ケニア

KENYA POSTS & TELECOMMUNICATIONS CORPORATION

CENTRAL TRAINING SCHOOL



F O W A R D

I wish to welcome you on behalf of the Managing Director K.P.& T. Corporation to our Training School. Our job is to serve all participants/students to the best of our ability both in training/extra-curriculum activities and accommodation. In the information that follow, some of which may not be obtained in this booklet but will be transmitted to you separately, you will see how far we can go to make YOUR course and life here enjoyable.

Training life here is often dependent on contributions that you can make personally. Living and working closely with about five hundred (500) colleagues demands a good deal of tolerance on all sides.

In your course work, do not be too impatient if the pace of instruction is set to meet the need of majority. On the other hand, do not hesitate to ask for guidance and additional attention, if you feel you are falling behind. You are however, reminded that although lecturers assist, the progress one makes is dependent on personal interest, initiative and active participation.

In the Residential area, you will not have the independence and privacy that you normally enjoy in your homes. You may share accommodation and in this you will expect your fellow colleagues to be considerate to you and they in turn will expect you to reciprocate. For example, it is more undesirable to be unreasonably noisy late at night or interfering with other peoples property or time.

You are therefore reminded to show maturity, sence of responsibility and respect. It is only by displaying this mature attitude that you as an individual and your organisation or country would benefit from a study programme here. The School Management and myself wish you a happy and a pleasant stay at this School.

P R I N C I P A L.

KENYA POSTS & TELECOMMUNICATIONS CORPORATION

CENTRAL TRAINING SCHOOL

GENERAL INFORMATION

1. LOCATION

The Central Training School is situated at Mbagathi, 16 kilometres from Nairobi the beautiful Capital City of Kenya. Nairobi with its pleasant & cool scenery of green trees overlooking the Kapiti Plains in which a game reserve is located. C.T.S. offers one of the best locations & atmosphere for a training institution in the country. It is located in the South - Western direction from the City centre. A guide map enclosed shows how you can reach the School from the General Post Office (G.P.O.); Railway Station, Jomo Kenyatta Airport and Kenya Bus Service Terminal. There is an official transport between the School and G.P.O. during the mornings, mid-day and finally in the evening. The Kenya Bus Service Company also operates bus services between the School and the bus terminal.

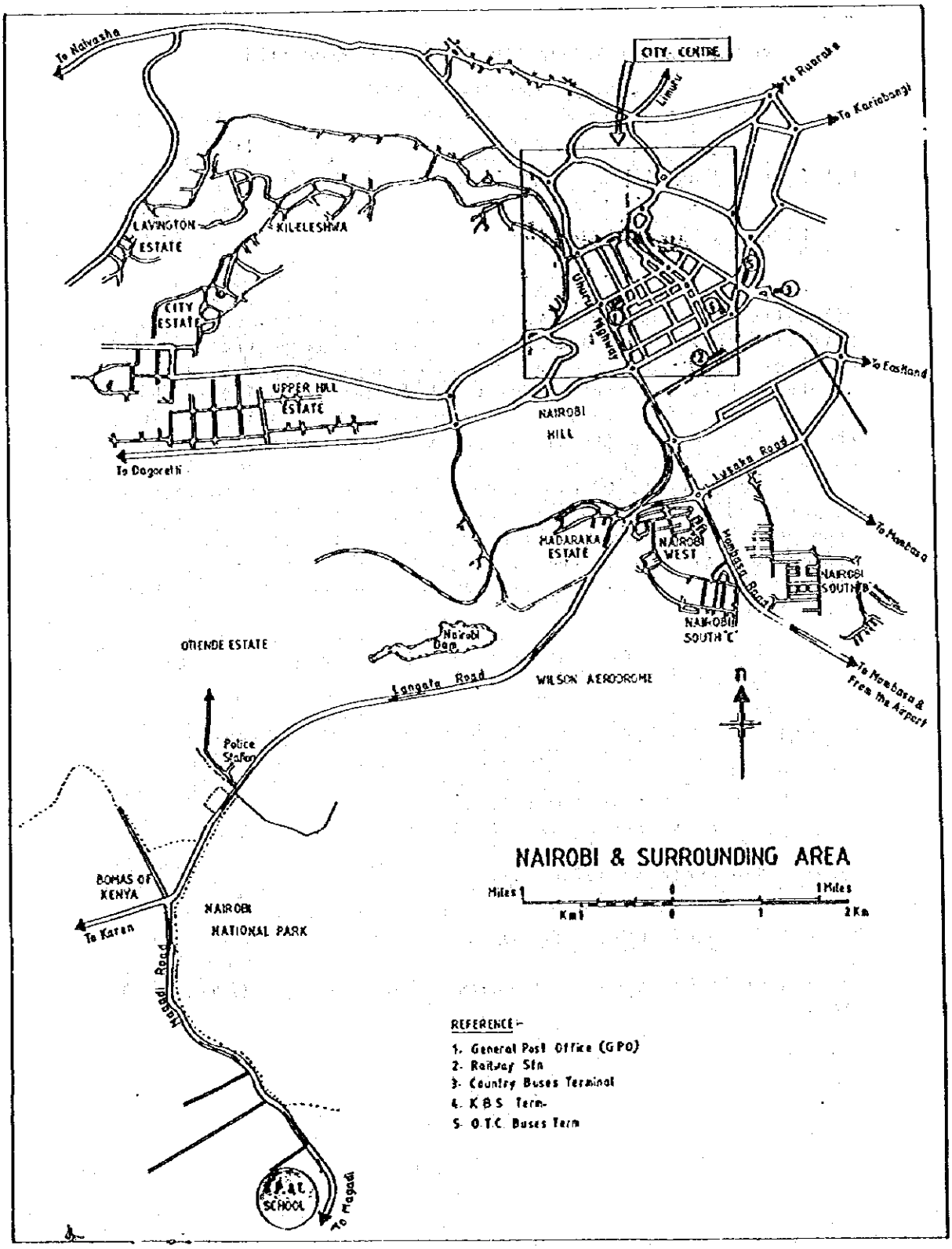
Distances from the Central Training School to some important places is as follows:-

From CTS to Jomo Kenyatta International Airport	26 Km.
" " " City Centre (G.P.O.)	15 Km.
" " " Nairobi Railway Station	15 Km.
" " " Bus Terminal O.T.C. or Kenya Bus Service (K.B.S.)	15 Km.

Note:- See enclosed guide map.

2. BRIEF HISTORY OF THE SCHOOL

The School is built on an extensive 113.3 hectares (280 acres) site.


To Naivasha
CITY CENTRE
To Ruaraka
To Kariobangi
Limuru
LAVINGTON ESTATE
KILELESHWA
CITY ESTATE
UPPER HILL ESTATE
To Dagoretti
NAIROBI HILL
Uhuru Highway
To Eastland
Lusaka Road
To Mombasa
HADARAKA ESTATE
NAIROBI WEST
NAIROBI SOUTH 'B'
NAIROBI SOUTH 'C'
Mombasa Road
To Mombasa & From the Airport
OTIENDE ESTATE
Nairobi Dam
Langata Road
WILSON AERODROME
Police Station
BOMAS OF KENYA
To Karen
NAIROBI NATIONAL PARK
Magadi Road
K.T.T.C. SCHOOL
To Magadi
N
NAIROBI & SURROUNDING AREA
Miles 1 0 1 Miles
Km 1 0 1 2 Km
REFERENCE -
1. General Post Office (GPO)
2. Railway Stn
3. Country Buses Terminal
4. K B S Term.
5. O.T.C. Buses Term

The School was founded in 1948 as a "Combined Training School" for the then three East African States namely, Kenya, Uganda and Tanzania. It brought together both the Postal and Telecommunications Schools under the same administration and to cater for the fast growing needs of the East African Posts and Telecommunications Corporation.

When this system of operation continued until 1967, it was decided that some junior courses should be decentralised to the Regional Schools in each of East African Countries. This was to allow CTS to concentrate in medium and advanced courses. In the subsequent agreement each Corporation i.e. Kenya P.& T., Tanzania P.& T. and Uganda P.& T. built their junior Training Schools in Nairobi (Kabete Loresho), Dar es Salaam and Kampala respectively.

These Schools were called REGIONAL TRAINING SCHOOLS, and were specifically to cater for basic courses. This was the time when the School changed the name to its present one, "The Central Training School" (C.T.S.).

During the collapse of the East African Posts and Telecommunication Corporation in 1977, the School still yet remained a training centre for the three East African Countries. It has continued to be so as the Tanzania and Uganda develop their national schools.

The School has progressively grown big and strong functionally. The School's reputation and the level of the various courses it offers has earned it well deserved recognition from various organisations and institutions of higher learning within the country and outside; with similar administrations.

Presently the School has accommodation capacity of 280 students. Its yearly student turn-out is above 2,000 mark. The School is staffed presently by 75 Instructors out of whom 50 are in Telecommunications (Engineering) Wing. The trainees attending various courses in this School are both new entrants and in-service officers on further training from various institutions in Kenya and other organisations in varous countries in Africa with similar P.& T. administrations or outside organisations with telecommunications services.

The various institutions which have been undertaking our courses come from Kenya Army, Kenya Airways, Kenya External Telecommunications, Directorate of Civil Aviation, Kenya Railways, Kenya Meteorological Department and Kenya Ports Authority. The African countries are Lesotho, Swaziland, Botswana, Zambia, Malawi, Mauritius, Sudan, Ethiopia, Ghana, Somalia, Nigeria, Liberia, Gambia and Sierra Leone.

3. TRAINING

The School offers medium and advanced level courses in the five training wings namely:-

1. Telecommunications (Engineering) Wing.
2. Telecommunications Traffic Operations Wing.
3. Postal Wing.
4. Management Wing.
5. Financial Wing.

Below here is a general breakdown of the courses conducted in various Wings for information purpose only. For detailed information regarding individual courses in the respective training Wings refer to the C.T.S. Prospectus.

1. Telecommunications "Engineering" Wing.

   A. Electronics Section

      (i) Electronics A and B
      (ii) Digital Electronics
      (iii) Intergrated Electronics
      (iv) Solid State Switching Circuits
      (v) Courses are being developed in advanced digital techniques.

   B. External Plant

      (i) External Planning I & II
      (ii) Advanced External Planning III
      (iii) Cable Balancing
      (iv) Advanced O/H and U/G Testing
      (v) Cable Pressurisation
      (vi) AN Survey
      (vii) Coaxial Cable Jointing
      (viii) Juction and Trunk Planning.

C. Subs. Apparatus

(i) Subs auto Switchboards.
(ii) Subs auto Teles (Advanced).
(iii) Call Offices.
(iv) Test Desk.

D. Power and Workshop

(i) Workshop II
(ii) Power Generation.
(iii) Electrical Power Plant.
(iv) AC Power Plant.
(v) Air Conditioning.
(vi) Engine Maintenance.
(vii) Switching Power Supplies
(viii) Radio Power Supplies.

E. Radio Transmission

(i) Radio Systems.
(ii) Radio Measurements.
(iii) Advanced Radio Measurements.
(iv) UHF Radio Systems.
(v) Microwave Practice.
(vi) Advanced Microwave Routine Maintenance.
(vii) Remote Supervisory System .
(viii) Telecomms Systems Planning.
(ix) SHF Equipment (Panaftel System) 4-6 Gigahertz microwave radio courses.
(x) VHF Equipment.
(xi) Microwave radio course in 2 Gigahertz radio system.
(xii) New courses in TD Digital Radio Transmission are being developed.

F. Line Transmission

(i) Transmission Multiplex theory; Transmission Measurements; 3 and 12 channel carrier; PST-MP 120 super group multiplex system.
(ii) Telettra Rural carrier TD2.
(iii) 3 and 12 channel carrier system
(iv) PST 120 super group multiplex system.

(v) Microwave Broadband Multiplex systems.
(vi) Broadband Multiplex Repair.
(vii) TMC VFT & Speech + Duplex.
(viii) OKI type semi Electronic Teleprinter Course.
(ix) OKI type circuitry.
(x) Data Modems Maintenance.
(xi) GT&E MP-25 Maintenance.
(xii) Courses in TDM PCM are being developed.

G. Switching

(i) NTTS Part I: Elements of switching and Basic strowger circuitry.
(ii) NTTS Part II: Basic Crossbar & Traffic.
(iii) NTTS Part III: Signalling and STD.
(iv) Hitachi C400.
(v) Advanced S x S.
(vi) PABX OKI, & PABX 9:3:3 BPO No.1 (PABX 10+49).
(vii) Hitachi C23H, C23S, C5 C82.
(viii) Line Concentrator. *
(ix) Penta Conta Auto Telex *
(x) Nothern Electric SF-1 Crossbar courses.
(xi) Rura X. *
(xii) 2 VF auto.
(xiii) STD App. and circuitry.
(xiv) Preliminary work on developing of a new course in SPC Digital Switching Electronic Exchange is in progress.

2. Operations Wing

(i) Telegraphist training.
(ii) Assistant Telecomms Controller.
(iii) Telephone Supervision.
(iv) Telephone Administration.
(v) Group Centre Refresher & Inquiry.
(vi) Telegraph Supervision.
(vii) Basic Sales.
(viii) Work to start soon on Advanced Telecommunications Controller Course.
(ix) Advanced Sales.

3. Postal Wing

(i) Postal Management.
(ii) Postal Planning and Development.
(iii) Postal Statistics.

(iv) Postal Managers Seminar.
(v) Assistant Postal Controllers.
(vi) General Correspondence and Writing Work.
(vii) Head Office Cash Account.
(viii) Postmasters Course.
(ix) Postal Instructors' Course.
(x) Work to start soon on Advanced Postal Controller Course.

4. Management Wing

(i) Executive Development.
(ii) Advanced Supervisory Management.
(iii) Supervisory Management.
(iv) Office Management *
(v) Instructor Training.
(vi) General Clerical.
(vii) Seminars - Manpower Planning & Development.
(viii) Telecoms Managers Workshop.
(ix) Work to start soon on Personnel Management Course.

5. Financial Wing

(i) Cash Accounts.
(ii) Telecommunications Accounts.
(iii) Computer Uses and Interpretations.
(iv) General Supplies.
(v) Computer and Key Edit - Operation.
(vi) Supplies and Materials Management.
(vii) ACNC Part I and II.
(viii) CPA - on - the way.
(ix) Work to start soon on the Budget Course.

Certification

With effect from January, 1981, the School now awards certificates to all trainees who attend its courses. There are two types of certificates being awarded - as follows:-

I. Performance Certificate

This is issued for academic and practical courses where a trainee goes through continuous assessment and sits and passes final examinations.

II. Attendance Certificate

This is issued for courses which do not require rigorous testing procedures as in the case of Suprvisory Management courses. This includes seminars.

III. Performance reports are also submitted to sponsors.

4. GENERAL

4.1. FEES

All resident students pay fee charges at the rate of Kshs.110/= per day amounting to Kshs.3,300/= per month. This is further broken down into:-

(i) Tuition fee Kshs.70/= per day.
(ii) Boarding fee Kshs.40/= per day.

However, non-resident students only have to pay for the tuition fee and an additional Kshs.10/= for their lunches at the School. Thus non-resident students would pay at the rate of Kshs.2,400/= per month. Plans are on the way to revise these rates to reflect changing economic conditions.

4.2. ADVICE TO SCHOOL ON NEW STUDENTS

Tuition fee should be paid either in advance or on arrival. Where students perdiem is included, it should be advised. The School does not pay outfit allowance. All organisations/Administrations outside Kenya sending students to C.T.S. should advise the School Administration in advance the mode of travel and the time the student is expected to arrive in Nairobi. This information is very important as the School authority would require to know if the student/s is/are to be met at the Airport, Railway Station or Bus terminal. This could also enable the School to arrange for transport to bring such student/s from Nairobi to the School. In case of a student using other means of transport to the School, only bus fares from Nairobi to the School will be refunded.

4.3. Students may bring their own cars or motor-cycles to the School. However, it should be noted that the School shall not have any responsibility over the security of such vehicles.

4.4. (For Kenya P.& T. students only).

Kenya P.& T. students should arrange transfer of their salary pay point to C.T.S. (190, 290, 390 as applicable) if they anticipate attending courses lasting for more than 6 weeks.

4.5. Students should bring their own personal effects. However, some of the items they might need may be available at the School Canteen. It may also be necessary to bring some warm clothing to keep yourself warm during the months of June, July and August as these are the coldest months of the year in the country.

5. ACCOMMODATION

At present the School provides full boarding facilities to both external and K.P.& T. male students.

Kenya P.& T. Students Only.

All male students are required to reside at the School unless Special Exemption has been granted by the School administration. Those students who obtain permission to stay outside the School should note that the School will not normally guarantee their daily transport facilities to and from School.

All P.& T. female students are accommodated at Kenya Training School (KTS) Loresho, Nairobi Telephone 582404. Free transport is provided by the School to connect between CTS and KTS.

In case of any difficulty the CTS House Keeper Telephone 891201 should be contacted. Lunches are provided to female students during the week at the School, but all other meals including full week-end meals are served at KTS.

External Students Only

1. All external students from other Kenya organisations or foreign countries may opt to stay in hotels/hostels in the town in case where their respective organisations or sponsors are prepared to meet the accommodation expenses in such places.

   Female students however, are to be accommodated at the Kenya Training School (KTS) or may be put up in hotels in town arranged by the School administration.

2. The rates for hotels vary depending on the category. Appended here under is a list of some of the hotels in Nairobi which are considered reasonable and of reasonable or good quality. Their respective tariffs have also been provided for information and comparison purposes. It should be noted that these rates are temporary and may be used only as a guide; they may change upwards without any notice.

HOTELS/HOSTELS TARIFF W.E.F.1/1/81 - SINGLE

Name of Hotel	B/B-fast	Lunch	Dinner	Tea	Total per day
1. Sixeighty Hotel	320/=	50/=	65/=	10/=	455/=
2. Ambassadour "	261/10	50/=	65/=	10/=	396/50
3. New Mayfair "	229/=	50/=	50/=	5/=	334/=
4. Fairview "	170/=	45/=	40/=	10/=	265/=
5. Impala "	110/=	30/=	32/50	7/50	187/50
6. Safariland "	105/30	30/=	35/=	5/=	180/=
7. Azee House	160/=	-	-	-	-
8. Chiromo Hotel	136/15				
(*	156/15	-	-	-	(*156/15)
9. Plums Hotel	130/=	-	-	-	130/=

*Payment for Saturday, Sundays and Public holidays.

6. AT CAMPUS

1. On your arrival at the Campus, the House Keeper will make the necessary accommodation arrangements and provide you with the essential items including a copy of School regulations and registration forms. All external students who opt to stay away from the School should advise the School authority in time so that Hotel reservations can be made.

2. The School will issue you with a "Facility Card" for identification purposes. This should be shown to members of the School staff rendering School services and facilities when the need for identification is necessary. The "Facility Card" and a copy of School regulations should be returned to the House Keeper on your departure from the School.

3. Classes commence at 0815 hours on the first Monday of the course and you should make sure that you arrive in Nairobi by 1700 hours on the previous day. This will allow you ample time in completing all necessary formalities.

4. You will not normally be granted leave of absence whilst at School, so you should make all necessary arrangements regarding your private affairs before you leave for the School.

GENERAL FACILITIES

1. Eelectric irons are obtainable from the House Keeper on a loan basis, these should be used in the ironing rooms provided. Please note that mains - operated private electric irons, radio sets, and gramaphones are not permitted.

2. A School shop is available and stocks some minor items which are essential. Your other shopping can be done during week-ends in town.

3. There is a POST OFFICE at the School which carries out all classes of Postal business. You are advised to deposit any extra money that you may need to keep with Post Office at the School, or any other commercial bank of your choice in the town for its safe keeping. Information on safe custody should be sought from Executive Officer.

Please note that personal money MUST NOT be given to anybody for safe keeping.

4. There is a public telephone Kiosk, Tel. No. 891646. All your private calls should be made from this telephone. During school hours, calls for you should be made to 891201 so that messages can be passed to you as it will not be possible for you to receive these calls yourself.

RECREATION

1. There is a Bar in the school where you can spend your leisure time in the evenings.

2. The school expects all students to make use of sports and games facilities provided in the school. Some of the facilities available are:- The school Library, Television, Radio, Lawn tennis and Tennis court, Cinema shows, Reading and writing rooms, Indoor games and church services on sundays, Football, Volley Ball etc.

There is a great deal to benefit from outside the classroom through participation in some of these school activities. A minimum Games and Sports outfit may be provided at the school but you are strongly urged to bring your own.

It is hoped that you will derive maximum benefit from the courses available in this school. The school welcomes you.

P R I N C I P A L.

(2) タ イ

KING MONGKUT'S INSTITUTE OF TECHNOLOGY

LADKRABANG CAMPUS

BANGKOK, THAILAND

1982

KING MONGKUT'S INSTITUTE OF TECHNOLOGY

LADKRABANG CAMPUS

(KMIT LADKRABANG)

King Mongkut's Institute of Technology was established by a Royal Act promulgated on April 23, 1971.

The aims of the Institute are to provide education and to promote research and development in science and technology for the industrial and technological progress of Thailand.

The Institute consists of three campuses:

Ladkrabang

Thonburi

and North-Bangkok.

The three campuses have their own history of development and different sources of foreign cooperation. KMIT Ladkrabang developed from the Nondhaburi Training Center in Telecommunications which was established with Japanese cooperation in 1960. KMIT Thonburi and KMIT North-Bangkok were formerly the Thonburi Technical College with UNDP cooperation and the Thai-German Technical School with German cooperation respectively.

In April 1982, the Government approved a bill for establishing each campus as an independent institute (a national university). Implementation will be started after the bill being approved by the Parliament in 1983.

The history of development of KMIT Ladkrabang is as follows:

1971 King Mongkut's Institute of Technology was established. Nondhaburi Institute of Telecommunications (suceessor of the Nondhaburi Training Center in Telecommunications) became Nondhaburi Campus. It was in the northern suburb of Bangkok.

In this year, it was decided to move the campus to a land of 250 acres in Ladkrabang district of Bangkok. It is called Ladkrabang Campus of KMIT.

1972 Nondhaburi Institute of Telecommunications was called "the Faculty of Engineering, KMIT Ladkrabang."

The Construction College which was in the same land at Ladkrabang joined KMIT Ladkrabang as the Faculty of Architecture.

1977 The Faculty of Industrial Education and Science was established in KMIT Ladkrabang for training vocational teachers for technical and vocational schools and for giving education and promoting research in Science.

1979 The Agricultural College which was in the same land at Ladkrabang joined KMIT Ladkrabang as the Faculty of Agricultural Technology.

1981 The Computer Research and Service Center was established.

In 1982, KMIT Ladkrabang consists of departments and courses as follows:

Faculty	Department	Courses
1. Central Office of KMIT Ladkrabang		
2. Engineering	1) Telecommunications Engineering 2) Electrical Engineering 3) Electronics 4) Computer Engineering 5) Control Engineering 6) Mechanical Engineering 7) Television Technology 8) Industrial Instrumentation Technology 9) Electronics Research Center 10) Engineering Development and Research Center	Technician Diploma Bachelor of Engineering Master of Engineering Doctor of Engineering
3. Architecture	1) Architecture 2) Interior Architecture (Interior Decoration) 3) Industrial Design 4) Building Construction Technology 5) Communication Arts	Technician Diploma Bachelor of Architecture
4. Industrial Education and Science	1) Industrial Education 2) Mathematics 3) Applied Physics 4) Applied Chemistry 5) Applied Biology 6) Langnages and Social Sciences	Bachelor of Science Bachelor of Industrial Education
5. Agricultural Technology	1) Agricultural Mechanics 2) Plant Production Technology 3) Animal Production Technology 4) Agricultural Engineering 5) Agricultural Industry 6) Agricultural Business	Technician Diploma Bachelor of Science
6. Computer Research and Service Center		

KMIT Ladkrabang

Number of Staff, Students and Budgets in Thai Fiscal Year 1983

(Oct. 82-Sept. 83)

	Number of Students (approx.)	Number of Staff		Budgets, million Bahts	
		Teaching	Administrative	Operation	Investment*
1. Central Office of KMIT Ladkrabang	-	-	40	6.94	3.30
2. Faculty of Engineering	1100	125	55	26.30	7.73
3. Faculty of Architecture	700	80	31	14.64	2.20
4. Faculty of Industrial Education and Science	300	95	9	10.81	2.66
5. Faculty of Agricultural Technology	600	104	21	14.88	4.40
6. Computer Research and Service Center	-	-	19	1.86	0.53
Total	2700	314	175	75.43	20.82

Note * Budget for equipment and construction.

Japanese Cooperation to KMIT Ladkrabang

1960 - 1982

1960-1964	Technical cooperation in telecommunications covering outside plant, automatic telephone, telegraph, telex, carrier, VHF radio, microwave and broadcasting.
1965-1973	The 1960 Agreement of Japanese technical cooperation was ended. But a follow-up program under the Colombo Plan was continued in forms of experts, fellowships and equipment.
1974	A grant aid was given for construction of auditorium, memorial hall, library, gymnaseum and telecommunications laboratory building.
1978-1982	A package technical cooperation in the fields of computer, solid state electronics and electrical engineering.

A proposal for a future program of cooperation

Objectives

1) To produce qualified technicians, engineers and scientists to meet the rapidly increasing demand in the areas of technology which receive emphasis in the Fifth National Development Plan of Thailand (1982-1986). It includes industrial development of the Eastern Seaboard Project, petrochemical industry, telecommunications facilities, etc.

2) To enhance the contribution of KMIT Ladkrabang with Japanese cooperation in the fields of science and technology to Thailand. KMIT Ladkrabang has potential to become a leading national university of technology for Thailand, if proper support is given. As KMIT Ladkrabang was established with Japanese cooperation from the beginning, it can give prestige to Japanese cooperation in science and technology which are given to developing countries, if KMIT Ladkrabang with Japanese cooperation becomes successful as a leading university of science and technology.

A proposal of areas of future cooperation

KMIT Ladkrabang has potential to develop in the following areas, if Japanese cooperation can be provided:

- telecommunication including digital switching and optical transmission
- electrical engineering including standard instruments laboratory
- electronics
- computer engineering
- mechanical engineering

  (necessary as basic engineering for all courses)
- petrochemical technology
- process instrumentation
- medical instrumentation
- computer applications
- industrial design
- polymer science (materials science)
- application of remote sensing techniques in agriculture
- farm machinery
- post-harvesting technology
- food processing technology.

Problems ungently need Japanese Cooperation

1. Staff Development Program

As demand by industry for engineers is high, no engineering graduate wants to work as a university lecturer with much lower salary. KMIT Ladkrabang has been operating so far with members of staff trained in Japan under the staff development program in 1971. Each year 4 top graduates were selected from KMIT Ladkrabang and sent to study in Japan for master degrees under a condition that they had to go back and work for KMIT Ladkrabang for at least twice the number of years that they studied in Japan. The program was continued for 5 years and ended in 1975.

Now, number of student and area of activities have expanded extensively, but KMIT L cannot recruit qualified staff directly.

It is vitally necessary for KMIT Ladkrabang to have a staff development program similar to the previous one with Japanese cooperation for other 5 years with 4 graduates per year.

2. Individual Experts

As the present package cooperation program will terminate in December 1982, KMIT Ladkrabang very much wishes to have individual experts from Japan to give further help as follows:

(1) General advisor on planning of the future cooperation program to KMIT Ladkrabang.

(2) Individual experts to the Faculty of Engineering KMIT Ladkrabang in the following fields:

- telecommunications
- mechanical engineering
- electrical engineering
- solid state electronics
- computer engineering.

(3) Individual expert to the Computer Research and Service Center in:

- computer applications

(4) Individual expert to the Faculty of Architecture in:

- industrial design

(5) Individual expert to the Faculty of Industrial Education and Science in:

- polymer science (materials science)

(6) Individual experts to the Faculty of Agricultural Technology in

- applications of remote sensing to agriculture
- farm machinery
- post-harvesting
- food processing.

3. A new cooperation program to KMIT Ladkrabang

A new cooperation program should cover not only telecommunications and engineering, but also other fields of science and technology at KMIT Ladkrabang. If possible, the program should include construction of buildings, experts, fellowships and equipment.

THAI AID PROGRAMME

FISCAL YEAR 1982

(October 1, 1981 - September 30, 1982)

		Value	Number
I.	Thai Aid Training Programme	฿ 5,547,078.-	180
II.	Third Country Training	฿ 251,715.-	778
III.	Equipment	฿ 13,515.-	-
	Grand total	฿ 5,812,308.-	958

Rate of Exchange : US $1 = ฿ 22.50

Thai Aid Programme

Department of Technical and Economic Cooperation

Tel. 2810552,

2821188

November 6, 1982

I. THAI AID TRAINING PROGRAMMES (F.Y. 1982)

FIELDS OF STUDY	DURATION (month)	VALUE (baht)	COUNTRIES		TOTAL
			Philippines	Sri Lanka	
1.1 Individual Request Training Programme					
1. Orchid Tissue Culture	3.0	325,168.-	-	5	5
2. Buddhist University System and Technology Universities	0.2	7,798.-	-	2	2
3. Cross Posting Programme on Drug Preventive Education and Information	1.0	49,060.-	6	-	6
4. Coastal Aquaculture : Shrimp and Fish	2.0	444,490.-	-	6	6
Total	6.2	826,516.-	6	13	19

FIELDS OF STUDY	DURATION (month)	VALUE (baht)	CHINA (number)	REMARKS
1.2 Scientific and Technical Cooperation Programmes between Thailand and the People's Republic of China				
1. City Traffic Planning & City Traffic Control	0.5	32,115.-	4	
2. Sugarcane Cultivation and Variety Resources	1.0	71,160.-	4	
3. Breeding of Claxian Batraohus	0.7	40,380.-	3	
4. Lean - Meat Pig Raising	0.5	46,690.-	4	
5. Research, Design and Application of Ferro - Cement	0.7	57,771.-	4	
6. Chicken Raising and Chicken Variety Resources	0.7	49,160.-	4	
7. Multiple Utilization of Wild Plant	0.7	73,300.-	4	
8. Growing and Processing of Rattan and Sargent Cloryvine	0.5	49,826.-	4	
9. Technology and Equipment of Kenaf Spinning and Weaving	0.7	69,895.-	4	
10. Manufacture of Case and Dial Plate of Wrist Watch	0.7	48,431.-	4	
11. Technology, Equipment and Kilns of Ceramic Production	0.7	59,516.-	5	
12. Thai Language	-	200,083.-	3	Third year program (1981 - 1983)
13. commodities - Shipment of Doroc Jersy Pig	-	12,143.-	-	
14. - Shipment of Seed and Seedling of Corp and Fruits	-	26,233.-	-	
15. - Shipment of Seeds and Roots of Lacquer tree	-	2,100.-	-	
Total	7.4	838,803.-	47	

I. THAI AID TRAINING PROGRAMMES (F.Y. 1982)

FIELDS OF STUDY	DURATION (month)	VALUE (bath)	Bangladesh	Bhutan	Brunei	Burma	China	Fiji	India	Indonesia	Iran	Rep. of Korea	Malaysia	Maldives	Nepal	Pakistan	Papua New Guinea	Philippines	Singapore	Sri Lanka	Thailand	TOTAL
1.3 Group Training Course																						
1. Telecommunications Technology	2.1	424,374.-	-	-	1	-	2	-	-	-	1	1	-	-	-	1	1	1	1	-	3	12
2. Nursing (Midwifery)	3.0	584,252.-	-	-	-	-	2	-	-	2	-	1	2	1	2	-	-	-	-	1	-	11
3. Road Construction in Thailand	0.7	335,212.-	1	1	1	-	2	-	-	2	-	-	-	-	2	1	-	-	1	1	1	13
4. Community and Rural Development	0.8	482,791.-	1	-	-	1	-	-	-	5	-	1	2	-	2	1	-	-	-	3	-	16
5. Dermatology	3.0	879,415.-	1	-	-	1	-	1	1	2	-	1	-	-	1	1	-	3	-	1	6	19
6. Agricultural Extension and Communication	1.3	735,739.-	1	-	2	-	-	1	-	3	2	-	-	2	1	-	-	2	-	3	4	21
7. Applied Plant Protection Service	1.0	390,476.-	2	1	1	-	-	-	-	2	-	1	1	1	2	-	-	2	-	1	-	14
8. Inter Asian Rural Youth Conference	0.4	49,500.-	-	-	-	-	-	-	-	3	-	-	2	-	-	-	-	2	1	-	-	8
Total	12.3	3,881,759.-	6	2	5	2	6	2	1	19	3	5	7	4	10	4	1	10	3	10	14	114
Grand Total (1.1 + 1.2 + 1.3)		5,547,078.-	6	2	5	2	53	2	1	19	3	5	7	4	10	4	1	16	3	23	14	180

Recipient Countries	Sponsoring Agencies										Total
	UN					USAID	MALAYSIA	F.R.of Germany	JAPAN (JICA)	Others	
	WHO	UNESCO	UNDP	UNICEF	ICAO						
1. Afghanistan	--	-	1	-	-	-	-	-	-	-	1
2. Bangladesh	46	2	3	2	-	48	-	10	1	4/5	116
3. Burma	29	-	-	-	1	-	-	-	2	1/6	33
4. China	20	12	15	3	9	-	-	-	2	3/7	64
5. Egypt	--	1	4	-	-	11	-	-	-	-	16
6. Ethiopia	-	-	3	-	-	-	-	-	-	-	3
7. Fiji	-	-	-	-	5	-	-	-	-	-	5
8. India	41	5	-	-	-	-	-	-	1	-	47
9. Indonesia	62	6	5	-	7	14	-	-	-	-	94
10. Iran	--	-	-	-	14	-	-	-	1	-	15
11. Kiribati	-	-	-	-	-	3	-	-	-	-	3
12. Rep.of Korea	--	-	-	-	3	-	-	-	1	-	4
13. Malawi	--	-	-	-	1	-	-	-	-	-	1
14. Malaysia	5	1	-	-	5	-	37	-	2	-	50
15. Maldives	4	4	-	-	10	-	-	-	-	2/8	20
16. Nepal	64	18	6	-	3	14	-	-	-	-	105
17. Pakistan	-	1	1	-	-	-	-	-	2	2/9	6
18. Philippines	2	21	4	-	-	9	-	-	3	-	39
19. Singapore	-	-	-	-	1	-	-	-	2	1/10	4
20. Sri Lanka	72	2	6	-	7	-	-	-	1	-	88
21. Sudan	-	-	-	-	-	2	-	-	-	-	2
22. Syria	-	-	-	-	3	-	-	-	-	-	3
23. Thailand	3	-	-	-	5	-	-	-	2	-	10
24. Vietnam	5	8	-	-	-	-	-	-	-	-	13
25. Yemen	-	-	-	-	11	-	-	-	-	-	11
26. Others	5/1	-	3/2	-	6/3	9/4	-	-	2/12	9/11	34
	358	81	51	5	91	110	37	10	22/*	22	787

/1 - Canada 1 Fellow
- Israel 1 Fellow
- Saudi Arabia 3 Fellows
/2 - Somalia 2 Fellows
- England 1 Fellow
/3 - Tonga 1 Fellow
- Tanzania 1 Fellow
- Laos 4 Fellows
/4 - U.S.A 9 Fellows
/5 - Bangladesh Government 3 Fellows
/ - ILO 1 Fellow
/6 - Burma Government 1 Fellow
/7 - Damian Foundation 3 Fellows
/8 - Australia Government 2 Fellows
/9 - World Bank 2 Fellows
/10 - Singapore Government 1 Fellows
/11 - Hong Kong Government 3 Fellows
- SMEC (Laos) 3 Fellows
- ASA Program (German) 3 Fellows
/12 - Brunei 1 Fellow
- Papua New Guinea 1 Fellow
/* - Joint Programme in Telecommunications Technology arranged by Thai Government 9 Fellows

II 1. THIRD COUNTRY TRAINING (F.Y. 1982)

(Sponsored by UN/by sectors)

Sectors/Sponsoring Agencies	Afghanistan	Bangladesh	Burma	China	Egypt	Ethiopia	Fiji	India	Indonesia	Iran	Korea	Malawi	Malaysia	Maldives	Nepal	Pakistan	Philippines	Singapore	Sri Lanka	Syria	Thailand	Vietnam	Yemen	Others	Total	Remarks
WHO – Sponsored		53.1	25.6	6.2				27.2	32.2				1.3	3.4	65.7		0.7		27.2		1.2	0.9		/1		(man/month)
1. Health Services	–	46/	29/	20/	–	–	–	41/	62/	–	–	–	5/	4/	64/7	–	2/	–	72/	–	3/	5/	–	5/4	358	/1 – Canada
Total	–	46	29	20	–	–	–	41	62	–	–	–	5	4	64	–	2	–	72	–	3	5	–	5	358	1 Fellow
UNESCO – Sponsored		0.2		1.9	0.1			0.8					0.1		5.1	0.1	2.3		0.1			1.8				– Israel
1. Education	–	2/	–	12/	1/	–	–	5/	6/1	–	–	–	1/	4/1	18/	1/	21/	–	2/	–	–	8/	–	–	81	1 Fellow
Total	–	2	–	12	1	–	–	5	6	–	–	–	1	4	18	1	21	–	2	–	–	8	–	–	81	– Saudi Arabia
UNDP – Sponsored															0.8											3 Fellows
1. Economic Planning and Public Administration	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4/	–	–	–	–	–	–	–	–	–	4	/2 – Somalia 2 Fellows
2. Agriculture, Fisheries and Forestry	1/2	–	–	0.5 8/	0.9 4/	–	–	–	–	–	–	–	–	–	–	–	–	–	0.1 6/	–	–	–	–	–	10	/3 – England 1 Fellow
3. Health Services	–	–	–	1.6 7/	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7	/4 – Tonga 1 Fellow
4. Public Utilities	–	0.2 2/	–	0.8 5/	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	/2	7/	– Tanzania 1 Fellow
5. Industry	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1.4 2/	–	1.4 4/	–	0.2 2/	–	–	–	–	0.3 2/	10	– Laos 4 Fellows
6. Social Services	–	0.4 1/	–	–	–	0.6 3/	–	–	1.3 5/	–	–	–	–	–	–	0.4 1/	–	–	0.1 2/	–	–	–	–	/3 –	12	
7. Trade	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/0.2	1	
Total	1	3	–	15	4	3	–	–	5	–	–	–	–	–	6	1	4	–	6	–	–	–	–	3	51	
UNICEF – Sponsored				0.9																						
1. Education	–	–	–	3/	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	
2. Agriculture	–	–	2/0.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	
Total	–	–	2	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5	
ICAO – Sponsored			2.1	0.6			18.1			41.2	3.9	3.4	11.2	66.1	4.4			2.1	23.4	7.4	12.1		29.4	/4		
1. Communication	–	–	1/	9/	–	–	5/	–	7/21	14/	–	3/	1/	5/	10/	3/	–	–	2/	7/	3/	5/	–	11/	6/11	91	
Total	–	–	1	9	–	–	5	–	7	14	–	3	1	5	10	3	–	–	1	7	3	5	–	11	6	91	
Grand Total	1	51	32	59	5	3	5	47	80	14	–	3	2	11	19	91	2	27	1	87	3	8	13	11	14	586	

II. 2 THIRD COUNTRY TRAINING (F.Y. 1982)

(Sponsored by USAID/by sectors)

Sectors	Bangladesh	Egypt	Indonesia	Kiribati	Nepal	Philippines	Sudan	U.S.A.	Total	Remarks
1. Agriculture	1/6	2/0.2	-	-	5/1.2	-	-	9/5.4	17	(man/month)
2. Economic Planning and Public Administration	28/12.8	-	-	-	-	-	-	-	23	
3. Health Services	-	9/2.1	-	3/0.6	-	9/1.5	2/0.4	-	23	
4. Public Utilities	4/12.2	-	-	-	-	-	-	-	4	
5. Social Services	15/8	-	14/3.2	-	7/1.1	-	-	-	36	
6. Trade	-	-	-	-	2/0.4	-	-	-	2	
Total	48	11	14	3	14	9	2	9	110	

II. 3 THIRD COUNTRY TRAINING (F.Y. 1982)

Sectors	Bangladesh	Brunei	Burma	China	German	Hong Kong	India	Iran	Rep.of Korea	Laos	Malaysia	Maldives	Pakistan	Papua New Guinea	Philippines	Singapore	Sri Lanka	Thailand	Total
Malaysia - Sponsored																			
- Education	-	-	-	-	-	-	-	-	-	-	7/0.6	-	-	-	-	-	-	-	7
- Social Services	-	-	-	-	-	-	-	-	-	-	11/22	-	-	-	-	-	-	-	11
- Industry	-	-	-	-	-	-	-	-	-	-	7/0.7	-	-	-	-	-	-	-	7
- Agriculture	-	-	-	-	-	-	-	-	-	-	12/2.8	-	-	-	-	-	-	-	12
Total	-	-	-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	37
German - Sponsored																			
- Public Utilities	10/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Total	10/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Japan/JICA - Sponsored																			
- Agriculture	1/0.4	1/0.4	2/0.8	2/0.8	-	-	1/0.4	1/0.4	1/0.4	-	2/0.8	-	2/0.8	1/0.4	3/1.3	2/0.8	1/0.4	2/0.8	22
Total	1	1	2	2	-	-	1	1	1	-	2	-	2	1	3	2	1	2	22
Other - Sponsored	/1		/2							/3		/4							
- Public Utilities	1/03	-	1/.03	-	-	-	-	-	-	3/0.7	-	2/10	-	-	-	-	-	-	7
- Agriculture, Fisheries	/5 3/0.3	-	-	-	/6 3/0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	6
- Health Services	-	-	-	/7 3/0.7	-	-	-	-	-	-	-	-	/8 2/0.7	-	-	-	-	-	5
- Social Services	-	-	-	-	-	/9 3/0.5	-	-	-	-	-	-	-	-	-	/10 1/0.2	-	-	4
Total	4	-	1	3	3	3	-	-	-	3	-	2	2	-	-	1	-	-	22

(man/month)

/1 - Sponsored by Bangladesh 1 fellow
/2 - Sponsored by Burma 1 fellow
/3 - Sponsored by Australian/SMEC 3 fellows
/4 - Sponsored by Australia Government 2 fellows
/5 - Sponsored by Bangladesh 2 fellows
- Sponsored by ILO 1 fellow
/6 - Sponsored by ASA of the Kuebel Foundation/Germany 3 fellows
/7 - Sponsored by Damien Foundation (Belgium) 3 fellows
/8 - Sponsored by World Bank 2 fellows
/9 - Sponsored by Hong Kong Government 3 fellows
/10 - Sponsored by Singapore Government 1 fellow

III. EQUIPMENT (F.Y. 1982)

EQUIPMENT	RECIPIENT COUNTRY	QUANTITY	VALUE (Baht)	REMARKS
Outboard engine	Western Samoa	1	13,515.-	Cost of shipment from Bangkok to Western Samoa is ¥ 15,817.- which is provided by ESCAP

10. 日本政府／K.P.T.C 間合意議事録（詳細，英文）

（参考ケニア分）

AGREED MINUTES OF A JOINT K.P. & T.C./JAPANESE GOVERNMENT REPRESENTATIVES MEETING TO DISCUSS THE ESTABLISHMENT OF THIRD COUNTRY TRAINING PROGRAMME TO BE SPONSORED BY GOVERNMENT OF JAPAN AND TO BE CENTRED AT CTS NAIROBI

1. PRESENT:

KP & TC - REPRESENTATIVES

1.	Mr. T.P. Kiambi	-	DTS - Chairman
2.	Mrs. K.S. Maluki	-	CPO/MP. & D.
3.	Mr. E.O. Allela	-	Ag. Principal, CTS
4.	Mr. S.M. Gicinga	-	SSE/P. & S.I.
5.	Mr. A. Balebwoha	-	SE/Radio, CTS
6.	Mr. J.R.O. Chemuku	-	ASE/Radio, CTS
7.	Mr. C.M. Njiru	-	Chief Instructor/Telecomms. CTS - Secretary

JAPANESE GOVERNMENT REPRESENTATIVES

1.	Mr. S. Tsugawa	-	Ministry of Foreign Affairs
2.	Mr. Y. Saiki	-	Ministry of Posts & Telecommunications
3.	Mr. S. Kaneko	-	Japan Telecommunications Engineering and Consulting = (JTEC)
4.	Mr. S. Kato	-	JICA
5.	Mr. K. Kumagai	-	First Secretary - Embassy of Japan, Nairobi
6.	Mr. K. Okabe	-	JICA, Nairobi
7.	Mr. Y. Shiotsuki	-	PEE/P. & S.I. - KP & TC

2. VENUE: CTS, Mbagathi

3. DATE: Tuesday 25th and Wednesday 26th November 1980

The Chairman opened the meeting at 11.30 a.m. and asked the Japanese Representative to outline briefly the purpose of this meeting. The Japanese representative said that as part of Technical Co-operation, the Government of Japan through JICA, has been conducting courses in Japan

for participants from Kenya and other countries in various fields including telecommunications engineering. The Government of Japan has also been sending experts to work in Kenya and other countries. The Government of Japan had also launched the Third Country Training Programme as a further step in Technical cooperation between Japan and other countries. The Japanese Representative gave the example of Mexico and Thailand where the Third Country Programme had been established. In this programme, Japan and the relevant authorities in Mexico and Thailand conduct courses for participants from Mexico (or Thailand) and from neighbouring Countries. He therefore explained that Kenya had been chosen whereby participants from Kenya and other countries in Africa would attend courses at the Central Training School (CTS) Nairobi. If agreement is reached the Government of Japan through JICA will conduct these courses jointly with Kenya Posts and Telecommunications Corporation at CTS Nairobi. The first course will be Microwave Communication Engineering with pa-ticular emphasis on the 6 GHz Microwave radio system which forms the main part of Pan African Telecommunications (Panaftel) Network.

4. PERIOD

The first course will be conducted at CTS by the end of March, 1981. The actual date will be agreed upon by the two parties - JICA and KPTC.

5. CURRICULUM

Three courses will be conducted.

5.1 For Engineers

This course will be for University Graduate Engineers to enable them to carry out Planning duties. This course will also be open to long experienced technicians in the radio field.

5.2 For Senior Technicians

This course will be for long experienced technicians to enable them to carry out high level maintenance duties, minimum academic qualification - 'A' level.

5.3 For Technicians

This course will be for technicians whose experience is not as long as those in 5.1 and 5.2 to enable them to carry out maintenance duties, minimum academic qualification - 'O' level.

See Appendix 1 for the Curricula of the above courses.

6. NUMBER OF PARTICIPANTS

The maximum number of participants per course will be twenty five (25), 60% will be Kenyans and 40% will be from other countries. However the number of participants from other countries will not exceed ten (10). The maximum number of participants per country other than Kenya will be two.

7. SELECTION OF COUNTRIES

It was agreed that Kenya as the host country will be making selection of countries which will participate in any given course.

8. GENERAL INFORMATION TO BE FORWARDED TO COUNTRIES CONCERNED

The Japanese representative informed the meeting that the general information pamphlets are normally produced for countries participating in the programme and the two examples of which are attached as Appendix 2. It was agreed that this information will be updated from time to time. This information will include accommodation, travel, per diem payments etc.

9. CHANNELS THROUGH WHICH GENERAL INFORMATION WILL BE SENT

It was agreed that in the first instance, the Government of Japan will have to inform the participating Countries about the availability of the course under Technical cooperation and the Japanese acceptance to meet the expenses of course participants under terms laid down by the government of Japan. These terms will be made available to KPTC (organisers of the course). CTS will undertake to provide Joining Instructions and any other information related to the course to the participating countries.

10. BOARDING ARRANGEMENT

The Government of Japan is willing to pay an allowance of K. Shs. 350/- per student per day for those students from other countries. This allowance will cover hotel expenses where they will be accommodated. However, accommodation is available at CTS for those students who do not wish to stay in hotels. CTS will deduct the standard rate from the per diem payment of those students who wish to stay at CTS. Otherwise those staying hotels will be expected to meet their hotel charges from their per diem payments.

11. SENDING AIRWAY TICKETS

It was agreed that JICA Nairobi will send airline tickets to the participants from other countries. See time table on Appendix 3.

12. INVITATION OF KENYAN OFFICIAL RELATED TO THIS PROGRAMME

The Government of Japan is willing to sponsor two or three Kenyan lecturers and administrators for a two to three week tour of Japan before the end of March, 1981. The study tour will enable them (Kenyans) to familiarise themselves with all aspects of the programme provided the necessary formalities are completed i.e. submitting forms A2 and A3 etc.

13. ARRANGEMENT OF LECTURE ROOMS AND KENYAN LECTURERS

KPTC (CTS) will provide the necessary lecture rooms. Although the lecturers for the course will be provided by Government of Japan, KPTC will have an option to attach one or more of their lecturers to the course to gain experience.

14. OTHER LOGISTICS

Transport for the participants from Naibori Airport to CTS at the beginning of the course and from CTS to Nairobi Airport at the end of the course will be provided by KPTC. JICA will make a lump sum payment to KPTC so that the latter can pay the per diem expenses to the participants. The lump sum payment will also cover other expenses - local study tour, teaching materials etc.

15. NUMBER OF JAPANESE EXPERTS

The Government of Japan will provide three short term experts to conduct the courses in both theory and practice. However, since this is a new project it is proposed to send a long term expert in addition to the three aforementioned, who will supervise the project. In all cases Form A1 will be submitted by KPTC to Government of Japan at appropriate time.

16. EQUIPMENT TO BE DONATED TO KPTC

The Japanese representative informed the meeting that only $25,000 had been made available for the purchase of test equipment during this fiscal year which ends in March, 1981. A further $150,000 would be allocated next fiscal year. Since this is a small amount, a sub-committee of experts from both sides was set up to:

(a) Compile a list of test equipment w-ich will be necessary to conduct the course.

(b) Out of (a) to decide on the equipment which can be bought during this fiscal year in view of the funds available.

(c) To decide which equipment will be bought during the next fiscal year.

(d) To review the syllabus of the three types of courses to be offered. See Appendix 4 on the recommendation of the sub-committee. The Japanese representative also explained that in order that the money allocated for test equipment is released form A4 will be submitted by KPTC to Government of Japan in January, 1981.

17. ACCOUNTING PROCEDURE

In order to account for the funds expenditure on this project the Japanese representative informed the meeting that the following procedure should be followed:

17.1 CTS shall submit to JICA a bill of estimation to be borne by the Government of Japan for implementation of the training course in consultation with JICA Nairobi Office.

17.2 JICA will provide the expenses necessary based on bill of estimation mentioned in 17.1 to CTS through JICA Nairobi in accordance with laws and regulations in force in Japan.

17.3 CTS will disburse separately expenses for local travel and per diem, and those for conducting the course, since they are of different categories.

17.4 CTS will submit a statement of account to JICA in due course and reimburse the balance if any cancellation of participation occurs upon the completion of the course. If there is over-expenditure JICA will not pay the difference.

18. FIRST COURSE

Following deliberations of the sub-committee mentioned in para. 16, it was agreed by both parties that due to limitation of funds available to purchase test equipment during this fiscal year, the engineer course will be the only convenient course that will be conducted by the end of March 1981.

19. ANY OTHER BUSINESS

19.1 The Government of Japan will pay all the expenses of the short term experts. KPTC will provide a house and medical expenses for the long term expert. Otherwise other expenses, like the short term experts, will be met by Government of Japan.

19.2 There is no limit to the length of the programme although 3 years is reasonable and can be extended by mutual consent.

19.3 6 GHz Microwave Radio System installed in CTS will form the major part of the course but the lecturers will be free to add other items which they feel will be useful to participants of other countries (in case other countries are using different systems).

19.4 KPTC selected the following countries to take part in the first course.

Uganda - 2

Tanzania - 1

Lesotho - 1

Malawi - 2

Swaziland - 2

Botswana - 1

Zambia - 1

20. The following appendices form part of these Agreed Minutes:

Appendix 1 - Tentative Course Curricula for the PANAFTEL Microwave (for Engineers)

Appendix 2 - Group Training Course in Microwave Communication Engineering

Appendix 3 - Time Plan for the 1st Course

Appendix 4 - Test Equipment which can be bought during this fiscal year.

21. The Agreed Minutes herein contained have been witnessed and signed on behalf of the parties thereto this 2nd day of Dec. 1980 as follows:-

T.P. KIAMBI
FOR AND ON BEHALF OF KENYA
POSTS AND TELECOMMUNICATIONS
CORPORATION

S. TSUGAWA
FOR AND ON BEHALF OF THE
GOVERNMENT OF JAPAN

APPENDIX 1

TENTATIVE COURSE CURRICULA FOR THE PANAFTEL MICROWAVE

(For Engineers)

1. PURPOSE

This course is designed to provide wide range of knowledge in the field of microwave communications engineering, with training in practical system design and the general outline of maintenance work for the PANAFTEL Microwave.

The course, however, does not include manufacturing techniques, the installation design or methods of construction.

2. DURATION

Training periods at the Central Training School of the Kenya Posts and Telecommunication Corporations (KPTC) is scheduled from to 40 days except holidays.

3. Curriculum mainly consists of Basic Knowledge, Microwave Communications Equipment, Microwave Communications System, System Design Methods and Practical Studies.

(1) Basic Knowledge of Microwave Communications Engineering 50 class periods.

a) Microwave and Logical Circuits

Microwave electron tubes, semiconductor devices and Microwave active circuits are explained. (30)

b) Microwave Propagation

Free space propagation, geometrical propagation path profile and Fading phenomena are explained.

c) FM Microwave Telephone Transmission

Characteristics of baseband signal, noise produced by FM transmission such as thermal noise, linear distortion noise

are presented.

d) FM Microwave TV Transmission (20)

Characteristics of TV video signal, is explained at first, and then, impairments due to FM transmission are presented. Simultaneous transmission of video and audio signals is also included.

(2) Microwave Communications Equipment --- 30 class periods

a) Microwave Radio Equipment (20)

Various kinds of modulator, demodulator, transmitter, receiver and repeater are introduced.

b) Microwave Antenna System (5)

Parabolic and horn reflector antenna, waveguide and microwave filter are explained.

c) Microwave Diversity System (5)

Space and frequency diversity techniques including study for space and frequency correlation, diversity devices and improvement by adopting diversity system are presented.

(3) Microwave Communications Systems --- 60 class periods

Studing the principle of the various types of microwave communications systems, the participants increase their ability to choose and apply the most suitable system to their own countries.

a) Line-of-sight FM Microwave Communications System (20)

Over all configurations of line-of-sight FM microwave system including auxiliary equipments are explained.

b) Line-of-Sight PCM Microwave Communications System (20)

Principles of PCM and PCM Microwave systems are briefly presented.

c) Trans-Horizon Microwave Communications System (10)

Microwave propagation and equipment of trans-horizon systems are explained.

d) Satellite Communications System (10)

Regarding to relations between terrestrial and satellite communication system, brief explanations of satellite communication system are presented.

(4) System Design Method --- 60 class periods

Practical system design work based on actual transmission routes including site location, choosing facilities and system quality estimation is dealt with.

(5) Practical Studies --- 40 class periods

a) To test actual equipments, practical studies on microwave communications and carrier equipment are provided at the Central Training School. Here, participants can combine theoretical knowledge with practical application. (30)

b) Two days practical observation on a microwave relay station is provided in the curriculum. (10)

1 day - 6 class periods.

TENTATIVE COURSE SYLLABUS FOR THE PANAFTEL MICROWAVE

(For Senior Technicians)

1. PURPOSE

This course is designed to provide trainees with comprehensive training necessary for the operation and maintenance of microwave systems.

To ensure trainee's comprehension on practical knowledge, this course starts from the explanation of the microwave system configuration and transmission theory.

Taking in account the familiarity by trainees, the Panaftel Microwave System in Kenya is better to be chosen as a model system.

2. DURATION

Training periods at the Central Training School of Kenya Posts and Telecommunications Corporation (KPTC) is scheduled from to 40 days except holidays.

3. SYLLABUS

(1) Microwave System Configuration --- 50 class periods

This course shall be started from the explanation of the outline of microwave systems including radio, modulator-demodulator, supervisory, multiplex and power supply systems.

(2) Microwave propagation and Path Design --- 20 class periods

Radio equipment, antenna system, RF propagation and system design are studied.

Space and frequency diversity techniques are treated here.

(3) Microwave Transmission Theory --- 20 class periods

Telephone and television transmission theories are explained.

This item is the introduction to the practical training on the operation and maintenance following.

(4) Practical Training on Operation and Maintenance --- 70 class periods

Using various range of test equipment, trainees can familiarize themselves with the practical technique necessary for the field job of the operation and maintenance of the Panaftel Microwave system.

Practical measuring principles and methods, and interpretation of data are studied.

(5) Philosophy of Maintenance --- 30 class periods

Routine maintenance, fault rectification and maintenance administration are studied.

(6) Simulation of Fault Rectification --- 50 class periods

Practical study of the fault rectification using the Panaftel microwave equipment in the CTS is provided.

1 day - 6 class periods.

TENTATIVE COURSE CURRICULA FOR THE PANAFTEL MICROWAVE

(For Technicians)

1. PURPOSE

This course is designed to provide participants with comprehensive theoretical and practical training in Microwave Communications Engineering so that participants will be able to acquire sufficient knowledge and ability, especially in the field of maintenance and operation work for the PANAFTEL Microwave.

2. DURATION

Training periods at the Central Training School of the Kenya Posts and Telecommunications Corporation (KPTC) is scheduled from to , 35 days except holidays.

3. CURRICULUM

The curriculum mainly consists of:

(1) Basic Study for Microwave
(2) Basic Study of MUX Terminal
(3) Microwave Components, Devices and Circuits
(4) PANAFTEL Microwave system
(5) Microwave Propagation and Path Design
(6) Microwave Transmission Theory
(7) Practical Study of PNAFTEL Microwave System.

4. Breakdown of Curriculum

(1) Basic Study for Microwave --- 20 class periods

To begin with microwave study, some basic study for outline of microwave, level and noise, decibel calculation practice etc. are necessary.

(2) Basic Study of MUX Terminal --- 20 class periods

Basic concepts such as constitution of MUX, ring moduration, frequency arrangement, reflection, return loss, etc. are studied.

(3) Microwave Components, Devices and Circuits --- 20 class periods

Recentry, new diodes, transisters, IC, devices and circuits have been developed and put into services. Theories for these are discussed.

(4) PANAFTEL Microwave System --- 40 class periods

Transmitter, receiver, modulator, demodulator, antenna system and auxiliary equipment used for PANAFTEL Microwave are explained together with their operational principles.

(5) Microwave Propagation and Path Design --- 20 class periods

Frequency arrangement for PANAFTEL Microwave, microwave propagation characteristics, reliability of the systems are explained.

(6) Microwave Transmi-sion Theory --- 20 class periods

Telephone and television transmission theories are treated here.

(7) Practical Study of PANAFTEL Microwave System --- 70 class periods

Practical study for PANAFTEL Microwave equipment and systems, measuring principles and methods etc. are studied.

1 day - 6 class periods

APPENDIX 2

GROUP TRAINING COURSE

IN

MICROWAVE COMMUNICATION ENGINEERING

, 1981

The Group Training Course in Microwave Communication Engineering will be conducted jointly by the Kenya Posts and Telecommunications Corporation (KPTC) and the Japan International Cooperation Agency (JICA) as part of its Technical Cooperation Programme.

Arrangements for conducting the course are made by the Kenya Posts and Telecommunication Corporation and Japan International Cooperation Agency, commissioned by the Government of Japan to execute technical Cooperation Programmes, in collaboration with the Central Training School (CTS) and other related organizations in Kenya.

PURPOSE

This course is designed to provide wide range of knowledge in the field of microwave communications engineering, with training in practical system design and the general outline of maintenance work for the PANAFTEL Microwave.

The course, however, does not include manufacturing techniques, the installation design or methods of construction.

QUALIFICATIONS

Applicants should:

(1) be either graduates from colleges or universities who have majored in telecommunication or electrical engineering, or those who have an equivalent technical knowledge,

(2) have a sufficient command of spoken and written English.

(3) be under years of age.

(4) have appropriate physical fitness.

(5) have at least one year working experience in telecommunication field.

DURATION

From , 1981.

LANGUAGE

The course will be conducted in English.

INSTITUATION

The course will be conducted by:

Central Training School, Kenya Posts and Telecommunications Corporation.

PROCEDURES FOR APPLICATION

ALLOWANCE AND EXPENSES

The following allowance and expenses will be borne by the Kenya Posts and Telecommunications Corporation and the Japan International Cooperation Agency:

(1) Economy class air ticket between the international airport designated by KPTC and Nairobi will be sent to the applicant in advance by the representative of the International Airline in the participant country, Air Ticket for the return-trip will be arranged by KPTC.

(2) Living allowance at the rate of (equivalent to US$) per day will be paid to the participant when arriving Nairobi. This living allowance is to cover board and lodging, local transportation and other personal daily expenses.

(3) In accordance with relevant regulations, free medical treatment will be provided for participants who become ill after arrival in Kenya.

FACILITIES PROVIDED

The following facilities will be provided by the Kenya Posts and Telecommunications Corporation.

(1) Arrangement for the training programme.

(2) Immigration and tax clearance including the arrangement for the extension of the permit to stay in Kenya.

(3) Orientations (Briefing upon arrival)

(4) Accommodation reservation and arrangement.

CERTIFICATE

Participants who successfully complete the course will be awarded a certificate of at-endance by KPTC and a certificate of academic achievement from CTS.

OTHER INFORMATION

(1) Participants are required to arrive in Nairobi on the date designated by KPTC after the confirmation of acceptance. However, the date will be finally confirmed through the airticket sent to the participants.

(2) On arrival at Nairobi International airport, participants will be met by a representative of KPTC. Necessary care of the participants, thereafter, will be taken by KPTC and CTS throughout the duration of the course.

(3) Participants are required to observe strictly the course schedule.

(4) Application to change or alter the training subject or to extend the training period will not be accepted.

(5) Participants are requested not to bring any member of their families.

The living allowance paid by Kenya Posts and Telecommunication Corporation and the Japan International Cooperation Agency is sufficient only to cover normal living expenses for one person. No allowance of any kind will be paid for their dependants.

(6) For administrative uses, participants are requested to bring six (6) copies of their photograph.

GROUP TRAINING COURSE

IN

MICROWAVE COMMUNICATION ENGINEERING

, 1981

The Group Training Course in Microwave Communication Engineering will be conducted jointly by the Kenya Posts and Telecommunications Corporation (KPTC) and the Japan International Cooperation Agency (JICA) as part of its Technical Cooperation Programme.

Arrangements for conducting the course are made by the K-nya Posts and Telecommunications Corporation and Japan International Cooperation Agency Commissioned by the Government of Japan to execute technical Cooperation Programmes, in collaboration with the Central Training School (CTS) and other related organizations in Kenya.

PURPOSE

This course is designed to provide participants with comprehensive theoretical and practical Training in Microwave Communication Engineering so that participants will be able to acquire sufficient knowledge and ability especially in the field of maintenance and operation work for the PANAFTEL Microwave.

QUALIFICATIONS

Applicants should:

(1) be graduates from Technical High School who have majored in Telecommunication or electrical technique, or those who have an equivalent technical knowledge.

(2) have a sufficient command of spoken and written English.

(3) be under years of age.

(4) have appropriate physical fitness.

(5) have at least one year working experience in telecommunication field.

DURATION

From , 1981.

LANGUAGE

The course will be conducted in English.

INSTITUATION

The course will be conducted by:

Central Training School, Kenya Posts and Telecommunications Corporation.

PROCEDURES FOR APPLICATION

ALLOWANCE AND EXPENSES

The following allowance and expenses will be borne by the Kenya Posts and Telecommunications Corporation and the Japan International Cooperation Agency:

(1) Economy class air ticket between the international airport designated by KPTC and Nairobi will be sent to the applicant in advance by the representative of the International Airline in the participant country, Air Ticket for the return-trip will be arranged by KPTC.

(2) Living allowance at the rate of (equivalent to US$) per day will be paid to the participant when arriving Nairobi. This living allowance is to cover board and lodging, local transportation and other personal daily expenses.

(3) In accordance with relevant regulations, free medical treatment will be provided for participants who become ill after arrival in Kenya.

FACILITIES PROVIDED

The following facilities will be provided by the Kenya Posts and Telecommunications Corporation.

(1) Arrangement for the training programme.

(2) Immigration and tax clearance including the arrangement for the extension of the permit to stay in Kenya.

(3) Orientations (Briefing upon arrival)

(4) Accommodation reservation and arrangement.

CERTIFICATE

Participants who successfully complete the course will be awarded a certificate of attendance by KPTC and a certificate of academic achievement from CTS.

OTHER INFORMATION

(1) Participants are required to arrive in Nairobi on the date designated by KPTC after the confirmation of acceptance. However, the date will be finally confirmed through the airticket sent to the participants.

(2) On arrival at Nairobi International airport, participants will be met by a representative of KPTC. Necessary care of the participants, thereafter, will be taken by KPTC and CTS throughout the duration of the course.

(3) Participants are required to observe strictly the course schedule.

(4) Application to change or alter the training subject or to extend the training period will not be accepted.

(5) Participants are requested not to bring any member of their families.

The living allowance paid by Kenya Posts and Telecommunication Corporation and the Japan International Cooperation Agency is sufficient only to cover normal living expenses for one person. No allowance of any kind will be paid for their dependants.

(6) For administrative uses, participants are requested to bring six (6) copies of their photograph.

APPENDIX 3

TIME PLAN FOR THE 1ST COURSE

DATE	KENYA	JAPAN
10 December, '80	Submit to the Ministry of Finance form A1, A2/3 and A4 duly completed.	Send telex to Embassy of Japan in the countries concerned to ask them to inform the telecomms organisations in their country that the offer of the course will be forwarded to them by KP & TC.
20	Send allocation of participants including all information related to the course to telecomms organisations	
January, '81 10		Arrange for procurement of the equipment and for selection of experts
20	Receive application from telecomms organisation. Selection of participants. Inform JICA Nairobi about the name and address of participants.	
10 February, '81	Inform the telecomms organisations concerned about the results of selection. Submit bill of estimation on the expenses which will be borne by Go Government of Japan to JICA Nairobi	
10 March, '81		Send airway tickets to selected participants dispatch experts and equipment
20	Arrival of participants. Pay per diem to participants.	

APPENDIX 4

TEST EQUIPMENT WHICH CAN BE BOUGHT DURING THIS FISCAL YEAR

1.	Barreter Mounts 1,700 to 8,600 MHz	Anritsu MP639B, SR13
2.	Power Meter 100 KHz to 18 GHz	YHP 435A, 8431A
3.	Digital Multimeter	Takeda Riken TR6875
4.	Microwave Frequency Counter 10 Hz to 18 GHz	Takeda Riken TR 5211B
5.	Standard Level Meter 10 Hz to 30 MHz	Anritsu MG405A
6.	Frequency Synthesizer 10 Hz to 30 MHz	Anritsu MG440A
7.	Return Loss Measuring set 50 KHz to 30 MHz	Anritsu M-242B

TEST EQUIPMENT NECESSARY TO RUN THE COURSE

1. Frequency Counter HP model 5340A
2. Noise Source HP model J347A
3. Noise Figure Meter HP model 342A
4. Microwave Signal Generator HP model 618C
5. Microwave link analyser HP model 8620C
6. " " " HP model 3730A
7. " " " HP model 3702B
8. " " " HP model 3710A
9. " " " HP model 3716A
10. " " " HP model 3705A

DF 626/6

C.T.S MBAGATHI

11th Feb. 1982

ACI/Equipment

1982 THIRD COUNTRY TRAINING PROGRAMME IN MICROWAVE RADIO ENGINEERING

The above named course is due to commence on Monday 22nd March 1982 and end on Friday 22nd May 1982. The following topic will be covered.

1. Microwave Radio Systems
   - Introductions to Microwave Radio
   - Transmitter, receiver and repeater
   - Modulator and demodulator
   - Auxiliary systems
   - Antennae and feeder systems
   - Components, devices and circuits.

2. Microwave Radio Systems Planning
   - Transmission Engineering Standards
   - Transmission techniques
   - Transmission system planning
   - " " technique
   * - Engineering economics

   Other transmission systems

   * - Principles of Pulse Code Modulation
   * - Digital Microwave Radio systems
   * - Trans horizon Microwave systems
   * - Satellite communication systems
   * - Rural telecommunications planning
   * - Optical fibre transmission systems

3. Microwave construction

4. Microwave systems design

   - Telephone transmission
   - Television transmission
   * - System reliability calculations
   * - Microwave propagation
   * - Selection of optimum frequency plan for microwave Radio systems.
   - Space diversity technology.

5. Microwave system design practice

6. Principles of measurements

7. Measurements Practice

8. Power systems design and planning

9. *Project Management

<未送付分>

1. Storage Oscilloscope (with beam splitter)
2. T.V. Monitor
3. Digital Circuit Tester
4. Polaroid Camera
5. Polyscope
6. Propagation Test Set
   Frequency Range 800 MHZ, IGHZ, 6GHZ
7. Portable Parabolic Antennae (800MHZ, 2GHZ & 6GHZ)
8. Two Hydraulic Masts
9. Chart Recorder
10. Field Survey Equipment

Thermometers	-	2
Barometers	-	2
Geodetic	-	2
Heliograph	-	2
Telscope Camera	-	2

Elevation Indicator
Compasses
Stroboscope

11. D.C. Differential Recorder

ITEMS RECEIVED FROM JICA

The following are the second consignment items received from JICA:

	ITEM	QUANTITY
1.	Frequency Counter HP5340A (10Hz - 18GHz.)	1
2.	Noise figure meter HP342A	1
3.	Wave Guide Noise Source HP5347A	1
4.	Signal Generator HP618C	1
5.	Microwave Link Analyser	1
	(a) IF/BB Transmitter HP3710A	1
	(b) BB Transmitrer (Plug-in) HP3716A	1
	(c) IF/BB Receiver HP3702B	1
	(d) Differential Phase Detector (Plug-in) HP3705A	1
	(e) Down Converter HP3730B	1
	(f) Oscillator Plug-in HP3736B	1
	(g) Oscillator Plug-in HP3737B	1
	(h) Oscillator Plug-in HP3738B	1
	(j) R-F Plug-in HP86235A	1
	(k) R-F Plug-in HP8624A	1
	(l) Accessory Kit HP15550A	1
6.	Automatic whil- Noise Test Set OA2090C	1
7.	Psophometer HP3556A	1
8.	Cable Assembly	1
9.	DBL Shield Cable	1
10.	Fuses	
11.	Lamp	

The following are the first consignment items received from JICA:

	ITEM	QUANTITY
1.	Microwave counter - TR5211B	1
2.	Power meter HP435A	1
3.	Power meter sensor HP8481A	1
4.	Sweep signal generator MG627A	1
5.	Frequency synthesizer MG.440A	1
6.	REturn loss measuring set M-242B	1
7.	Standard level meter ML-423A	1
8.	Digital multimeter TR6875	1
9.	Barreter Mount	1
10.	Instruction books and Test Data in English	

JICA