

4. Training Provisions:

	<u>Location</u>	<u>Starting Date</u>	<u>Duration</u>
(a) Counterpart to the Project Manager	Sweden UK	to be decided	6 weeks 6 weeks
(b) Counterpart to the Transmission Expert	UK	Jan 1974	3 months.
(c) Counterpart to the Switching Expert	Sweden UK	Jan 1974 Apr 1974	3 months 1 months
(d) Counterpart to the External Plant Expert	Sweden	Jan 1974	3 months
(e) Counterpart to the Power Plant Expert	UK	Nov 1973	3 months
(f) Counterpart to the Traffic Expert	Sweden UK	Jan 1974 Apr 1974	3 months 1 month
(g) Additional Counterpart to E1 and T1	-	to be decided	3 months
(h) Counterpart to Economic Method Expert.	to be decided	Mar 1974 <sup>4</sup>	3 months

An additional 10 man-months of fellowships have been allowed for Counterpart training in 1975. These will be allocated to selected personnel as the later needs emerge the details of the 1975 budget provision for training are therefore provisional.

5. UNDP Provided supplies and equipment:

(a) Expendable Equipment:

- (i) Hire of propagation measuring equipment \$25,000
- (ii) Connections, constructions, accessories, and tools used in deployment of measuring equipment \$ 3,000
- (iii) Books, publications and educational material \$ 3,000

(b) Non-Expendable Equipment:

- (i) Audio level measuring sets and oscillators (2 sets) Jan 1974 \$ 2,000
- (ii) Traffic measuring equipment (6 sets) Oct 1973 \$30,000
- (iii) Cable location and measuring equipment (2 locators, 4 wheel meters) Jan 1974 \$ 2,000



- (iv) Insulation measuring equipment (2 Bridge meggers and 4 megohmmeters) Jan 1974 \$ 2,500
- (v) Pen recorders for propagation monitoring (6 recorders) Jan '74 \$ 2,000
- (vi) Supplementary radio frequency measuring equipment (as required) as required \$10,000
- (vii) Miscellaneous instruments (clinometer, binoculars, compass etc.) as required \$ 350

# DESCRIPTION OF GOVERNMENT INPUTS

## 1. Assignment of National Staff:

	<u>Location</u>	<u>Starting Date</u>	<u>Take Over Date</u>
(a) Counterpart to the Project Manager; Mr. E.A. Amon, Assistant Director of Planning. Along with the Project Manager, he will provide general guidance to the Project staff until the Project comes to an end.	Lagos	June, 1973	Nov. 1974
(b) Counterpart to the Principal Transmission Expert (Expert X1): MR. O.O. Oladimeji, Principal Engineer.	Lagos	Sept. 1973	Nov. 1974
(c) Counterpart to the Principal Switching Expert (Expert S1) Mr. P.S. Kentebe, Principal Engineer.	Lagos	Nov. 1973	Nov. 1974
(d) Counterpart to the Principal External Plant Engineer (Expert E1): Mr. G.E. Gbenebor Principal Engineer.	Lagos	Oct. 1973	Nov. 1974
(e) Counterpart to the Power Plant Expert (Expert P1): Mr. O. Okuwobi, Principal Engineer.	Lagos	Sept. 1973	Aprl. '75



	<u>Location</u>	<u>Starting Date</u>	<u>Take Over Date</u>
(f) Counterpart to the Traffic Expert (Expert T1): Mr. S.A. Adesuyi-Dada, Area Engineer.	Lagos	Sept. 1973	Oct 1974
(g) Counterpart to Long Distance Network Planning Expert N1: Mr. O. Oladimeji, Principal Engineer.	Lagos.	Nov. 1974	Sep 1975
(h) Counterpart to Network Planning Expert N2: Mr. P.S. Kentebe, Principal Engineer.	Lagos	Nov. 1974	Sep 1975
(i) Counterpart to the Local Network Planning Expert N3: Mr. G.E. Gbenebor, Principal Engineer.	Lagos	Nov 1974	Sep 1975
(j) Counterpart to Long Term Network Planning Expert N4 to be selected later from existing Counterpart Engineers.	Lagos	Nov. 1974	Sep 1975
(k) Counterpart to the Transmission Expert X2: Mr. S.A. Thanni, Engineer.	Lagos	Mar. 1974	Apl 1975
(l) Counterpart to Transmission Expert X3: 1 Engineer, initially Mr. S.A. Thanni.	Lagos	Dec. 1973	Sep 1974
(m) Counterpart to Transmission Expert X4: a Technologist to be appointed	Lagos	Mar 1974	Apl 1975
NOTE: Counterparts to Experts X2, X3, and X4 will interchange duties at intervals to obtain experience with all three Experts.			
(n) Counterpart to Switching Expert S2: an Engineer, or Technologist. Mr. Onuora.	Lagos	Feb. 1974	Apl 1975
(o) Counterpart to Switching Expert S3: Mr. Fashola, Senior Engineer.	Lagos	Dec. 1973	Sep 1974



- (p) Counterpart to External Plant Expert E2: Mr. Popoola Technologist. Zones Dec. 1973 Oct 1974
- (q) Counterpart to External Plant Expert E3: Mr. Olowu, Technologist. Zones Jan. 1974 Nov 1974
- (r) Counterpart to the Viability Study Expert V1: an Engineer or Technologist, to be appointed Lagos Jan. 1974 Nov 1974
- (s) Counterpart to the Financial Analysis and Tariff Expert A1: to be appointed Lagos Nov. 1974 Sep 1975
- (t) Counterpart to Economic Method Expert: Counterpart to V1, or an Engineer to be appointed Lagos Nov. 1974 Sep 1975
- (u) Additional counterpart to E1 and T1: Mr. E.O.A. Ajibodu Senior Traffic Officer. Lagos Oct. 1973 Nov 1974
- (v) One or two External Plant Technologists in each Territory: to be appointed. Lagos and Zones Dec. 1973 Nov 1974
- (w) Administrative Officer (HBO) Lagos Dec. 1973 Nov 1974
- (x) Secretarial, and clerical staff Lagos - -
- (y) Drawing office staff - -
- (z) Drivers - -

2. Training Provisions.

Cost:

Maintenance of trainees

N 12,600

3. Government provided buildings, equipment and supplies.

(a) Expendable equipment

Cost:

(i) office supplies

N 740

(ii) cleaning equipment and materials

800



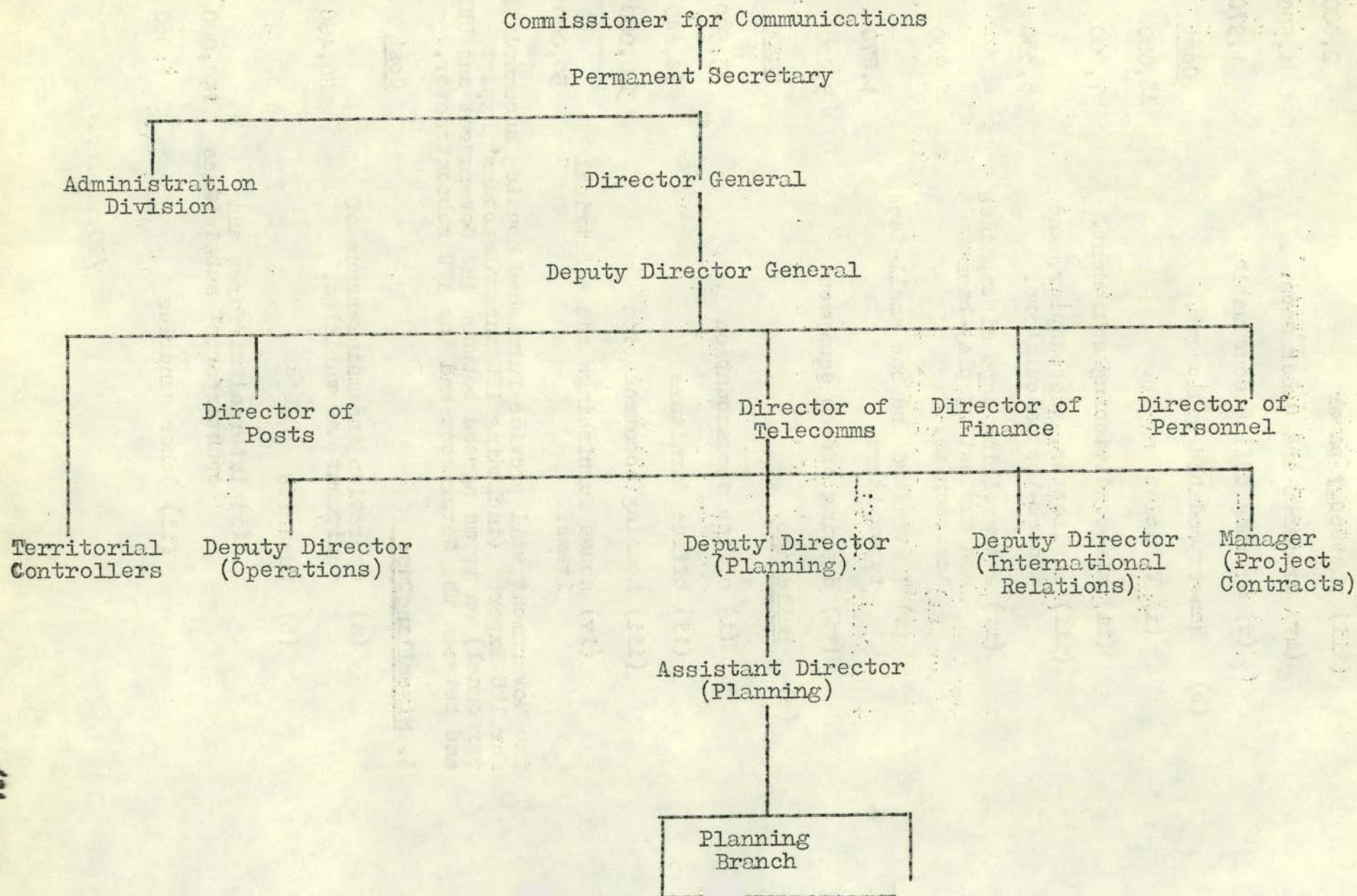
(iii) photocopy paper	2,000
(iv) <del>ordnance</del> and other maps.	1,500
(v) drawing office consumables	1,970
(b) Non-expendable equipment.	<u>Cost</u>
(i) Vehicles	46,080
(ii) air-conditioning equipment.	7,000
(iii) duplicator, photocopier, and 4 desk-top calculators.	5,330
(iv) 2 travelling tape dictaphones and one set of play-back accessories.	500
(v) 7 standard and one small-face typewriters.	1,870
(vi) drawing office equipment	5,420
(c) <u>Buildings.</u>	<u>Cost:</u>
(i) office accommodation	33,500
(ii) office furniture	14,640
(iii) housing accommodation	<u>300,000</u>
(iv) house furnishings and electrical items.	<u>50,000</u>

The Government will provide furnished housing accommodation for ITU Experts (including ITU subcontractors' Expert personnel) on terms agreed between the Government and UNDP and between the Government and the ITU subcontractor.

4. <u>Miscellaneous:</u>	<u>Cost</u>
(a) Operation and maintenance of equipment and vehicles.	20,400
(b) Sundries:	
(i) internal airfares and counterparts' subsistence	140,000
(ii) Other sundries	1,960



Figure 1: Organisation of Ministry of Communications and its  
Telecommunications Division





# WORK PLAN BAR CHART 1: LONG DISTANCE NETWORK PLANS

PARA. (IN SECT. IIIA)	ACTIVITIES	EXPERT	1973												1974												
			M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D					
			PREPARATION												1	2	3	4	5	6	7	8	9	10	11	12	13
	PRELIMINARY STUDIES of existing plant, plans, drawings, specifications, reports etc.																										
	Transmission plant	X1																									
		X2																									
		X3																									
		X4																									
	Switching plant and traffic routing	S3																									
	Power plant	P1																									
	TRAFFIC STUDIES (Reporting Officer: T1)																										
	Plan operations and devised methods	T1																									
	Measurements	T1, S3																									
	Forecasts	T1																									
	Routing	T1, T3																									
	PROPAGATION STUDIES (Reporting Officer: X1)	X3																									
2(a)	FUNDAMENTAL PLAN (Reporting Officer: S1)																										
	Preliminary studies ( see above )																										
	Transmission	X1																									
	Switching	S1, S3																									
2(b)	LONG TERM PLAN (Reporting Officer: X1)																										
	- Preliminary studies (see above)																										
	- Traffic studies (see above)																										
	- Propagation studies ( see above )																										
	Prepare plan																										
	- Transmission	X1, X3																									
	- Switching and traffic routing	T1, S3																									
	Viability	V1(X1)																									



# WORK PLAN BAR CHART : LONG DISTANCE NETWORK PLANS (CONTINUED)

PARA (IN SECT. III A)	ACTIVITIES	EXPERT	1973							1974																	
			M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D					
			PREPARATION							1	2	3	4	5	6	7	8	9	10	11	12	13	14				
3(a)	TECHNICAL SPECIFICATION(Reporting Officer: X1)																										
	Preliminary studies (see above)																										
	Specifications																										
	- Line and radio systems	X4																									
	- Aerials	X3																									
	- Multiplex and terminal equipment	X2																									
	- Exchanges (joint Reporting Officer: S1)	S1, S3																									
	- Power plant	P1																									
3(b)	PROJECT PLANS(Reporting Officer: X1)																										
	Preliminary studies (see above)																										
	Traffic studies																										
	Propagation studies																										
	Prepare plans																										
	- Transmission plant	X1																									
	- Power plant	P1																									
	- Switching plant (joint Reporting Officer: S1)	S3																									
	Viability of projects	V1 (X1)																									
3(d)	PROJECT SPECIFICATIONS (Reporting Officer: X1)																										
	Traffic studies: routing (see above)																										
	Specifications																										
	- Line and radio system	X4																									
	- Aerials	X3																									
	- Multiplex and terminal equipment	X2																									
	- Exchanges (joint Reporting Officer: S1)	S3																									
	- Power plant	P1																									
3(c)	INDEPENDENT CHECK	ITU/HQ																									



# WORK BAR CHART 3: LOCAL NETWORK I ANS

PARA. (IN SECT. IIIA)	ACTIVITIES	EXPERT	1973												1974																				
			M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D													
			PREPARATION												1	2	3	4	5	6	7	8	9	10	11	12	13	14							
	PRELIMINARY STUDIES of existing plant, plans, drgs, specifications, report etc.																																		
	Switching	}	S1																																
			S2																																
	External plant	}	E1																																
			E2																																
			E3																																
	Power	P1																																	
	TRAFFIC STUDIES (Reporting Officer: T1)																																		
	Plan operation and devise methods	T1																																	
	Measurements	T1																																	
	Forecasts	T1																																	
2(a)	FUNDAMENTAL PLAN (Reporting Officer: S1)																																		
	Preliminary studies (see above)																																		
	Exchanges	S1																																	
	External plant	E1(X1)																																	
2(e)	LONG-TERM PLAN (Reporting Officer: S1)																																		
	Preliminary studies (see above)																																		
	Traffic studies (see above)																																		
	Long term forecasts	E1, T1																																	
	Area layout studies (large urban areas)	E1(V1, S1)																																	
	Prepare plans																																		
	- Exchanges	S1, S2																																	
	Viability	V1(E1, S1)																																	
																												</							



# WORK PLAN BAR CHART 4: LOC NETWORK PLANS(CON IUED)

PARA (IN SECT IIIA)	ACTIVITIES	EXPERT	1973							1974																	
			M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D					
			PREPARATION							1	2	3	4	5	6	7	8	9	10	11	12	13	14				
3(a)	TECHNICAL SPECIFICATION (Reporting Officer: S1, E1)																										
	Preliminary studies (see above)																										
	Specification																										
	-Exchanges	S 1																									
	-External plant	E1																									
	-Power plant	P1																									
3(c)	PROJECT PLANS (Reporting Officer: S1, E1)																										
	Traffic studies (see above)																										
	Development studies	{ E 2																									
		E 3																									
	Area layout studies (see activity 2(e))																										
	Prepare plans																										
	-Exchanges																										
	-Large urban	S1																									
	-Small urban	S2																									
	-Rural	S2																									
	-Step-by-step (inter-facing)	S2																									
	-External plant	{ E1																									
		E2																									
		E3																									
	Power plant	P1																									
	Viability of projects	V1(E1,S1)																									
3(d)	PROJECT SPECIFICATION																										
	Exchanges	S2,S3																									
	External plant	E1 E2																									
	Power plant	P1																									
3(e)	INDEPENDENT CHECK	ITU/HQ																									



# WORK PLAN BAR CHART 5 ON-GOING PLANNING & INITIATION OF IMPLEMENTATION

PARA. (IN SECT III A)	ACTIVITIES	EXPER.	1974					1975												
			J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
			9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	FUNDAMENTAL & LONG TERM PLANS																			
4(a)	On-going fundamental and long term planning: initiation of implementation	N4																		
	PROJECT PLANS: SPECIFICATIONS																			
	On-going specification and project planning: initiation of implementation																			
4(b)	- Long distance network																			
	- Network planning and specification	N1																		
	- Cable and multiplex	X2																		
	- Line and radio systems	X4																		
4(c)	- Local network																			
	- Network planning and specification	N2																		
	- Exchanges	S2																		
	- External plant	N3																		
	- Power plant	P1																		
4(d)	Tendering and adjudication	N1,N2,N3																		
	PLANNING INSTRUCTIONS																			
4(e)	Prepare and introduce planning and specification instructions																			
	- Transmission plant																			
	- Cable and multiplex	X2																		
	- Line and radio systems	X4																		
	- Switching plant	S2																		
	- External plant	N3																		
	- Power plant	P1																		
	- Traffic forecasts	T1																		
	ECONOMICS																			
4(f)	Establish a data base	A1																		
4(g)	Economic studies																			
	- Develop methods	A2																		
	- Apply methods and develop skills	A1, A2																		
4(h)	Tariff studies																			
	- Analyse present situation	A1, A2																		
	- Develop methods	A1, A2																		
	- Apply methods and develop skills	A1, A2																		

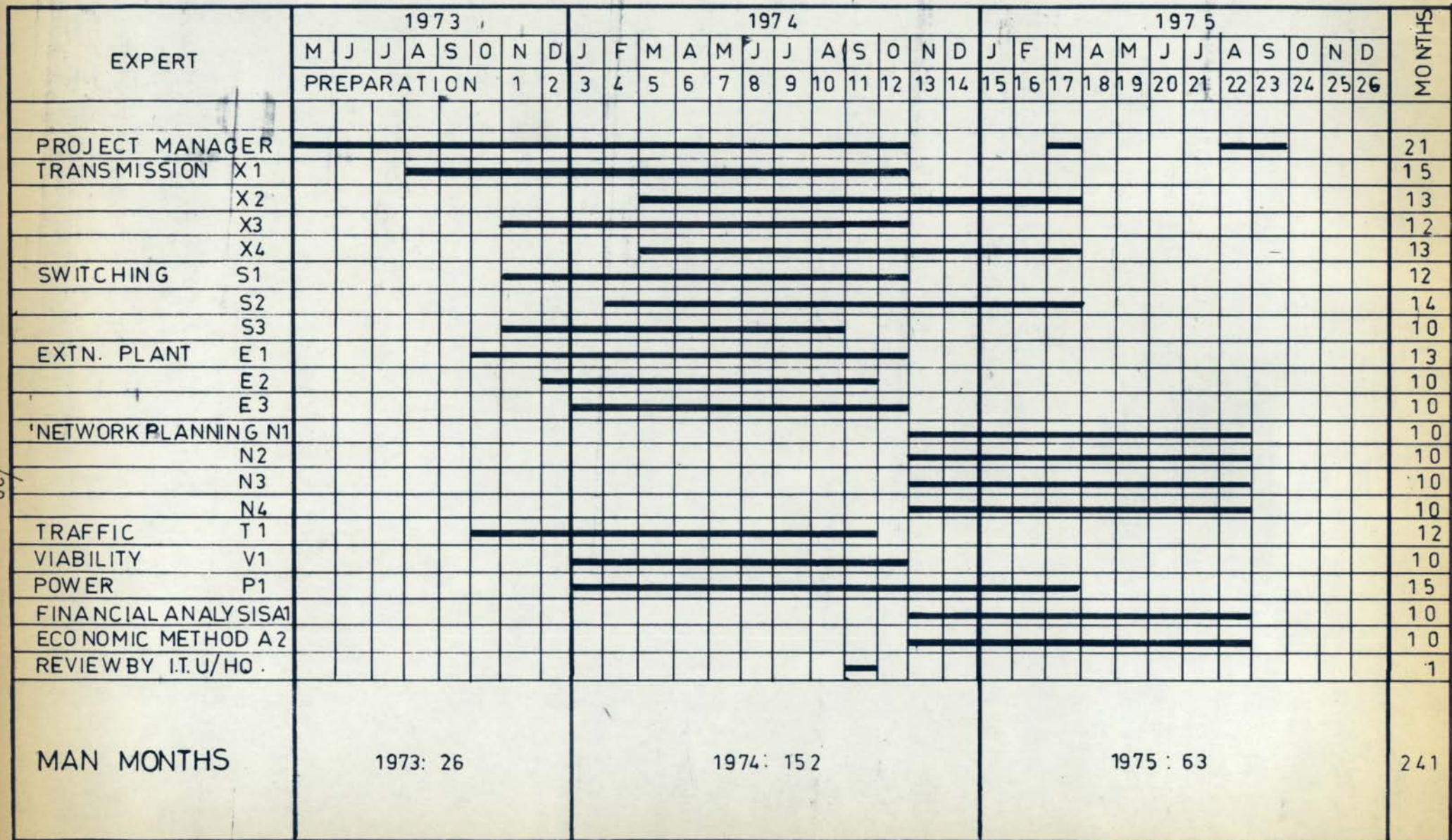


## WORK PLAN BAR CHART 6: MISCELLANEOUS

[illegible]



# WORK PLAN BAR CHART 7: SCHEDULE OF EXPERTS





Project Budget Covering UNDP Contribution

(in U.S. Dollars)

		Total		1973		1974		1975	
		m/m	\$	m/m	\$	m/m	\$	m/m	\$
10	<u>PROJECT PERSONNEL COMPONENT</u>								
11	<u>Experts</u>								
11-01	Project Manager	21	52,500	8	20,000	10	25,000	3	7,500
02	Principal Transmission Expert X1	15	37,500	5	12,500	10	25,000	-	-
03	Transmission Expert X2	13	32,500	-	-	10	25,000	3	7,500
04	Transmission Expert X3	12	30,000	2	5,000	10	25,000	-	-
05	Transmission Expert X4	13	32,500	-	-	10	25,000	3	7,500
06	Power Plant Expert P1	15	37,500	-	-	12	30,000	3	7,500
07	Financial Analysis Expert A1	10	25,000	-	-	2	5,000	8	20,000
08	Economic Method Expert A2	10	25,000	-	-	2	5,000	8	20,000
09	Network Planning Expert N1	10	25,000	-	-	2	5,000	8	20,000
10	Network Planning Expert N2	10	25,000	-	-	2	5,000	8	20,000
11	Network Planning Expert N3	10	25,000	-	-	2	5,000	8	20,000
12	Network Planning Expert N4	10	25,000	-	-	2	5,000	8	20,000
13	Consultants from ITU/HQ	1	2,500	-	-	1	2,500	-	-
13	Administrative Support	13	6,500	1	500	12	6,000	-	-
19	Component Total	-	381,500	-	38,000	-	193,500	-	150,000
20	<u>SUBCONTRACT COMPONENT</u>								
21	<u>Subcontractor: Swedtel</u>								
	Fee for Experts	91	254,000	11	52,000	77	193,500	3	8,500
	Housing subsidies (maximum)	-	48,000	-	6,000	-	41,000	-	1,500
	Computer operations (maximum)	-	20,000	-	-	-	20,000	-	-
	Miscellaneous (maximum)	-	29,000	-	10,000	-	19,000	-	-
29	Component Total	91	351,500	11	68,000	77	273,500	3	10,000
30	<u>TRAINING COMPONENT</u>								
31	<u>Fellowships</u>								
31-01	Counterpart to Project Manager	3	2,350	2	1,400	1	950	-	-
02	Counterpart to Principal Transmission Expert	3	2,350	2	1,400	1	950	-	-
03	Counterpart to Principal Switching Expert	4	2,800	2	1,400	2	1,400	-	-
04	Counterpart to Principal External Plant Expert	3	2,350	2	1,400	1	950	-	-
05	Counterpart to Principal Power Plant Expert	3	2,350	2	1,400	1	950	-	-
06	Counterpart to Traffic Expert	4	2,800	2	1,400	2	1,400	-	-
07	Additional Counterpart to Traffic & Subs' Dev.	3	2,350	-	-	3	2,350	-	-
08	Counterpart to Transmission Expert	3	2,350	-	-	-	-	3	2,350
09	Counterpart to Switching Expert	4	2,800	-	-	-	-	4	2,800
10	Counterpart to Financial Analyst	3	2,350	-	-	-	-	3	2,350
11	Counterpart to Economic Expert	3	2,350	-	-	3	2,350	-	-
39	Component Total	36	27,200	12	8,400	14	11,300	10	7,500



		Total		1973		1974		1975	
		m/n	\$	m/n	\$	m/n	\$	m/n	\$
40	<u>EQUIPMENT COMPONENT</u>								
41	Expendable equipment	-	31,000	-	300	-	30,500	-	200
42	Non-expendable equipment	-	49,350	-	30,000	-	19,350	-	-
49	Component Total	-	80,350	-	30,300	-	49,850	-	200
50	<u>MISCELLANEOUS COMPONENT</u>								
51	Operation and maintenance of equipment	-	400	-	100	-	200	-	100
52	Reporting Cost	-	3,000	-	-	-	1,500	-	1,500
53	Sundry	-	8,500	-	1,200	-	5,500	-	1,800
59	Component Total	-	11,900	-	1,300	-	7,200	-	3,400
99	GRAND TOTAL	-	852,450	-	146,000	-	535,350	-	171,100

/30.....



PROJECT BUDGET COVERING GOVERNMENT COUNTERPART  
CONTRIBUTION IN KIND  
(IN NAIRA)

		Total		1973/74 (see Note 1)		1974/75 (see Note 1)		1975/76 (see Note 1)	
		m/m	£	m/m	£	m/m	£	m/m	£
<u>PROJECT PERSONNEL COMPONENT</u>									
10	Counterpart to Project Manager	10	9,720	10	5,400	8	4,320	-	-
	Counterpart to Principal Transmission Expert	15	7,500	7	3,500	8	4,000	-	-
	Counterpart to Principal Switching Expert	15	7,500	7	3,500	8	4,000	-	-
	Counterpart to Principal External Plant Expert	15	7,500	7	3,500	8	4,000	-	-
	Counterpart to Power Plant Expert	19	9,500	7	3,500	12	6,000	-	-
	Counterpart to Traffic Expert	14	5,960	7	2,980	7	2,980	-	-
	Counterpart to Network Planning Experts (4)	40	20,000	-	-	20	10,000	20	10,000
	Counterpart to Transmission Experts (3)	36	12,250	7	2,400	29	9,850	-	-
	Counterpart to Switching Experts (2)	24	7,920	7	2,310	17	5,610	-	-
	Counterpart to External Plant Experts (2)	20	5,930	7	2,060	13	3,870	-	-
	Counterpart to Viability Study Expert	10	3,600	3	1,000	7	2,520	-	-
	Counterpart to Economic Methods Expert	10	3,600	-	-	5	1,800	5	1,800
	Counterpart to Financial Analysis Expert	10	3,600	-	-	5	1,800	5	1,800
	Additional Counterpart: traffic & dev. studies	11	3,920	6	2,140	5	1,780	-	-
	Additional supporting Technologists	200	55,000	50	13,750	120	33,000	30	8,250
	Administrative Officer	12	3,600	4	1,200	8	2,400	-	-
	Secretarial and Clerical Staff	318	23,020	62	5,500	172	11,770	84	5,750
	Messengers, Cleaners, Gardiners, Drivers etc.	541	39,010	109	8,540	288	23,390	144	6,090
	Draughtsmen	63	5,040	15	1,200	36	2,880	12	960
19	Component Total	1,391	233,170	315	62,560	776	135,960	300	34,650
30	<u>TRAINING COMPONENT</u>								
31	Fellowships: maintenance of trainees	36	12,600	12	6,600	14	-	10	6,000
39	Component Total	36	12,600	12	6,600	14	-	10	6,000
40	<u>EQUIPMENT COMPONENT</u>								
41	Expendable Equipment	-	7,010	-	2,470	-	3,880	-	660
42	Non-expendable equipment	-	66,200	-	66,200	-	-	-	-
43	Premises	-	398,140	-	396,910	-	1,200	-	-
49	Component Total	-	471,350	-	465,610	-	5,080	-	660
50	<u>MISCELLANEOUS COMPONENT</u>								
51	Operation and maintenance of equipment	-	20,400	-	7,400	-	8,800	-	4,200
55	Sundry	-	141,960	-	30,970	-	100,740	-	10,250
59	Component Total	-	162,360	-	38,370	-	109,540	-	14,450
99	GRAND TOTAL	1,459	879,480	327	573,140	797	250,580	335	55,760

Note 1: The estimates are for P&T financial years ending 31st March 1974, 1975 and 1976.



## ANNEX I: ORGANIZATION OF THE PROJECT

### General responsibilities

1. The Government, the UNDP and the Executing Agency shall jointly be responsible for the execution of the project and the realization of its objectives as described in Part II of this Project Document.
2. The Government shall provide to the project the national project personnel, training facilities, land, buildings, equipment and other required services and facilities. It will designate the Government Co-operating Agency named in the "Co-operating Agency" and which will be directly responsible for the implementation of the Government contribution to the project.
3. The UNDP undertakes to complement and supplement the Government participation and will provide through the Executing Agency the required expert services, training, equipment and other services within the funds available to the project.
4. Upon commencement of the project the Executing Agency may be requested to assume primary responsibility for project execution. However, that primary responsibility shall be exercised in consultation and in agreement with the Cooperating Agency. Arrangements to this effect shall be stipulated in the project Work Plan as well as for the transfer of this responsibility to the Government or to an entity designated by the Government during the execution of the project.
5. Part of the Government's participation may take the form of a cash contribution to UNDP. In such cases, the Executing Agency will provide the related services and facilities and will account annually to the UNDP and to the Government for the expenditure incurred.

### Participation of the Government

6. The Government shall provide to the project the services, equipment and facilities in the quantities and at the times specified in the Work Plan. Budgetary provision - either in kind or in cash - for the Government's participation so specified shall be set forth in the Project Budgets.
7. The Co-operating Agency shall in consultation with the Executing Agency assign a director for the project on a full-time basis. He shall carry out such responsibilities in the project as are designed to him by the Co-operating Agency.
8. The estimated cost of items included in the Government contribution, as detailed in the Project Budget, shall be based on the best information available at the time of drafting this project proposal. It is understood that price fluctuations during the period of execution of the project may necessitate an adjustment of said contribution in monetary terms; the latter shall at



all times be determined by the value of the services, equipment and facilities required for the proper execution of the project.

9. Within the given number of man-months of personnel services described in the work plan minor adjustments of individual assignments of project personnel provided by the Government may be made by the Government in consultation with the Executing Agency, if this is found to be in the best interests of the project.

10. The Government shall continue to pay the local salaries and appropriate allowances of national project personnel during the period of their absence from the project while on UNDP fellowships.

11. The Government shall defray any customs duties and other charges related to the clearance of project equipment, its transportation, handling, storage and related expenses within the country. It shall be responsible for safe custody of the equipment, its installation and maintenance, insurance, and replacement if necessary, after delivery to the project site.

12. The Government shall make available to the project - subject to existing security provisions - ~~any~~ published and unpublished reports, maps, records and other data which are considered necessary to the implementation of the project.

13. The Government shall assist all project personnel in finding suitable housing accommodation at reasonable rents.

14. The services and facilities specified in the Work Plan which are to be provided to the project by the Government by means of a contribution in cash shall be set forth in the Project Budget. Payment of this amount shall be made in local currency to the UNDP in accordance with the Schedule of Payments by the Government.

15. Payment of the above-mentioned contribution to the UNDP on or before the dates specified in the Schedule of Payments by the Government is a prerequisite to commencement or continuation of project operations.

#### Participation of the UNDP and of the Executing Agency

16. The UNDP shall provide to the project through the Executing Agency the services, equipment and facilities described in the Work Plan. Budgetary provision for the UNDP contribution as specified shall be set forth in the Project Budget.

17. The Executing Agency shall consult with the Government on the candidature of the Project Manager who, under the direction of the Executing Agency, will be responsible in the country for the Executing Agency's participation in the project. The Project Manager shall supervise the experts and other agency personnel assigned to the project, and the on-the-job training of national project personnel. He shall be responsible for the management of all equipment



provided to the project from UNDP funds.

18. The Executing Agency, in consultation with the Government, shall assign international staff and other personnel to the project as specified in the Work Plan, select candidates for fellowships and determine standards for the training of national project personnel.

19. Fellowships shall be administered in accordance with the fellowships regulations of the Executing Agency.

20. The Executing Agency may, in agreement with the Government and UNDP, execute part or all of the project by subcontract. The selection of subcontractors shall be made, after consultation with the Government, in accordance with the Executing Agency's procedures.

21. All material, equipment and supplies which are purchased from UNDP resources will be used exclusively for the execution of the project, and will remain the property of the UNDP in whose name it will be held by the Executing Agency. Equipment supplied by the UNDP shall be marked with the insignia of the UNDP and of the Executing Agency.

22. Arrangements may be made, if necessary, for a temporary transfer of custody of equipment to local authorities during the lifetime of the project, without prejudice to the final transfer.

23. Prior to completion of UNDP assistance to the project, the Government, the UNDP and the Executing Agency shall consult as to the disposition of all project equipment provided by the UNDP. Title to such equipment shall normally be transferred to the Government, or to an entity nominated by the Government, when it is required for continued operation of the project or for activities following directly therefor,. The UNDP may, however, at its discretion, retain title to part or all of such equipment.

24. At an agreed time after the completion of UNDP assistance to the project, the Government and the UNDP, and if necessary the Executing Agency, shall review the activities continuing from or consequent upon the project with a view to evaluating its results.

#### Facilities, privileges and immunities

##### UNDP and Executing Agency personnel

25. In accordance with the Agreement concluded by UNDP and the Government concerning the provision of assistance, the personnel of UNDP and other United Nations organizations associated with the project, shall be accorded facilities, privileges and immunities specified in the said Agreement.

##### Subcontractors and their personnel



26. The Executing Agency's contractors and their personnel (except Government nationals employed locally) shall:

- (a) Be immune from legal process in respect of all acts performed by them in their official capacity in the execution of the project;
- (b) Be immune from national service obligations;
- (c) Be immune together with their spouses and relatives dependent on them from immigration restrictions;
- (d) Be accorded the privileges of bringing into the country reasonable amounts of foreign currency for the purposes of the project or for personal use of such personnel, and of withdrawing any such amounts brought into the country, or, in accordance with the relevant foreign exchange regulations, such amounts as may be earned therein by such personnel in the execution of the project;
- (e) Be accorded together with their spouses and relatives dependent on them the same repatriation facilities in the event of international crises as diplomatic envoys.

27. All personnel of the Executing Agency's contractors shall enjoy inviolability for all papers and documents relating to the project.

28. The Government shall either exempt from, or bear the cost of any taxes, duties, fees or levies which it may impose on any foreign firm or organization which may be retained by the Executing Agency and on the foreign personnel of any such firm or organization in respect of:

- (a) The salaries or wages earned by such personnel in the execution of the project;
- (b) Any equipment, materials and supplies brought into the country for the purposes of the project or which, after having been brought into the country, may be subsequently withdrawn therefrom;
- (c) Any substantial quantities of equipment, materials and supplies obtained locally for the execution of the project, such as, for example, petrol and spare parts for the operation and maintenance of equipment mentioned under (b) above, with the provision that the types and approximate quantities to be exempted and relevant procedures to be followed shall be agreed upon with the Government and, as appropriate, recorded in the Work Plan; and
- (d) As in the case of concessions currently granted to UNDP and Executing Agency's personnel, and property brought, including one privately owned automobile per employee,



by the firm or organization or its personnel for their personal use or consumption or which after having been brought into the country, may subsequently be withdrawn therefrom upon departure of such personnel.

29. The privileges and immunities to which such firm or organization and its personnel may be entitled, referred to in the paragraphs above, may be waived by the Executing Agency where, in its opinion or in the opinion of the UNDP, the immunity would impede the course of justice and can be waived without prejudice to the successful completion of the project or to the interest of the UNDP or the Executing Agency.

30. The Executing Agency shall provide the Government through the Resident Representative with the list of personnel to whom the privileges and immunities enumerated above shall apply.



ORIGINAL DIRECT

hks/tf

Mrs. Carmen Korn, Acting Deputy Director  
Europe, Latin America and Interregional Projects Branch  
Office of Technical Co-operation

6 November 1973

TE 210 (2) ITU

Mr. Vladimir Baum, Acting Director  
Resources and Transport Division, ESA

Zdenek Lastovka, Chief  
Transport Section, RTD

TRINIDAD AND TOBAGO - Establishment of a Telecommunications  
Training Centre - TRI-73/005/A/01/20

1. We have reviewed the request and found no direct relevance to problems of transportation or tourism. It falls within the scope of competence of ITU. Therefore, we suggest that it be evaluated by the specialized agency.

2. In general terms, we see the importance of the project requested, in view of the deficiencies of education and training facilities in the country for telecommunications operations and further development.



FINAL DIRECT

Drafted: M. NEKRASSOFF-CECCATTO/lk  
CLEARED: Mrs. Korn and Mr. Downes-Thomas

Mr. Gabriel Valdes S., Assistant Administrator  
and Director  
Regional Bureau for Latin America  
United Nations Development Programme

2 November 1973

TE 210 (2) ITU

Bahgat El-Tawil, Acting Director  
Office of Technical Co-operation

TRINIDAD AND TOBAGO - Establishment of a Telecommunication  
Training Centre - TRI-73/005/A/01/20

1. Having reviewed the request of the Government of Trinidad and Tobago mentioned above, we wish to offer the following comments:

(a) Telecommunications Services in Trinidad and Tobago are principally owned or controlled by the government, with 100 per cent control of internal telephone and telex systems, 51 per cent of external public communications, and 90 to 100 per cent of television and radio broadcasting companies.

(b) Approval has already been granted for the International Telecommunication Union (ITU) to provide the Ministry of Public Utilities with an Administration and Management Adviser for 32 months between 1974 and 1976, together with fellowships.

(c) It has also been proposed to establish a Telecommunication Training Centre to train 80 to 90 new technicians annually to "certificate" level. The estimated total number of technical personnel in these activities is 400. Normal attrition and growth call for about 25 per cent of this number annually, and there is a shortage of qualified technical candidates. Other existing education and training facilities are deficient in both expertise and equipment requirements. Another institute can give preparatory training to some 20 trainees, but their training is not complete due to insufficient local facilities.

(d) Under these circumstances, the proposed Training Centre appears to be fully justified as a part of the general need for upgrading training facilities in the area.



UNITED NATIONS



NATIONS UNIES

INTEROFFICE MEMORANDUM

MEMORANDUM INTERIEUR

TO: Mr. J. Rapoport, Deputy Director  
A: Latin America and Interregional Projects Branch

THROUGH: Mr. Simos G. Vassiliou, Asst. Director-in-charge  
S/C DE: Development Planning Advisory Services, CDPPP

FROM: Donald M. Crawford, Interregional Adviser  
DE: Development Planning Advisory Services, CDPPP

SUBJECT: TRINIDAD & TOBAGO - Establishment of a Telecommunication  
OBJET: Training Centre - TRI-73/005/A/01/20

DATE: September 27, 1973

REFERENCE: TE 210 (2) ITU

Received 3/8.73  
inc

This project (already included in the Country Programme presented in June 1973) has been referred to this office for comment.

Telecommunications Services in Trinidad & Tobago are principally owned or controlled by the government, with 100% control of internal telephone and telex systems, 51% of external public communications, and 90 to 100% of television and radio broadcasting companies.

Approval has already been granted for the International Telecommunication Union (ITU) to provide the Ministry of Public Utilities with an Administration and Management Adviser for 32 months between 1974 and 1976, together with fellowships.

It has also been proposed to establish a Telecommunication Training Centre to train 80 to 90 new technicians annually to "certificate" level. The estimated total number of technical personnel in these activities is 400. Normal attrition and growth call for about 25% of this number annually, and there is a shortage of qualified technical candidates. Other existing education and training facilities are deficient in both expertise and equipment requirements. Another institute can give preparatory training to some 20 trainees, but their training is not complete due to insufficient local facilities.

Under these circumstances, the proposed Training Centre appears to be fully justified as a part of the general need for upgrading training facilities in the area.



N. Nekrassoff-Seccatto

ORIGINAL DIRECT

Mr. Simos Vassiliou, Assistant Director-in-charge  
Development Planning Advisory Services, CDPAP 1973

20 September 1973

TE 210 (2) ITU

Jacques Rapoport, Deputy Director  
Europe, Latin America & Interregional Projects Branch  
Office of Technical Co-operation

TRINIDAD & TOBAGO - Establishment of a Telecommunication  
Training Centre - TRI-73/005/A/01/20

.....  
.....

1. Please find attached copy of a Project Document together with a copy of a Project Summary prepared by the Government of Trinidad & Tobago for UNDP assistance for the draft project under reference.

2. Kindly note that this project is included in the Country Programme presented by the above-mentioned Government in June 1973. The International Telecommunication Union will be the Executing Agency.

3. We should appreciate receiving your comments by 28 September 1973.



ORIGINAL DIRECT



Mr. Guy Cresford, Officer-in-charge  
Resources and Transport Division

20 September 1973

TE 210 (2) ITU

Jacques Rapoport, Deputy Director  
Europe, Latin America & Interregional Projects Branch  
Office of Technical Co-operation

TRINIDAD & TOBAGO - Establishment of a Telecommunication  
Training Centre - TRI-73/005/A/01/20

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3. We should appreciate receiving your comments by 28 September 1973.



UNITED NATIONS  
DEVELOPMENT PROGRAMME



PROGRAMME DES NATIONS UNIES  
POUR LE DEVELOPPEMENT

UNITED NATIONS  
OFFICE OF THE REGIONAL REPRESENTATIVE  
IN THE CARIBBEAN

POSTAL ADDRESS: P.O. BOX 812  
CABLE ADDRESS: UNDEVPRO  
TELEPHONES: 62-37056, 37057, 37059

19 KEATE STREET  
PORT-OF-SPAIN  
TRINIDAD & TOBAGO

REF:

TRI/73/005/8-116

10 August 1973

Dear Mr. Valdes,

Establishment of Telecommunication Training Centre -  
TRI/73/005

We have received an official request from the Government of Trinidad and Tobago for assistance in the above-cited project, the cost of which is to be charged to the country's IPF.

.....  
Attached are five copies of the Project Summary and Draft Project Document submitted in accordance with Paragraph 3, Page V.D.1 of the UNDP Operational and Financial Manual, Chapter IV.

As pointed out in the Draft Country Programme for Trinidad and Tobago, the Government has decided to continue to orient UNDP assistance towards institution building projects and the strengthening of existing training facilities. This project is one of high priority and it is hoped that a cadre of technicians will be trained in the field of Telecommunications to meet the growing needs. It is quite evident that Trinidadian nationals are very trainable in sophisticated technology. Since it is the Government's policy to own fully or to have controlling ownership in the telecommunication activities in Trinidad and Tobago, it is essential that nationals not only hold managerial posts, but also be fully qualified to assume technical responsibilities as well. The training of trainers in telecommunications and related electronics is a pre-requisite to providing a flow of trained technicians for the private sector.

Mr. Gabriel Valdes S.  
Asst. Administrator and Director  
Regional Bureau for Latin America  
United Nations Development Programme  
New York, N.Y. 10017  
U S A





- 2 -

I strongly support this request and consider the establishment of a Telecommunication Training Centre will assist the Government to meet a part of the training objectives needed for a well organized telecommunication system so essential to the development of the country.

In accordance with Paragraph 4, Page 1 of UNDP/PROG/HQTRS/21 we are sending a copy of this letter and a copy each of the attached documents to UN, WMO and UPU.

Yours sincerely,

A handwritten signature in dark ink, appearing to be 'AP'.

Antonio Patriota  
Regional Representative

cc: Mr. M. Mili, ITU, Geneva  
Mr. J. Rapoport, UNOTC, NY ✓  
Mr. K. Parthasarathy, WMO, Geneva  
Mr. L. Lachaize, UPU, Berne



UNITED NATIONS DEVELOPMENT PROGRAMME

Project Summary\*, Government of  
TRINIDAD AND TOBAGO

Project Title: Establishment of Telecommunication Training Centre

Number: TRI/73/005/A/01/20

Date of Submission: 9 July 1973

Sector: Transport and Communications  
(75)

Subsector: Telecommunications  
(7550)

Proposed starting date for  
full project operations:

September 1974

Proposed duration: Four years

Proposed Government

Co-operating Agency: Ministry of Public Utilities

Amount requested from the UNDP:

US\$ 384,300

Proposed Government counterpart  
contribution:

in cash: TT\$ N.A.

in kind: TT\$ 387,450  
(local currency)

Total: US\$ 578,025

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\*PLEASE NOTE THAT THIS DOCUMENT IS A SUMMARY OF THE PROJECT AS SUBMITTED  
AND DOES NOT REPRESENT THE VIEWS OF THE UNDP ON ITS MERITS.



I. Background

1. The major telecommunication services of Trinidad and Tobago are provided by:
  - (i) the Trinidad and Tobago External Telecommunication Company Limited, which operates external public communications
  - (ii) Trinidad and Tobago Telephone Company Limited, which operates internal telephone and telex systems
  - (iii) International Aeroradio which provides and maintains all facilities and services for aeronautical telecommunications
  - (iv) the Trinidad and Tobago Television Company and the National Broadcasting Company
2. The estimated number of technical telecommunication personnel is 400. A great proportion of this staff require refresher courses either because of technological advance or deficient initial education and training.
3. On the basis of Government's plan for the expansion of national telecommunications services in addition to the manpower requirements of the private sector, it is estimated that the annual output of new technicians should be in the order of 80 - 90 per year. This number represents an attrition rate of about 15 per cent of existing staff coupled with a growth rate of about 10 per cent.
4. Education and training facilities in Trinidad and Tobago for telecommunications staff are deficient both in terms of expertise and equipment requirements. At present twenty (20) trainees are given preparatory training at the John S. Donaldson Technical Institute, but the majority are later sent abroad for additional training because of the absence of local facilities of the kind required.



5. It is not possible to provide accurate data on manpower shortages in the overall field of telecommunications, but it is quite probable that the figure is greater than the number of existing staff. Therefore, in view of the manpower shortage and the deficient education facilities for technical telecommunication staff it is felt that specialized training should be established to support the telecommunication services. The primary objective is to train technicians to a "Certificate" level.

## II. The Project

6. The initial Draft UNDP Country Programme for Trinidad and Tobago was submitted in June 1973 and this project is included on Page 41, Paragraph 110.
7. The long range objectives of the project are:-  
 To assist the Government in solving the problem of telecommunication training by creating, and making operational, a permanent unit for specialist training of telecommunication and electronics technicians. The unit, when firmly established, will be capable of training technical staff to:
- a) help the Government to ensure proper maintenance of the investments made and to be made in the field of telecommunications and to prolong the life span of the equipment resulting in reduction of the expenditure in future years
  - b) assist the Government to maintain the telecommunication services at a high level of operation efficiency thus, on the one hand optimizing the revenue from telecommunication services, and on the other, providing effective support to national plans for economic and social development.



The immediate objectives are to:-

- a) assist the Government in identifying the specific knowledge and skills required for technicians in different positions in the telecommunications field
- b) assist in identifying the optimum number of specialists and sub-specialists for having the best organization and orientation of training and refresher courses
- c) assist in drawing up syllabi for the courses and selecting the training methods most suited to each subject together with specifying the pre-requisite qualifications for each course
- d) assist the Government in training and re-training of 80 - 100 technicians each year as well as creating a permanent staff of national instructors capable of following up the project on completion of UNDP assistance.

### III. Financial Data

#### A. Contribution requested from UNDP

	Total	
	m/m	US\$
<u>Project Personnel</u>		
<u>Experts</u>		
Director	1/44	110,000
Instructor (Switching)	1/38	95,000
Instructor (External Plant)	1/38	95,000
Component Total	3/120	300,000



		Total	
		m/m	US\$
<u>Training</u>			
<u>Fellowships</u>			
Co-Director	1/6		3,700
Instructor (Switching)	1/12		6,400
Instructor (External Plant)	1/12		6,400
Instructor (Transmission)	1/12		6,400
Instructor (Operations)	1/12		6,400
Component Total	5/54		29,300
<u>Equipment Total</u>			
Expendable and Non-Expendable			50,000
Component Total			50,000
<u>Miscellaneous</u>			
Reporting costs			3,000
Sundry			1,000
Direct costs			1,000
Component Total			5,000
GRAND TOTAL			384,300

B. <u>Proposed Government Counterpart Contribution in kind</u>		Total	
		m/m	TT\$
<u>Project Personnel</u>			
Co-Director	1/44		52,800
4 Instructors	4/152		136,800
2 Laboratory Technicians	2/88		44,000
Clerk/Stenographer	1/44		13,200
Typist	1/38		10,250
Component Total	9/366		257,050
<u>Training</u>			
Fellowships for counterpart staff	5/54		50,400
Component Total	5/54		50,400
<u>Equipment Total</u>			
Expendable and Non-Expendable			10,000
Component Total			10,000
<u>Miscellaneous</u>			
Sundry and Operating costs			70,000
Component Total			70,000
GRAND TOTAL			387,450



UNITED NATIONS DEVELOPMENT PROGRAMME

PROJECT OF THE GOVERNMENT OF

TRINIDAD AND TOBAGO

Title: ESTABLISHMENT OF TELECOMMUNICATION TRAINING CENTRE

Number: TRI/73/005/A/01/20

Duration: 4 YEARS

Sector: Transport and Communications (75)

Subsector: Telecommunications (7550)

Government Co-operating Agency:  
MINISTRY OF PUBLIC UTILITIES

Executing Agency: I.T.U.

Date of Submission: 9 July 1973

Starting Date: September 1974

Government Contribution: \$387,450  
T.T.

UNDP Contribution: \$390,300  
U.S.

Approved.....

*Rosemary Mathurin*  
on behalf of the Government  
**PERMANENT SECRETARY**  
MINISTRY OF PLANNING & DEVELOPMENT

Date.....

*9/7/73*

.....

on behalf of Executing Agency  
(signature)

Date.....

.....

on behalf of UNDP  
(signature)

Date.....



1. BACKGROUND AND SUPPORTING INFORMATION

A. Justification for the Project

The major telecommunication services of Trinidad and Tobago are provided by:-

- (i) the Trinidad and Tobago External Telecommunication Company Limited, which operates external public communications. (51% Government owned)
- (ii) Trinidad and Tobago Telephone Company Limited, which operates internal telephone and telex systems. (100% owned by Government)
- (iii) International Aeroradio which provides and maintains all facilities and services for aeronautical telecommunications. (Owned as follows:-  
  
International Aeradio Company Ltd.  
I.A.C.L. - 51%  
B.W.I.A. - 1%  
Air Canada - 1%  
Pan Am - 47%)
- (iv) The Trinidad and Tobago Television Company (90% Government owned and 10% by Colombia Broadcasting) and the National Broadcasting Company. (100% Government owned)

The estimated number of telecommunication personnel in the total work force is in the order of 300 to 400. A great proportion of this technical staff needs to be upgraded or given refresher courses either because of technological advance or deficient initial education and training.

On the basis of Government's plan for the expansion of national telecommunications services in addition to the manpower requirements of the private sector, it is estimated that the annual output of new technicians should be in the order of 80-90 per year. This number represents an attrition rate of about 15% of existing staff coupled with a growth rate of about 10%.



### Justification for the Project - (Cont'd)

The Trinidad and Tobago Telephone Company Limited which had approximately 65,400 stations in service at the end of 1972, has a program of telecommunications expansion to cover the period 1973 - 1977. The expansion would include switching equipment to provide an additional 38,500 lines including replacement of about 21,000 lines of existing plant (of which about 9,300 lines would be reused) and the long distance network for an additional 3,600 circuits. The cost of such a program is estimated at T.T. \$6.7 million.

From its formation on 1st January, 1970, the Trinidad and Tobago External Telecommunications Company Limited (TEXTEL) embarked on a considerable programme of expansion which is now nearing completion. It included the construction of a Satellite Earth Station, the introduction of an International Telephone Switching and Maintenance Centre, the establishment of direct broadband communication with Venezuela and an enlarged manual switchboard for the international telex system. Expansion in the next five years will be mainly concerned with the improvement of existing services including:-

- (a) increasing the capacity on the Venezuela circuit;
- (b) replacing the "Tropospheric scatter" system to Barbados by a UHF link via Grenada. This is an expansion being planned in conjunction with Cable and Wireless Limited to increase capacity throughout the Eastern Caribbean and provide T.V. capacity between the larger islands.
- (c) replacing the existing manual Telex Exchange by an automatic system.

Education and training facilities in Trinidad and Tobago for telecommunications staff are deficient both in terms of expertise and equipment requirements. At present twenty (20) trainees are given preparatory training at the John S. Donaldson Technical Institute, but the majority are later sent abroad for additional training because of the absence of local facilities of the kind required.

It is not possible to provide accurate data on manpower shortages in the field of telecommunication, but it is quite probable that the figure is greater than the number of existing staff. Therefore, in view of the manpower shortage and the deficient education facilities for technical telecommunication staff it is felt that a telecommunication school should be established to provide adequate training facilities to support the telecommunication industry.



## B. Institutional Framework

The project will be a constituent component of the existing organisational framework of the John S. Donaldson Technical Institute in the Department of Electrical Engineering. (See Appendix I attached). The Institute has all the facilities needed for the proper development of the project.

The current budget for 1973 of the John S. Donaldson Technical Institute is:-

Personal Emoluments	-	\$1,065.000
Recurrent operational expenditure	-	206.000
Fees for part time instructors	-	250.000
TOTAL		<u>\$1,521.000 T.T.</u>

The premises and facilities to be exclusively dedicated to the project are:-

Already available	-	Laboratories and class-rooms	-	400 sq. ft.	price \$64,400
To be finished before September 1973	-	Classrooms and staff room	-	1865 sq. ft.	" 65,275
TOTAL					<u>\$129,675 T.T.</u>

As other buildings of the Institute will be used also for telecommunications needs (classrooms, administrative officers, library etc.), the project will have all the advantages of economics of scale. The existing preparatory programme at the Institute could, therefore, be conveniently expanded to cater for the enlarged activities which the project would entail. Details on the existing programme are attached as Appendix II.

Curricula and certification will be dealt with by the National Training Board in collaboration with all interested bodies in the country, and also in consultation with the experts provided by the U.N.D.P.



C. Provision for Government follow-up

The Government of Trinidad and Tobago will appoint a Co-Director to work alongside the UNDP Project Director. The Co-Director will be completely responsible for the running of the training centre when the UNDP Director completes his assignment.

The John S. Donaldson Technical Institute has made all the budgetary provisions which will permit the adequate continuation of the project.

D. Other related activities

Telecommunications Management

E. Future UNDP assistance envisaged in same field.

It is probable that after the 3½ years assistance the John S. Donaldson Institute should be capable of continuing the project without further UNDP assistance.



## 11. OBJECTIVES OF THE PROJECT

### Place of project in proposed or approved Country Programme

**This project is given high priority in the Trinidad and Tobago Country Programme of which the first draft has been submitted.**

#### A. Long-range objectives

1. The project will help the Government to solve definitively the problem of telecommunication training in the country by **creating** and making operational a permanent unit in the John S. Donaldson Institute for specialised training of telecommunication and electronics technicians.

The unit will be capable of training technical staff for the country as a whole.

2. To help the Government to ensure proper maintenance of the investments made and to be made in the field of telecommunications and to prolong the life span of the equipment resulting in reduction of the expenditure in future.
3. The project will help the Government to maintain the telecommunications services at a high level of operational efficiency. Thus on one hand optimizing the revenues from telecommunications services and on the other providing an effective support to national plans for economic and social development.

#### B. Immediate objectives

1. Assist the Government in identifying the specific **knowledge** and skills required for technicians in different positions in the telecommunications fields.
2. Assist the Government in identifying the optimum number of specialities and sub-specialities for having the best organization and orientation of training and retraining courses.
3. Assist the Government in drawing up **syllabi** for the courses and **select** the training methods most suited to each subject.



B. Immediate objectives - (Cont'd)

4. Assist the Government in selecting equipment for the laboratories.
5. Assist the Government in drawing up practical and theoretical training manuals, publishing them and keeping them up to date
6. Assist the Government in specifying, in consultation with the user institutions, the pre-requisite qualifications for each course and follow-up on the job training to ensure optimum consolidation of knowledge and skills imparted.
7. Assist the Government in training and re-training of 80 - 100 technicians each year.
8. Assist the Government in creating a permanent staff of national instructors in telecommunications and related matters, capable of following up the project when the international staff leave the country.

C. Does this project have an investment potential?

No.

# 111. WORK PLAN

## A. description of project activities

<u>Project activities</u>	<u>Location</u>	<u>Proposed duration and starting date</u>
1-1 Training courses to meet urgent needs for 20 students	J.S.D.T.I., Port of Spain	1970 onwards
1-1 Assignment of building for the Telecommunication Unit - 240 sq. ft.	"	available now
1-2 Laboratories and equipment and Library	"	" "
1-3 New building to be assigned to the project - 1865 sq. ft - under construction	"	To be finished before September, 1973
1-4 Furniture and administrative equipment	"	- do -
1-5 Existing common installations, personnel and buildings (reproduction aids, accountant, water, electricity, clerical services etc.)	"	Available now
<u>Activities</u>		
1-6 Study the actual situation, discussions with the principal users, Telephone Company, Textel etc. revision of the work plan. Draw up the syllabi for regular courses and planning the retraining activities. Propose the different courses to be carried out in the Institute. To plan the organization of the telecommunication unit in the J.S.D.T.I. Director, Co-director and National Staff	"	1/6/75 - 30/9/75
1-7 Revision of specific problems of (6) with the international instructors on switching and external plant and the national staff. Establish the standards and test for selecting students for the different specialities, etc.	"	



A. Description of project activities - (Cont'd)

<u>Project activities</u>	<u>Location</u>	<u>Proposed duration and starting date</u>
1-8 Training and retraining 80 - 100 technicians on the different aspects of telecommunications. Draw up and public practical and theoretical training manual.	J.S.D.T.I., Port of Spain	1/10/75 - 31/8/78 36 months
1-9 Revision and evaluation of the project	"	7/77 1 month
2 4 fellowships for counter- part Instructors		
2-1 Co-director - (level 3)		1/9/74 - 28/2/75 6 months
2-2 Instructor - (level 3)		1/9/74 - 30/8/75
2-3 Instructor - (Level 3)		" "
2-4 Instructor - (level 3)		1/9/76 - 30/8/77
2-5 Instructor - (level 3)		" "

B. Description of UNDP inputs

1. Assignment of international staff

a) Project Director: from 1st *May*, 1975.

Requirements: Graduate in Telecommunications Engineering with 5 years experience in administration and training. It is also important that he should have broad experience in all fields of telecommunications especially in transmission, VHF, UHF, Micro-wave radio multiplex cables etc.

Functions: To advise the Government of Trinidad and Tobago in planning and organising the centre; preparing equipment schedules; other material requirements; text books etc.; to assist in the preparation of course curricula in conjunction with the National Training Board. The Director shall also supervise the installation and maintenance of equipment provided by UNDP, and lecture on subjects related to his speciality. He will direct and co-ordinate the activities of the other international experts.

b) Instructor: (Switching and Telex)

Requirements: Graduate in Telecommunications Engineering with at least 5 years experience in administration and training, and broad experience in all telecommunication fields especially in switching and telex.

Functions: Under the direction of the Project Director, assist in planning curricula in conjunction with the National Training Board; to give lectures and demonstrations in switching and telex; to assist in the organisation and installation of laboratories of his speciality, and to co-operate fully through the Project Director and with the national Co-director on all matters on which he is requested to assist in his specialisation.

c) Instructor: (External plant and telephone telex operation)

Requirements: Graduate in Telecommunications Engineering with at least 5 years experience in administration and training; and broad experience in all telecommunications fields especially in External Plan and Operations (Telephones, Teleprinter Service etc.)

Functions: Similar to those specified at (b) above in his specialisation.



2. Provision of subcontractual services

Not applicable

3. Training provisions

- a) A six-month fellowship (level 3) for the Co-director commencing September, 1974.
- b) Four (4) fellowships (level 3) for twelve (12) months each for Counterpart Instructors, commencing September, 1974 (2), and September 1976 (2).

4. UNDP-provided supplies and equipment

Delivery Date

A total of US \$50,000 is required for training purposes. This equipment is to be delivered in agreement with a detailed list to be prepared by the Project Director on his arrival

September 1975

February 1976

April 1977

c. Description of Government inputs

1. Pre-requisite activities

The existing class of Telecommunications Technicians at the John S. Donaldson Technical Institute is supported by annual departmental budget allocations (\$16,350 in 1972). Teaching in telecommunications technology is done by Textel and Trinidad and Tobago Telephone Company staff, (Teaching contribution by these companies is paid out of their funds) and is mentioned earlier in the Work Plan.

2. Assignment of national staff

The Government of Trinidad and Tobago will provide the following staff members:-

- (i) Co-Director and Instructor in Transmission
- (ii) Instructor for Switching Technology and Practice
- (iii) Instructor for Radio and Wireless Technology and Practice
- (iv) Instructor for External Plant Technology and Practice
- (v) Instructor for Telegraphy
- (vi) Two (2) Laboratory Technicians
- (vii) Support personnel - Two (2) secretaries, one (1) Typist, one (1) Accounts Clerk

3. Government-provided supplies and equipment

For the new project, the existing laboratory at the Institute will continue to be used in conjunction with appropriate classroom space.



	Preparatory	1974	1975	1976	1977	1978
Prior obligations or preparatory activities by Government (legislation, premises, etc.)						
Assignment of international experts (indicate teamleader if applicable)				Project Director xxxxxxxxxxxxxxxxxxxxxx Instructors xxxxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxxxx
Assignment of Government counterpart personnel				xxxxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxxxx
Training Schedule Co-Director 4 Fellowships			Co-Director xxxxxxx  xxxxxxxxxxxxxxxxxx Counterpart Instructors		xxxxxxxxxxxxxxxxxx Counterpart Instructors	
Delivery of major items of equipment (UNDP)				Expendable and Non-Expendable Equipment xxxxxxxxxxxxxxxxxxxxxx		
Availability of Government supplies and equipment				Accommodation, supplies, equipment, etc. xxxxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxxxx
Provision of miscellaneous items				Sundry and Operating Costs xxxxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxxxx

Project Budget Covering UNDP Contribution  
(in US. Dollars)

Country: Trinidad and Tobago

Project No.: TRI/73/005/A/01/20

Title: Establishment of Telecommunication

Training Centre

	TOTAL		1974		1975		1976		1977		1978	
	m/m	\$	m/m	\$	m/m	\$	m/m	\$	m/m	\$	m/m	\$
10 <u>PROJECT PERSONNEL</u>												
11 <u>Experts</u>												
11-01 Director	1/44	110,000			1/8	20,000	1/12	30,000	1/12	30,000	1/12	30,000
02 Instructor (Switching)	1/38	95,000			1/2	5,000	1/12	30,000	1/12	30,000	1/12	30,000
03 Instructor (External Plant)	1/38	95,000			1/2	5,000	1/12	30,000	1/12	30,000	1/12	30,000
10 Component Total	3/120	300,000			3/12	30,000	3/36	90,000	3/36	90,000	3/36	90,000
<u>SUBCONTRACT</u>												
Not applicable												
Component Total												
30 <u>TRAINING</u>												
31 <u>Fellowships</u>												
31-01 Co-Director	1/6	3,700	1/4	2,800	1/2	900						
02 Instructor (Switching)	1/12	6,400	1/4	2,800	1/8	3,600						
03 Instructor (Ext. Plant)	1/12	6,400	1/4	2,800	1/8	3,600						
04 Instr. Transmission	1/12	6,400					1/4	2,800	1/8	3,600		
05 Instr. Operations	1/12	6,400					1/4	2,800	1/8	3,600		
39 Component Total	5/54	29,300	3/12	8,400	3/18	8,100	2/8	5,600	2/16	7,200		
40 <u>EQUIPMENT</u>												
41 Expendable												
42 Non-expendable		50,000				15,000	15,000	15,000	15,000		5,000	
Component Total		50,000				15,000	15,000	15,000	15,000		5,000	
50 <u>MISCELLANEOUS</u>												
52 Reporting cost		3,000					500	1,000		1,500		
53 Sundry		1,000				250	250	250		250		
54 Direct Cost		1,000				250	250	250		250		
59 Component Total		5,000				500	1,000	1,500		2,000		
GRAND TOTAL		384,300		8,400		53,600	111,600	113,700		97,000		



Project Budget Covering Government Counterpart Contribution in Cash (where applicable)

(Services and facilities specified in the Work Plan which are to be provided to the project by Government by means of a contribution in cash, in accordance with a schedule of payments to be annexed to the present document) (in local currency).

Country:  
Project No.:  
Title:

<u>TOTAL</u>		<u>1973</u>		<u>1974</u>		<u>1975</u>		<u>1976</u>		<u>1977</u>	
m/m	\$	m/m	\$	m/m	\$	m/m	\$	m/m	\$	m/m	\$

PROJECT PERSONNEL

Component Total

TRAINING

Component Total

EQUIPMENT

MISCELLANEOUS

GRAND TOTAL

N.A.

Project Budget Covering Government Counterpart  
Contribution in Kind - ( ) local currency)

Country: Trinidad and Tobago

Project No.: TRI/73/005/A/01/20

Title: Establishment of Telecommunication  
 Training Centre

	TOTAL		1974		1975		1976		1977		1978	
	m/m	TT \$	m/m	TT \$	m/m	TT \$	m/m	TT \$	m/m	TT \$	m/m	TT \$
10 PROJECT PERSONNEL												
Co-Director	1/44	52,800			1/8	9,600	1/12	14,400	1/12	14,400	1/12	14,400
4 Instructors	4/152	136,800			4/8	7,200	4/48	43,200	4/48	43,200	4/48	43,200
2 Lab. Technicians	2/98	44,000			2/8	3,000	2/24	12,000	2/24	12,000	2/42	17,000
Clerk/Stenographer	1/44	13,200			1/8	2,400	1/12	3,600	1/12	3,600	1/12	3,600
Typist	1/38	10,250			1/8	2,000	1/12	3,000	1/12	3,000	1/9	2,250
19 Component Total	9/366	257,050			9/61	24,200	9/108	76,200	9/108	76,200	9/92	80,450
30 TRAINING												
Fellowships												
Co-Director	1/6	7,200	1/4	4,800	1/2	2,400						
	1/12	10,800	1/4	3,600	1/8	7,200						
	1/12	10,800	1/4	3,600	1/8	7,200						
	1/12	10,800					1/4	3,600	1/8	7,200		
	1/12	10,800					1/4	3,600	1/8	7,200		
39 Component Total	5/54	50,400	3/12	12,000	3/18	16,800	2/8	7,200	2/16	14,400		
40 EQUIPMENT												
Furniture for new staff		10,000				10,000						
49 Component Total		10,000				10,000						
50 MISCELLANEOUS												
Operating charges and contingencies		70,000				22,500	22,500	22,500	22,500		2,500	
59 Component Total		70,000				22,500	22,500	22,500	22,500		2,500	
99 GRAND TOTAL		387,450		12,000		73,500	105,900		113,100		82,950	
		=====		=====		=====	=====		=====		=====	



ANNEX I

ORGANIZATION OF THE PROJECT

General Responsibilities

1. The Government, the UNDP and the Executing Agency shall jointly be responsible for the execution of the project and the realization of its objectives as described in Part II of this Project Document.
2. The Government shall provide to the project the national project personnel, training facilities, land, building, equipment and other required services and facilities. It will designate the Government Co-operating Agency named in the cover page of this document, which will hereinafter be referred to as the "Co-operating Agency" and which will be directly responsible for the implementation of the Government contribution to the project.
3. The UNDP undertakes to complement and supplement the Government participation and will provide through the Executing Agency the required expert services, training, equipment and other services within the funds available to the project.
4. Upon commencement of the project the Executing Agency may be requested to assume primary responsibility for project execution. However, that primary responsibility shall be exercised in consultation and in agreement with the Co-operating Agency. Arrangements to this effect shall be stipulated in the project Work Plan as well as for the transfer of this responsibility to the Government or to an entity designated by the Government during the execution of the project.
5. Part of the Government's participation may take the form of a cash contribution to UNDP. In such cases, the Executing Agency will provide the related services and facilities and will account annually to the UNDP and to the Government for the expenditure incurred.

Participation of the Government

6. The Government shall provide to the project the services, equipment and facilities in the quantities and at the times specified in the Work Plan. Budgetary provision - either in kind or in cash - for the Government's participation so specified shall be set forth in the Project Budgets.
7. The Co-operating Agency shall in consultation with the Executing Agency assign a director for the project on a full-time basis. He shall carry out such responsibilities in the project as are assigned to him by the Co-operating Agency.
8. The estimated cost of items included in the Government contribution, as detailed in the Project Budget, shall be based on the best information available at the time of drafting this project proposal. It is understood that price fluctuations during the period of execution of the project may necessitate an adjustment of said contribution on monetary terms; the latter shall at all times be determined by the value of the services, equipment and facilities required for the proper execution of the project.

9. Within the given number of man-months of personnel services described in the Work Plan minor adjustments of individual assignments of project personnel provided by the Government may be made by the Government in consultation with the Executing Agency, if this is found to be in the best interest of the project.
10. The Government shall continue to pay the local salaries and appropriate allowances of national project personnel during the period of their absence from the project while on UNDP fellowships.
11. The Government shall defray any customs duties and other charges related to the clearance of project equipment, its transportation, handling, storage and related expenses within the country. It shall be responsible for safe custody of the equipment, its installation and maintenance, insurance, and replacement if necessary, after delivery to the project site.
12. The Government shall assist all project personnel in finding suitable housing accommodation at reasonable rents.
13. The Government shall make available to the project - subject to existing security provisions - any published and unpublished reports, maps, records and other data which are considered necessary to the implementation of the project.
14. The services and facilities specified in the Work Plan which are to be provided to the project by the Government by means of a contribution in cash shall be set forth in the Project Budget. Payment of this amount shall be made in local currency to UNDP in accordance with the Schedule of Payments by the Government.
15. Payment of the above-mentioned contribution to the UNDP on or before the dates specified in the Schedule of Payments by the Government is a prerequisite to commencement or continuation of project operations.

Participation of the UNDP and of the Executing Agency

16. T The UNDP shall provide to the project through the Executing Agency the services, equipment and facilities described in the Work Plan. Budgetary provision for the UNDP contribution as specified shall be set forth in the Project Budget.
17. The Executing Agency shall consult with the Government on the candidature of the Project Manager\* who, under the direction of the Executing Agency, will be responsible in the country for the Executing Agency's participation in the project. The Project Manager shall supervise the experts and other agency personnel assigned to the project, and the on-the-job training of national personnel. He shall be responsible for the management of all equipment provided to the project from UNDP funds.
18. The Executing Agency, in consultation with the Government, shall assign international staff and other personnel to the project as specified in the Work Plan, select candidates for fellowships and determine standards for the training of national project personnel

\* May also be designated teamleader of Chief Technical Adviser as appropriate.



19. Fellowships shall be administered in accordance with the fellowships regulations of the Executing Agency.

20. The Executing Agency may in agreement with the Government and UNDP execute part or all of the project by subcontract. The selection of sub-contractors shall be made, after consultation with the Government, in accordance with the Executing Agency's procedures.

21. All material, equipment and supplies which are purchased from UNDP resources will be used exclusively for the execution of the project, and will remain in the property of the UNDP in whose name it will be held by the Executing Agency. Equipment supplied by the UNDP shall be marked with the insignia of the UNDP and of the Executing Agency.

22. Arrangements may be made, if necessary, for a temporary transfer of custody of equipment to local authorities during the lifetime of the project, without prejudice to the final transfer.

23. Prior to completion of UNDP assistance to the project, the Government, the UNDP and the Executing Agency shall consult as to the disposition of all project equipment provided by the UNDP. Title to such equipment shall normally be transferred to the Government, or to an entity nominated by the Government, when it is required for continued operation of the project or for activities following directly therefrom. The UNDP may, however, at its discretion, retain title to part or all of such equipment.

24. At an agreed time after the completion of UNDP assistance to the project, the Government and the UNDP, and if necessary the Executing Agency, shall review the activities continuing from or consequent upon the project with a view to evaluating its results.

#### Facilities, privileges and immunities

##### UNDP and Executing Agency personnel

25. In accordance with the Agreement concluded by UNDP and the Government concerning the provision of assistance, the personnel of UNDP and other United Nations organizations associated with the project, shall be accorded facilities, privileges and immunities specified in the said Agreement.

##### Subcontractors and their personnel

26. The Executing Agency's contractors and their personnel (except Government nationals employed locally) shall:

- (a) Be immune from legal process in respect of all acts performed by them in their official capacity in the execution of the project;
- (b) Be immune from national service obligations;
- (c) Be immune together with their spouses and relatives dependent on them from immigration restrictions;
- (d) Be accorded the privileges of bringing into the country reasonable amounts of foreign currency for the purposes of the project or for personal use of such personnel, and of withdrawing any such amounts brought into the country, or in accordance with the relevant foreign exchange regulations,

(e) Be accorded together with their spouses and relatives dependent on them the same repatriation facilities in the event of international crises as diplomatic envoys.

27. All personnel of the Executing Agency's contractors shall enjoy inviolability for all papers and documents relating to the project.

28. The Government shall either exempt from, or bear the cost of any taxes, duties, fees or levies which it may impose on any foreign firm or organization which may be retained by the Executing Agency and on the foreign personnel of any such firm or organization respect of:

(a) The salaries or wages earned by such personnel in the execution of the project;

(b) Any equipment, materials, and supplies brought into the country for the purposes of the project or which, after having been brought into the country, may be subsequently withdrawn therefrom;

(c) Any substantial quantities of equipment, materials and supplies obtained locally for the execution of the project, such as, for example, petrol and spare parts for the operation and maintenance of equipment mentioned under (b) above, with the provision that the types and approximate quantities to be exempted and the relevant procedures to be followed shall be agreed upon with the Government and, as appropriate, recorded in the Work Plan; and

(d) As in the case of concessions currently granted to UNDP and Executing Agency's personnel, any property brought, including one privately owned automobile per employee, by the firm or organization or its personnel for their personal use or consumption or which after having been brought into the country, may subsequently be withdrawn therefrom upon departure of such personnel.

29. The privileges and immunities to which such firm or organization its personnel may be entitled, referred to in the paragraphs above, may be waived by the Executing Agency where, in its opinion or in the opinion of the UNDP, the immunity would impede the course of justice and can be waived without the prejudice to the successful completion of the project or to the interest of the UNDP of the Executing Agency.

30. The Executing Agency shall provide the Government through the Resident Representative with the list of personnel to whom the privileges and immunities enumerated above shall apply.



## APPENDIX II

### EXISTING ORGANISATIONAL FRAMEWORK OF THE JOHN S. DONALDSON TECHNICAL INSTITUTE

#### HISTORICAL BACKGROUND:

The Institute was founded in 1963 as a multi-level technical education centre embracing, as it does at present, work of craft, technician and professional standard. The Technician courses do not usurp nor attempt to enter the confines of the more theoretical engineering or other professional courses offered at the University of the West Indies at St. Augustine, Trinidad. The Institute conducts both full-time and part-time day courses and part-time evening courses. Since the founding of the Institute, tremendous progress has been made towards the provision of facilities for the education and training of young people and adults in a very wide variety of occupational fields.

#### OBJECTIVES:

To prepare students for employment in the ever expanding and exigent needs of industry, commerce and government. Education and training are also geared to advance the levels of skills in productive and semi-productive employment with special emphasis being placed on the technician level.

#### PROGRAMME:

Courses offered by the Institute are available both full-time and part-time in the seven (7) Departments of the Institute:

(i) BUSINESS EDUCATION AND MANAGEMENT:

(Craft and Technician levels)

Clerk/Typist;

Shorthand Typist;

Secretarial Practice;

Palantyping;

Business Management: Middle management courses -  
Combined Accountancy, Elements of Supervision,  
Statistics, Personnel Administration, Banking.

(ii) DISTRIBUTIVE EDUCATION AND MANAGEMENT:

(Craft and Technician levels)

Food Preparation;

Food Service;

Retail Trades -

/2.....

All occupations which related to the sale, distribution, handling, display, inventory and control of goods and services both in the wholesale and retail business.

(iii) LAND SURVEYING AND MARINE SCHOOL:

Land Surveying (Professional and Technician levels);  
AB Seamen and Lifeboatmen;  
Computer Programming.

(iv) ELECTRICAL ENGINEERING:

(Craft and Technician levels)  
Laboratory Technology;  
Air Conditioning and Refrigeration;  
Electrical Installation;  
Electronics;  
Radio and Television,  
Telecommunications.

All training programmes specifically related to electricity and electronics from semi-skilled to supervisory levels.

(v) MECHANICAL AND BUILDING ENGINEERING:

(Craft and Technician levels)  
Auto and Diesel mechanics;  
Machine Shop Craft Practice;  
Draughtsmanship;  
Welding;  
Plumbing;  
Masonry;  
Carpentry;  
Junior Building Technician's Course;  
Mechanical Engineering Technician's Course.

All training programmes in the fields of mechanical and building engineering from craft to supervisory levels.

(vi) HOME ECONOMICS:

(Craft and Technician levels)  
Clothing and Textiles;  
Food and Nutrition;  
Tailoring Craft;  
Housekeeper's Craft;  
Dressmaking and Design;



Advanced Dressmaking and Design;

Institutional Management - All training programmes in fields related to management in the home, hospitals, sanatoria, child welfare clinics and homes for the handicapped, at all levels.

(vii) GRAPHIC AND APPLIED ARTS:

(Craft and Technician Levels):

Commercial Art;

Jewellery;

Bookbinding and Warehouse;

Letterpress Printing;

Compositors' Work;

Photolithography - Camera operators;

Offset Printing and Proving.

All training programmes related to the world of Printing in its diversified forms including Advertising etc.

PERSONNEL:

(a) Recruitment:

(i) Primary School Leavers

(ii) Secondary School Leavers;

(iii) Recruits from Industry.

(b) Throughput:

Student intake in March, 1973, equalled 1,857 of whom 689 were registered for full-time day courses and 1,168 were registered for evening courses.

(c) Destination of Leavers:

Local Industry, Government, Commerce etc.

(d) Follow up of Leavers:

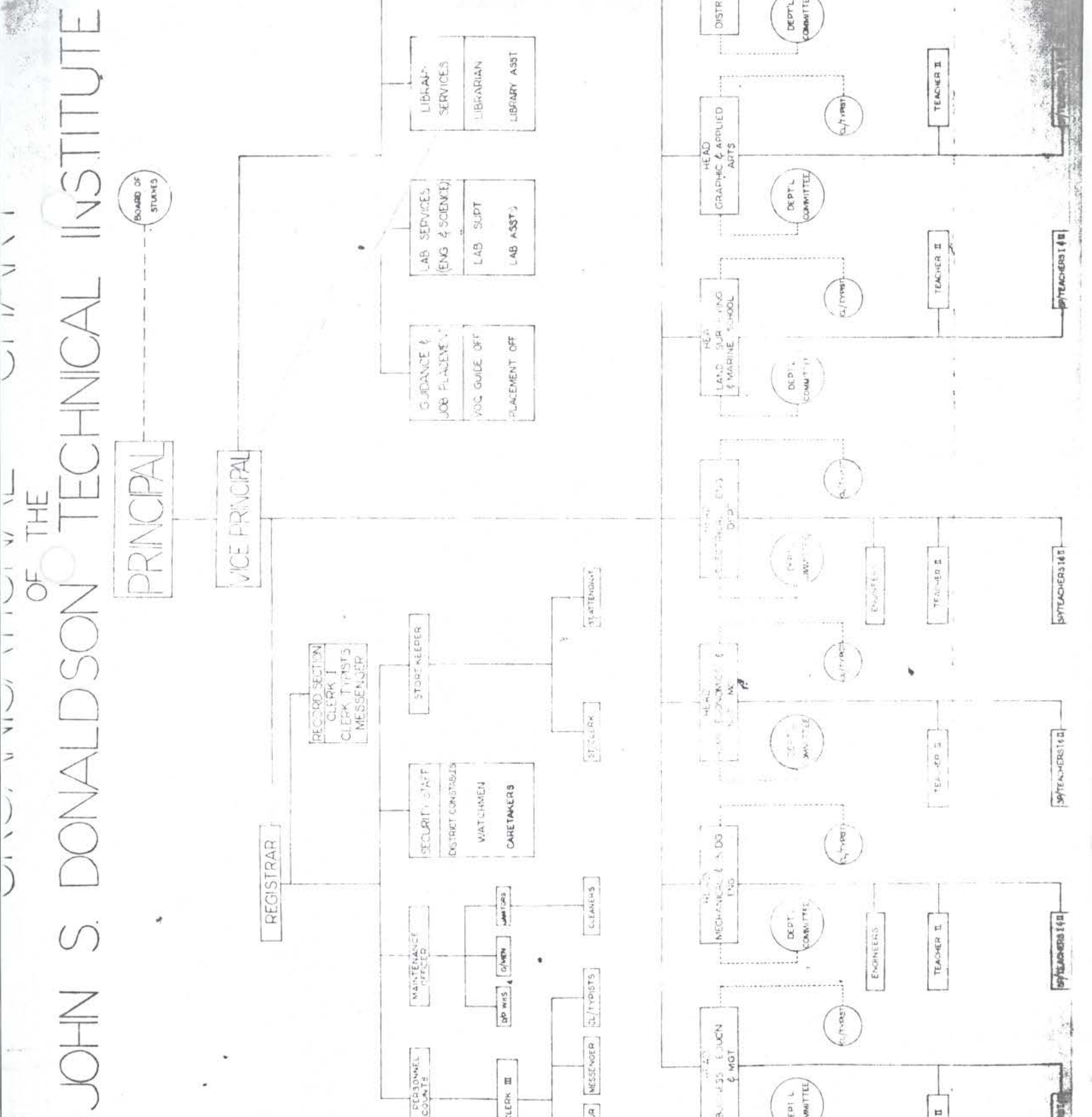
No machinery available at present.

FUNDING: Government of Trinidad and Tobago

INSTITUTIONAL FRAMEWORK:

The organisational chart of the John S. Donaldson Technical Institute is attached.

The staffing situation at the Institute as at 31st May, 1973, was as follows:



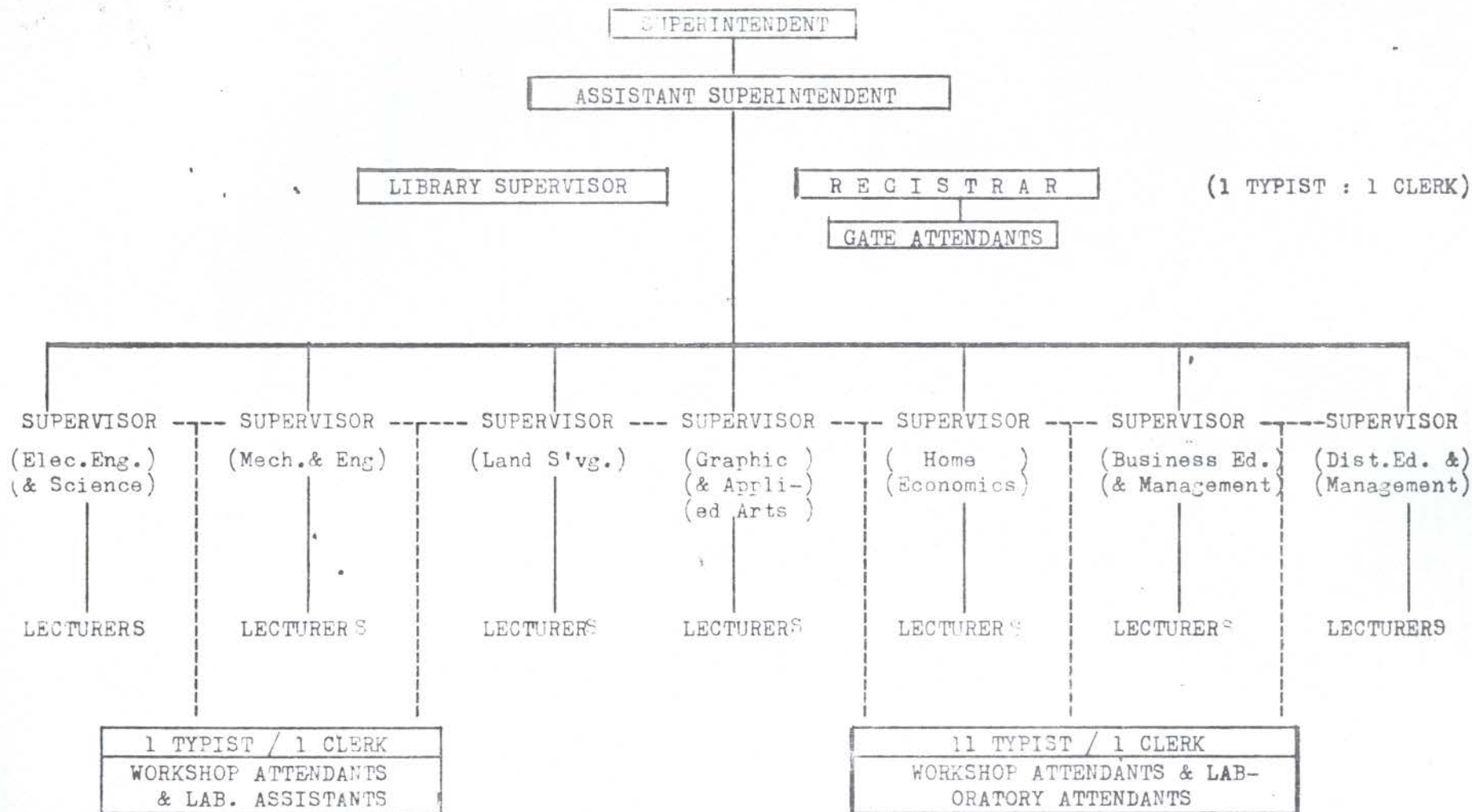
## MESSENGERS:

S. Ramsamooj (on leave)  
P. Bacchus (Temp.)  
R. Rodriguez

## TELEPHONE OPERATORS:

Mrs. Y. Marson-Crichlow  
Miss H. Alexander





ORGANIZATIONAL CHART OF THE EVENING SCHOOL STAFF  
OF THE JOHN S. DONALDSON TECHNICAL INSTITUTE

PRINCIPAL: N. J. Masson, Ph.D. (Leeds), DIC (Pet. Eng.)  
A.C.G.I. (Mech. Eng.), B.Sc.  
(Mech. Eng.), 1st Class Hons.,  
London, C. Eng., M.I. Mech. E.,  
A.M.I. Mar. E., A.F.Inst.Pet.,  
A.M.B.I.M.

VICE PRINCIPAL: A. B. Alleyne, B.Sc. (U.W.I. - London), M.Sc.  
(U.W.I. - London).

CENTRAL STAFF

LIBRARY STAFF:

LIBRARIAN: Miss E. Ramatallie, ALA, Teachers' Dip.  
LIBRARY ASSISTANT: Miss J. John.  
TYPIST: Miss M. Hunte.

REGISTRAR/SECRETARY: K. Henry (Acting).

VOCATIONAL GUIDANCE OFFICER: W. Edinborough.

PLACEMENT OFFICER: (Vacant).

REGISTRAR'S STAFF:

Mrs. Z. Maharaj  
S. Mohammed  
L. Henry  
Miss G. Blackett  
Miss S. Solomon  
Miss C. Nelson

STOREKEEPER & STORES  
ASSISTANTS:

W. Licorish (Storekeeper)  
D. Inglesbirth  
R. Zamore  
Miss M. Cumberbatch

CENTRAL OFFICE STAFF:

Head of Personnel/Accounts	:	J. Pargass
Clerical Officer III	:	Mrs. V. Barrow
Clerical Officer II	:	Miss J. Fernando
Clerk Stenographer II	:	Miss R. Bannister
Clerk I (Temp.)	:	Miss A. Francis
Clerk Typist I	:	Mrs. C. Baird-Balfour
Clerk Typist I	:	Miss S. Trim-Henry

MESSENGERS:

S. Ramsamooj (on leave)  
P. Bacchus (Temp.)  
R. Rodriguez

TELEPHONE OPERATORS:

Mrs. Y. Marson-Crichlow  
Miss H. Alexander



SECURITY STAFF:

L. Archibald  
O. Coombs  
M. Kennedy  
J. Hopkinson

JANITORS:

C. Potter  
D. Fox

VEHICLE OPERATOR:

E. Baird

CARETAKERS:

O. Jack  
U. Thomas  
A. Hall (Temp.)  
R. Fisher

WATCHMEN:

E. Walcott  
J. Sammy  
V. Smith  
W. West

GROUNDSMEN:

Rajab Ali  
Daniel Jugoon

LABORATORY SUPERINTENDENT:

(Vacant)  
G. Hackshaw (Part-Time)

WORKSHOP SUPERINTENDENT: I. Ramnarine

WORKSHOP/LABORATORY STAFF:

N. Ali (Part-time); L. Franklyn (N.C.D.); H. Finley-Morgan; E. Welch;  
R. Hope; T. Goddard; G. Rampaul; Miss I. Le Maitre; T. Adams (Part-time); A. Brumble (Part-time); O. Ali (Part-time).

MAINTENANCE OFFICER: (Vacant), S. Jones (Part-time).

DAILY PAID STAFF:

K. Grosvenor; R. Clarke; M. Audain; H. Patrick; M. Joseph; L. Phillips;  
E. Walcott; C. Hoyte (Part-time); J. Pierre (Part-time); E. George.

CLEANING STAFF:

B. Bridgeman; C. Cambridge-Charles; G. Cambridge; J. Clarke;  
C. Clarke; W. David; P. Davidson; M. Charles; L. Davis; L. Johnson;  
U. Jordan; O. Joseph. J. Matthews; H. McLeod; A. Mottley; E. Murray;  
A. Pascall; G. Prescott; S. Rosemain; R. Tappin; D. Taylor; I. Jack;  
J. Hannibal; A. Warren.

DEPARTMENT OF ELECTRICAL ENGINEERING

(FULL-TIME STAFF):

HEAD OF DEPARTMENT: R. Choate (Acting).

LECTURERS:

O. Baird; J. Beharry; R. Mitchell; D. Christian; J. Roy; H. Gaskin  
(on Scholarship); F. Richards; S. Ramnarine.

ELECTRONICS AND RADIO AND TELEVISION:

F. Archer; Mrs. D. Moore; F. Reid; E. Richardson; K. Smith.

AIR CONDITIONING AND REFRIGERATION: H. Waldron.

SCIENCE (Shared with Mechanical/Building and Surveying Departments):

M. Bissoo; T. Davis; K. Cordner; R. Sosa.

CONSULTANT: Dr. St. Clair King.

LABORATORY ASSISTANTS:

N. Ali (Electronics Laboratory); I. Le Maitre (Physics Laboratory);  
K. Sultan (Chemistry Laboratory).

CLERK/TYPIST: N. Wajid Ali.

PART-TIME STAFF:

SUPERVISOR: R. Choate.

LECTURERS:

D. Christian; D. Charles; K. Cordner; T. Davis; M. Douglas;  
D. Edwards; F. Gangar; T. Huggins; S. Jack; E. A. Jardine; F. John;  
C. Laird; F. A. Lera; L. Louis; J. Martinez; N. Mendoza; P. Patel;  
E. Ramrattan; J. Roy; L. A. Roberts; E. Richardson; F. Reid; R. Sosa;  
H. Waldron; O. Young.

LABORATORY ASSISTANTS:

I. Le Maitre (Biology); D. Inglesbirth (Chemistry); S. George  
(Electrical); S. Mohammed (Electrical); R. Stephen (Physics);  
M. Shand (Glass Blowing); K. Sultan (Glass Blowing).

CLERK/TYPIST: N. Wajid Ali.

DEPARTMENT OF GRAPHIC AND APPLIED ARTS

(FULL-TIME STAFF):

HEAD OF DEPARTMENT: P. Welsh.

LECTURERS:

J. Farrell; E. Gray; G. Crichlow; H. Sheafe; M. Gill; N. Gonzales;  
C. Lee-Neptune; W. Archibald; C. Reveillac (Part-Time); L. Busby  
(Part-Time).

CLERK/TYPIST: Mrs. E. Reid.

PART-TIME STAFF:

SUPERVISOR: P. Welsh



LECTURERS:

E. Lewis; C. John; L. Gray; H. Sheafe; C. Beveillac; N. Gonzales;  
Mrs. M. Gill; L. Busby; G. Crichlow.

DEPARTMENT OF MECHANICAL AND BUILDING

ENGINEERING

(FULL-TIME STAFF):

HEAD OF DEPARTMENT: J. Burgess (Acting).

LECTURERS:

C. Austin; C. Bobb; A. Bowen; C. De Merieux; M. Douglas;  
C. Du Berry; C. Edwards; D. Edwards; F. Gangar; A. Gill;  
J. Hernandez; S. Jack; K. Johnson; G. Joseph; C. Laird;  
P. Lewis; N. Mendoza; A. Muradali; S. Persad; T. Peters;  
E. Ramrattan; S. Sebro; L. Vilain; G. Waldron (Mrs.);  
N. Warner-Paul.

CLERK/TYPIST: Miss J. Wade.

WORKSHOP ASSISTANTS:

L. Franklyn; E. George; G. Rampaul; T. Adams; R. Hope; E. Welch.

PART-TIME STAFF:

SUPERVISOR: J. Burgess.

LECTURERS:

C. D. Alexander; C. Austin; C. Bacchus; W. H. Benjamin; C. Bobb;  
A. Bowen; C. De Merieux; J. C. Douglas; C. Du Berry; C. Edwards;  
D. Edwards; R. Edwards; F. Gangar; A. Gill; C. Harvey J. Hernandez;  
S. Jack; K. Johnson; G. Joseph; C. John; C. Laird; P. Lewis;  
N. Mendoza; H. Nurse; M. Wyke; O. Burns; L. Roberts; Z. Mohammed;  
L. H. Gloudon; A. Pierre; C. Celestin; N. Warner-Paul.

DEPARTMENT OF DISTRIBUTIVE EDUCATION AND MANAGEMENT

(FULL-TIME STAFF):

HEAD OF DEPARTMENT: E. Lau.

LECTURERS: H. E. Beckles; C. Balkaran.

CLERK/TYPIST: Mrs. M. Williams.

PART-TIME STAFF:

SUPERVISOR: E. Lau.

LECTURERS:

E. Beharry; H. Beckles; N. Smith; Miss L. Horne; Dr. R. Marciano;  
E. Holdip; C. Balkaran.

DEPARTMENT OF LAND SURVEYING (INCLUDING  
MARINE SCHOOL):  
(FULL-TIME STAFF):

HEAD OF DEPARTMENT: C. L. A. Williams.

LECTURERS: C. C. Rudder; J. Bartholomew.

PART-TIME STAFF:

SUPERVISOR: C. L. A. Williams.

LECTURERS:

J. Allard; Dr. M. W. Chin; J. Bartholomew; C. C. Rudder;  
C. L. A. Williams; F. Charles; M. Wyke; C. Taylor; C. Joseph.

COMPUTER PROGRAMMING COURSE:

LECTURERS:

J. Babooram; A. Rafeek; M. Donelan.

DEPARTMENT OF HOME ECONOMICS  
(FULL-TIME STAFF):

HEAD OF DEPARTMENT: Miss D. Edwards.

LECTURERS:

Miss P. Massiah; Miss V. Horsham; Mrs. C. Bryan; Mrs. S. Woodroffe;  
Mrs. E. Fraser; D. Modeste.

CLERK/TYPIST: Mrs. N. Isaac.

PART-TIME STAFF:

SUPERVISOR: Miss D. Edwards.

LECTURERS:

Mrs. O. Bryan; Mrs. S. Woodroffe; Mrs. E. Fraser; Mrs. M. Charbonne;  
Mrs. S. Pierre; Mrs. L. Nicholls; Miss E. Ferdinand; D. Modeste;  
V. King; B. Ramkissoon; O. Burns; C. Phillips.

DEPARTMENT OF BUSINESS EDUCATION AND MANAGEMENT  
(FULL-TIME STAFF):

HEAD OF DEPARTMENT: M. Daniel.

LECTURERS:

Mrs. R. White; Miss F. Ferreira; Mrs. S. Soverall; Mrs. M. Agostini;  
F. W. Hosein; Miss R. Wilford; R. Makaraj; M. Narine; Mrs. E.  
Browne; Mrs. D. Mason; Mrs. F. Lindsay; Miss E. Nurse.

CLERK/TYPIST: Miss J. Thomas.



PART-TIME STAFF:

SUPERVISOR: M. Daniel.

LECTURERS:

C. R. Lindsay; W. Mckell; M. Daniel; K. Mitchell; Miss F. Ferreira;  
Mrs. F. Lindsay; Miss E. Nurse; Mrs. M. Latchman; Mrs. M. Frederick;  
Mrs. F. Ahye; F. P. Medina; Mrs. G. Tangyuk; E. Maundy; M. Ali;  
U. Baksh; H. O'Brian; W. La Borde; Mrs. M. Jonvey.

BUDGET:

The budget for the fiscal year January, 1973, - December, 1973,  
is as follows:

Personal Emoluments	\$1,065,000
Operating Expenditure	206,000
Fees for Part-Time Lecturers	250,000
	<hr/>
TOTAL:	\$1,521,000 TT
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TELECOMMUNICATIONS TECHNICIANS EDUCATION AND  
TRAINING AT PRESENT OFFERED AT JOHN S.  
DONALDSON TECHNICAL INSTITUTE:

INTRODUCTION:

In January, 1970, the John S. Donaldson commenced education and training of telecommunication technicians in collaboration with the Trinidad and Tobago External Telecommunications Company Limited (TEXTEL) and the Trinidad and Tobago Telephone Company Limited (TELCO).

COURSES:

The specific courses followed are Part I and II of the Telecommunications Technicians' Course of the City and Guilds of London Institute and are provided on a full-time basis (30 hr/week) over a period of one (1) calendar year. The subjects of the courses are as follows:

PART I

(JANUARY - JUNE)

- (Ia) Telecommunications Principles 'A'.
- (Ib) Radio and Line Transmission 'A'.
- (Ic) Mathematics 'A'.
- (Id) Elementary Telecommunications Practice.
- (Ie) General Studies.

PART II

(AUGUST - DECEMBER)

- (IIa) Telecommunications Principles 'B'.
- (IIb) Radio and Line Transmission 'B'.
- (IIc) Mathematics 'B'.
- (IId) Telephony and Telegraphy 'A'.
- (IIe) General Studies.

STAFFING:

Under existing arrangements two members of the technical staff at TEXTEL and TELCO teach the subjects listed at Ia, Ib, Id, IIa, IIb, and IId of the foregoing. The salaries of these teachers are paid by their firms. The remaining subjects of the course are taught by full-time staff attached to the Institute.

STUDENT INTAKE/OUTPUT:

Since the commencement of the programme at the Institute, forty-eight (48) students have completed the two courses successfully. At present seventeen (17) students are undergoing education and training in telecommunications at the Institute and these have recently taken Part I examinations.



FACILITIES:

Classes are at present conducted in the Telecommunications' Laboratory (area : 1,200 sq. ft.) at the Institute. This work-area is a constituent laboratory of the Electrical Engineering complex (Block 'D') of total floor area equal to 7,000 sq. ft.

Air-conditioning of the Telecommunication's Laboratory is provided by installations donated to the Institute by TEXTEL and TELCO.

Ancillary services by way of general utilities, security, cleaning etc. are provided for by the Institute.

## ORGANIZACION DEL PROYECTO

Responsabilidades generales

1. El Gobierno, el PNUD y el Organismo de Ejecución serán solidariamente responsables de la ejecución del proyecto y de la realización de sus objetivos descritos en la parte II de este Documento del Proyecto.
2. El Gobierno proporcionará para el proyecto personal nacional, servicios de capacitación, terrenos, edificio, equipo y otros servicios y medios necesarios. Designará al Organismo Gubernamental de Cooperación indicado en la portada de este documento, denominado en adelante "Organismo de Cooperación", que será directamente responsable del cumplimiento de la contribución del Gobierno al proyecto.
3. El PNUD se compromete a complementar la participación del Gobierno y proporcionará por intermedio del Organismo de Ejecución los expertos, la capacitación, el equipo y otros servicios necesarios con cargo a los fondos asignados al proyecto.
4. Al comenzar el proyecto se podrá pedir al Organismo de Ejecución que asuma la responsabilidad primordial de su ejecución. Sin embargo, esa responsabilidad primordial se ejercerá en consulta con el Organismo de Cooperación y de común acuerdo con el mismo. En el Plan de Trabajo del proyecto se estipularán las disposiciones para este fin, así como las disposiciones relativas al traspaso de esta responsabilidad al Gobierno o a una entidad designada por el Gobierno durante la ejecución del proyecto.
5. Parte de la participación del Gobierno podrá ser una contribución en efectivo al PNUD. En esos casos el Organismo de Ejecución proporcionará los servicios y medios correspondientes, y cada año rendirá cuenta al PNUD al Gobierno de los gastos efectuados.

Participación del Gobierno

6. El Gobierno proporcionará para el Proyecto los servicios, el equipo y medios en las cantidades y plazos especificados en el Plan de Trabajo. En el presupuesto del proyecto figurará la consignación presupuestaria (en especie o en efectivo) correspondiente a la participación del Gobierno.
7. El Organismo de Cooperación designará, en consulta con el Organismo de Ejecución un Director del Proyecto de dedicación exclusiva, quien asumirá en el proyecto las funciones que le asigne el Organismo de Cooperación.
8. El costo estimado de las partidas incluidas en la contribución del Gobierno, detalladas en el presupuesto del proyecto, se basará en la mejor información disponible en el momento de presentar esta propuesta sobre el proyecto. Queda entendido que las variaciones de precios durante el período de ejecución del proyecto puede hacer necesario un ajuste de la contribución del Gobierno en términos monetarios; esta contribución se determinará en todos los casos a base del valor de los servicios, del equipo y los medios necesarios para la correcta ejecución del proyecto.
9. Dentro del número dado de meses-hombre de servicios descritos en el Plan de Trabajo, el Gobierno podrá en consulta con el Organismo de Ejecución, hacer pequeños ajustes en las tareas asignadas a cada miembro del personal del proyecto que él mismo proporcione, si ello es conveniente para la ejecución satisfactoria del proyecto.
10. El Gobierno seguirá pagando los sueldos locales y los subsidios correspondientes al personal nacional del proyecto mientras esté ausente del proyecto para hacer uso de becas del PNUD.



11. El Gobierno costeará todos los derechos de aduana y otros gastos relacionados con la importación del equipo del proyecto, su transporte, carga y descarga, almacenamiento y gastos conexos en el país. Será responsable de la custodia del equipo, su instalación y mantenimiento, seguro y, en caso necesario, reemplazo, una vez entregado en el lugar del proyecto.
12. El Gobierno pondrá a disposición del proyecto - con sujeción a las disposiciones vigentes sobre seguridad - cualesquiera informes, publicados o no, mapas, documentos y otros datos que se consideren necesarios para la ejecución del proyecto.
13. El Gobierno prestará asistencia a todo el personal del proyecto en la búsqueda de vivienda adecuada a alquileres razonables.
14. Los servicios y medios para el proyecto especificados en el Plan de Trabajo, respecto de los cuales el Gobierno habrá de proporcionar una contribución en efectivo, figurarán en el Presupuesto del Proyecto. El Gobierno pagará esta suma al PNUD en moneda nacional, de conformidad con el Plan de Pagos.
15. El pago por el Gobierno de la mencionada contribución al PNUD en las fechas especificadas en el Plan de Pagos o antes es un requisito previo para comenzar - o continuar, según el caso - las operaciones del proyecto.

#### Participación del PNUD y del Organismo de Ejecución.

16. El PNUD proporcionará para el proyecto, por intermedio del Organismo de Ejecución, los servicios, el equipo y los medios descritos en el Plan de Trabajo. La consignación presupuestaria correspondiente a la contribución del PNUD figurará en el Presupuesto del Proyecto, según se ha especificado.
17. El Organismo de Ejecución consultará con el Gobierno acerca de la candidatura del Director del Proyecto <sup>1)</sup> quien, bajo la dirección del Organismo de Ejecución, será responsable en el país de la participación del Organismo de Ejecución en el proyecto. El Director del Proyecto supervisará a los expertos y demás personal del Organismo asignado al proyecto, así como la capacitación en el servicio del personal nacional del proyecto. Será responsable de la administración de todo el equipo proporcionado para el proyecto con cargo a los fondos del PNUD.
18. El Organismo de Ejecución, en consulta con el Gobierno, asignará personal internacional y otro personal al proyecto según lo especificado en el Plan de Trabajo, seleccionará candidatos para las becas y determinará las normas para la capacitación del personal nacional del proyecto.
19. Las becas serán otorgadas de conformidad con las normas pertinentes del Organismo de Ejecución.
20. El Organismo de Ejecución podrá, de común acuerdo con el Gobierno y el PNUD, ejecutar parte o la totalidad del proyecto por subcontratación. La selección de subcontratistas se hará previa consulta con el Gobierno, de conformidad con los procedimientos del Organismo de Ejecución.
21. Todo el material, equipo y suministros adquiridos con recursos del PNUD se utilizarán exclusivamente para la ejecución del proyecto y serán de propiedad del PNUD, en cuyo nombre los tendrá el Organismo de Ejecución. El equipo suministrado por el PNUD llevará las insignias del PNUD y del Organismo de Ejecución.

1) Que también se podrá denominar Jefe del Equipo o Asesor Técnico Principal, según corresponda.



22. En caso necesario se podrá hacer arreglos para el traspaso temporario de la custodia del equipo a las autoridades locales durante el período del proyecto, sin perjuicio de su transferencia definitiva.

23. Antes de dar por terminada la asistencia del PNUD para el proyecto, el Gobierno, el PNUD y el Organismo de Ejecución se consultarán sobre el destino final de todo el equipo del proyecto proporcionado por el PNUD. El título de propiedad de dicho equipo normalmente se transferirá al Gobierno o a una entidad designada por el Gobierno, cuando se necesite para continuar las operaciones del proyecto o para actividades directamente resultantes del mismo. Sin embargo, el PNUD podrá retener el título de propiedad sobre una parte o la totalidad de ese equipo.

24. En el momento convenido y una vez que se haya dado por terminada la asistencia del PNUD para el proyecto, el Gobierno y el PNUD y, en caso necesario, el Organismo de Ejecución, examinarán las actividades ulteriores o consiguientes del proyecto con miras a evaluar sus resultados.

#### Facilidades, privilegios e inmunidades

##### Personal del PNUD y del Organismo de Ejecución

25. De conformidad con el Acuerdo concertado por el PNUD y el Gobierno sobre la prestación de asistencia, se otorgarán al personal del PNUD y de otras organizaciones de las Naciones Unidas vinculado al proyecto, las facilidades, privilegios e inmunidades especificados en dicho Acuerdo.

##### Subcontratistas y su personal

26. Los contratistas del Organismo de Ejecución y su personal (excepto los nacionales empleados localmente):

(a) Tendrán inmunidad respecto de los procesos judiciales relacionados con todos los actos que cumplan en su carácter oficial durante la ejecución del proyecto

(b) Tendrán inmunidad respecto de las obligaciones del servicio nacional;

(c) Tendrán inmunidad, junto con sus cónyuges y familiares a cargo, respecto de las restricciones a la inmigración;

(d) Tendrán el privilegio de introducir en el país sumas razonables de moneda extranjera para los fines del proyecto o para su uso personal, y de retirar dichas sumas introducidas en el país o, de conformidad con las normas cambiarias pertinentes de retirar las sumas que pudieran ganar en el país durante la ejecución del proyecto

(e) Tendrán derecho, junto con sus cónyuges y familiares a cargo, a las mismas facilidades de repatriación que los enviados diplomáticos en caso de crisis internacional.

27. Todo el personal de los contratistas del Organismo de Ejecución tendrá derecho a la inviolabilidad de todos los papeles y documentos relacionados con el proyecto.

28. El Gobierno eximirá del pago - o se hará cargo del pago - de todo impuesto, derecho o gravamen a las firmas u organizaciones extranjeras contratadas por el Organismo de Ejecución y el personal extranjero de esas firmas u organizaciones en lo tocante a:

(a) Sueldos o salarios percibidos por dicho personal en la ejecución del proyecto.



(b) Todo equipo, materiales o suministros introducidos en el país para los fines del proyecto o que, una vez introducido en el país, deban ser posteriormente retirados del mismo;

(c) Toda cantidad considerable de equipo, materiales y suministros adquiridos localmente para la ejecución del proyecto como, por ejemplo, gasolina y piezas de repuesto para el uso y el mantenimiento del equipo mencionado en el inciso (b) supra, en la inteligencia de que los tipos y las cantidades aproximadas cubiertos por la exención, y los procedimientos pertinentes que deberán aplicarse se determinarán de común acuerdo con el Gobierno y, cuando corresponda, figurarán en el Plan de Trabajo;

(d) Como en el caso de las concesiones otorgadas actualmente al personal del PNUD y del Organismo de Ejecución, toda propiedad introducida en el país (incluso un automóvil de propiedad personal de cada empleado) por la firma u organización o por su personal para su uso o consumo particular o que, una vez introducida en el país, pueda posteriormente ser retirada del mismo con motivo de la partida de dicho personal.

29. El Organismo de Ejecución podrá renunciar a los privilegios e inmunidades a que puedan tener derecho dichas firmas u organizaciones y su personal cuando a su juicio o a juicio del PNUD, la inmunidad sea un obstáculo para la acción de la justicia y pueda renunciarse a ella sin perjuicio para la feliz realización del proyecto o para los intereses del PNUD o del Organismo de Ejecución.

30. El Organismo de Ejecución proporcionará al Gobierno, por conducto del representante residente, una lista del personal al que se aplicarán los privilegios e inmunidades enumerados más arriba.

. . . .