

4. Field Survey Data in Rural Areas

Questionnaire to Local Governments (District)
(Regional data)

Date : _____

1. Name of Area ()

2. Geographical Conditions

(1) Size of Area

() sq. Km)

(2) Geography

Mountain (%)

Hilly (%)

Flat (%)

3. Population of the area

(1) Labour Population

a) Sector by Sector

Name of Sector	Pop. ('000)
1. Agriculture (with peasant)	
2. Industry	
3. Tourism	
4. Others	

(2) Growth rate (91/92)

a) Economic growth rate (p.a.)

b) Population growth rate (p.a.)

4. Main Products

	Assortment
1st	
2nd	
3rd	
4th	

5. Regional development Plan

6. Number of Social Facilities that related to this office (1/2)

No.	Item	The number of each item (County by County)		
1	Government offices			
2	Police station			
3	Hospital			
4	Health unit			
5	Hotel			
6	Large Lodge			
7	Secondary school			
8	High Secondary school			
9	College / University			
10	Theater			
11	Bank			
12	Factory (Large scale)			
13	Store (Large scale)			
14	Filling Station			
15	Other Public installations			

6. Number of Social Facilities that related to this office (2/2)

No.	Item	The number of each item (County by County)		
1	Government offices			
2	Police station			
3	Hospital			
4	Health unit			
5	Hotel			
6	Large Lodge			
7	Secondary school			
8	High Secondary school			
9	College / University			
10	Theater			
11	Bank			
12	Factory (Large scale)			
13	Store (Large scale)			
14	Filling Station			
15	Other Public installations			

7. Communication method between and among offices of National/Regional Administration

(1) From/to Ministry

1st ()
2nd ()
3rd ()

(2) From/to County

1st ()
2nd ()
3rd ()

Thank you for your cooperation !

Table 4-1 Telephone Demand at Sample District

Name of Regions	CENTRAL			EASTERN			NORTHERN			WESTERN		
	MPIGI	SOROTI	ARUA	MOROTO	KITOO	RUKUNGIRI	KABAROLE	KSORO				
Name of Districts	A1	A2	B	C	D	E						
Category of Sample Areas	6	9	8	6	3	7						
Number of County & Municipality												
Population	960,131	452,179	670,238	133,246	205,929	410,553	784,607	136,132				
Urban Population	144,068	48,616	28,065	13,638	10,193	13,642	38,825	7,884				
Urbanization Rate (%)	15.01	10.75	4.19	7.44	4.95	3.32	4.95	4.01				
Geographical Conditions												
Size of Area (sq. Km)	6,222	10,060	7,830	14,113	13,208	2,753	8,391	692				
Mountain	X (15%)	X (8%)	X (13%)	X (5%)	-	X (10%)	X (30%)	X (50%)				
Hilly	X (75%)	-	-	X (15%)	X (10%)	X (50%)	X (60%)	X (40%)				
Flat	X (10%)	X (93%)	X (87%)	X (80%)	X (80%)	X (40%)	X (10%)	X (10%)				
Government Offices	N/A	50	89	47	30	37	N/A	14				
Post Office	14	6	6	1	1	6	7	2				
Police Station	26	5	8	7	5	1	25	1				
Hospital	57	3	2	2	2	3	3	1				
Health Unit (Included Hospital)		5	55	13	8	19	53	7				
Hotel	1	1	1	1	-	2	33	2				
Large Lodge	N/A	19	1	2	3	11	39	-				
Secondary School	49	16	42	3	3	24	20	5				
High Secondary School	15	2	12	1	1	8	17	2				
College / University	N/A	-	3	1	1	10	1	1				
Theater	10	2	-	-	3	-	35	-				
Bank	13	2	7	1	1	5	9	1				
Other Public Installations	5	-	25	-	10	1	-	-				
Industries / Companies	N/A	2	6	-	-	3	52	-				
Shops	N/A	8	4	-	6	6	32	-				
Filing Station	N/A	6	9	6	1	9	11	1				
Main Industries or Products												
1st	Agriculture	Cotton	Tabacco	Livestock	Cattle	Livestock	Tea	Irish Potatoes				
2nd	Farming	Millet	Maize	Sorghum	Sorghum	Coffee	Maize	Sorghum				
3rd	Timber	Sorghum	Rice	Maize	Maize	Tabacco	Beers / Ground Nuts	Beers				
Communication Method of District Administration Office												
From / to Ministry Administration Office	N/A	Telephone / Vehicle	Post Office / messenger	Vehicle / Telephone	Vehicle / Post Office	Vehicle / Telephone	Telephone / Post Office	Telephone / EWS				
From / to County Administration Office	N/A	Vehicle / Bicycle	Messenger	Vehicle / Radio Calls	Vehicle / Post Office	Vehicle	Post Office / Vehicle	Messenger				

Questionnaire to Local Governments (County Office)
(Regional data)

Date : _____

1. Name of Area ()

2. Geographical Conditions

(1) Size of Area

() sq. Km)

(2) Geography

Mountain (%)

Hilly (%)

Flat (%)

3. Population of the area

(1) Labour Population

a) Sector by Sector

Name of Sector	Pop. ('000)
1. Agriculture (with peasant)	
2. Industry	
3. Tourism	
4. Others	

(2) Growth rate (91/92)

a) Economic growth rate (p.a.)

b) Population growth rate (p.a.)

4. Main Products

	Assortment
1st	
2nd	
3rd	
4th	

5. Regional development Plan

6. Number of Social Facilities that related to this office (1/2)

No.	Item	The number of each item (Sub county by Sub county)		
1	Government offices			
2	Police station			
3	Hospital			
4	Health unit			
5	Hotel			
6	Large Lodge			
7	Secondary school			
8	High Secondary school			
9	College / University			
10	Theater			
11	Bank			
12	Factory (Large scale)			
13	Store (Large scale)			
14	Filling Station			
15	Other Public installations			

6. Number of Social Facilities that related to this office (2/2)

No.	Item	The number of each item (Sub county by Sub county)		
1	Government offices			
2	Police station			
3	Hospital			
4	Health unit			
5	Hotel			
6	Large Lodge			
7	Secondary school			
8	High Secondary school			
9	College / University			
10	Theater			
11	Bank			
12	Factory (Large scale)			
13	Store (Large scale)			
14	Filling Station			
15	Other Public installations			

7. Communication method between and among offices of Regional/Local Administration

(1) From/to Regional (District Office)

1st ()
2nd ()
3rd ()

(2) From/to Sub-County

1st ()
2nd ()
3rd ()

Thank you for your cooperation !

Table 4-2 Telephone Demand at Sample County (1/13)

Region : Central District : Mpigi County : Butambala Category : A1
(Pop. 77,811)

Name of Sub - County	Budde	Bulo	Kalamba	Kibibi	Ngendo
Telecom. Post Office	-	X	X	X	-
Telecom. Telephone Office	-	X	-	X	-
Number of Parish	4	5	5	7	4
Population	9,908	14,259	18,045	21,429	14,170
Urban Population (Kibibi , Gomba)	0	0	0	9,073	0
Urbanization Rate (%)	0	0	0	14.94	0
Government Offices	6	7	7	8	6
Post office	-	1	1(A)	1(A)	-
Police Station	1	1	1	1	1
Hospital	-	-	-	1	-
Health Unit	1	1	3	3	1
Hotel	-	-	-	-	-
Large Lodge	-	-	-	-	-
Secondary School	2	2	4	2	1
High Secondary School	-	-	-	2	-
College / University	-	-	1	-	-
Theater	1	1	1	1	-
Bank	-	1	-	1	-
Other Public Installations	1	1	1	3	1
Industries / Companies Large Scale	1	1	2	1	-
Large Scale	1	1	2	3	1
Medium Scale	2 (*)	3 (*)	3	5	2 (*)
Filling Station	1	1	1	1	-
Telephone 1. Govt. Office	6	7	7	6	6
Demand 2. Social Facilities / Others	6	8	12	15	4
3. Indus. / Compon. / Shops	5	6	8	10	3
4. Residents (*)	10	13	16	20	8
Total Telephone Demand	27	34	43	53	21
Demand Density per 100 population (%)	0.27	0.24	0.24	0.25	0.15
Communication Method of County Administration Office					
From / to District Administration Office	Post Office / Travel (Vehicles)				
From / to Sub - County Administration Offices	Post Office / Travel (Vehicles)				
Main Products of County	Coffee / Banana / Cassava / Pigeon				
Average Annual Income per Person	500,000 Uganda Shs				

NOTE : - NO POST OFFICE / NO TELECOM. FACILITY
 X EXISTING POST OFFICE / EXISTING TELECOM. FACILITIES
 (X) EXISTING TELECOM. FACILITIES BUT DAMAGED
 (A) AGENCY POST OFFICE
 (*) ESTIMATED DATA BY STUDY TEAM

Table 4-3 Telephone Demand at Sample County (2/13)

Region : Central District : Mpigi County : Mawokota Category : A1
 (Pop. 155,335)

Name of Sub - County	Kamungo	Kituntu	Muduma	Nwozi	Buwama	Mpigi	Kringente	Mpigi Town Council
Telecom. Post Office	X	-	-	-	X	-	-	X
Telecom. Telephone Office	-	-	-	-	X	-	-	X
Number of Parish	8	7	7	7	10	7	5	4
Population	28,048	17,728	20,029	25,396	32,929	28,024	10,584	7,652
Urban Population (Mpigi T.C., Buwama)	0	0	0	0	2,406	0	0	7,652
Urbanization Rate (%)	0	0	0	0	7.31	0	0	100.00
Government Offices	5	2	2	4	3	5	1	11
Post office	1(A)	-	-	-	1	-	-	1
Police Station	1	1	1	1	1	1	-	1
Hospital	-	-	-	1	-	-	-	-
Health Unit	3	1	1	2	3	1	1	1
Hotel	-	-	-	-	-	-	-	-
Large Lodge	-	-	-	1	2	1	-	-
Secondary School	2	1	1	1	1	2	1	-
High Secondary School	-	-	-	-	1	-	-	-
College / University	1	-	-	1	1	-	-	-
Theater	1	1	-	1	1	2	1	-
Bank	(1)	-	(1)	1	2	2	-	-
Other Public Installations	-	-	-	-	-	-	-	-
Industries / Companies	3	-	3	1	5	3	-	-
Large Scale	2	1	2	2	3	6	-	-
Medium Scale	6 (*)	7 (*)	5 (*)	14 (*)	8	9 (*)	12 (*)	12
Filling Station	1	(1)	1	2	(1)	2	-	-
Telephone Demand	5	2	2	4	3	5	1	11
1. Govt. Office	10	4	4	9	13	9	4	3
2. Social Facilities / Others	12	9	11	19	17	20	12	12
3. Indus. / Compan. / Shops	26	9	16	31	32	32	15	25
4. Residents (*)	43	24	27	51	53	54	27	42
Total Telephone Demand	0.15	0.14	0.13	0.20	0.16	0.23	0.26	0.55
Demand Density per 100 population (%)	NOTE : - NO POST OFFICE / NO TELECOM. FACILITY							
Communication Method of County Administration Office	X EXISTING POST OFFICE / EXISTING TELECOM. FACILITIES							
From / to District Administration Office	(X) EXISTING TELECOM. FACILITIES BUT DAMAGED							
From / to Sub - County Administration Offices	(A) AGENCY POST OFFICE							
Main Products of County	(*) ESTIMATED DATA BY STUDY TEAM							
Average Annual Income per Person	180,000 Uganda Shs							

Table 4-4 Telephone Demand at Sample County (3/13)

Region : Eastern District : Soroti County : Kaberamaido Category : A2
(Pop. 42,110)

Name of Sub - County	Alwa	Kaberamaido	Kobutubulu	Ocharo
Telecom. Facilities				
Post Office	-	X	-	-
Telephone Office	-	(X)	-	-
Number of Parish	3	7	4	3
Population	10,159	14,065	8,174	9,712
Urban Population (Kaberamaido T.B.)	0	1,903	0	0
Urbanization Rate (%)	0	13.53	0	0
Government Offices	4	9	7	5
Post office	-	1	-	-
Police Station	-	1	1	1
Hospital	-	-	-	-
Health Unit	1	4	1	1
Hotel	-	-	-	-
Large Lodge	-	2	-	1
Secondary School	-	-	-	-
High Secondary School	-	1	-	-
College / University	-	-	1	-
Theater	-	2	1	-
Bank	-	1	-	-
Other Public Installations	-	3	-	-
Industries / Companies	-	-	1	-
Large Scale	2	4	3	2
Medium Scale	2 (*)	5	3 (*)	5 (*)
Filling Station	1	1	-	-
Telephone Demand	4	9	7	5
1. Govt. Office	1	15	4	3
2. Social Facilities / Others	5	10	6	7
3. Indus. / Compan. / Shops	6	20	10	9
4. Residents (*)	16	54	27	24
Total Telephone Demand	0.16	0.33	0.33	0.25
Demand Density per 100 population (%)				
Communication Method of County Administration Office				
From / to District Administration Office		Travel (Vehicles) / Post Office		
From / to Sub - County Administration Offices		Messengers		
Main Products of County		Sirsim / Millet / Sorghum / Beans		
Average Annual Income per Person		40,000 Uganda Shs		

NOTE : - NO POST OFFICE / NO TELECOM. FACILITY
 X EXISTING POST OFFICE / EXISTING TELECOM. FACILITIES
 (X) EXISTING TELECOM. FACILITIES BUT DAMAGED
 (A) AGENCY POST OFFICE
 (*) ESTIMATED DATA BY STUDY TEAM

Table 4-5 Telephone Demand at Sample County (4/13)

Region : Eastern District : Soroti County : Serere Category : A2

(Pop. 68,809)

Name of Sub - County	Serere / Oib	Kyere	Katera	Alira
Telecom. Post Office	X	-	-	-
Facilities Telephone Office	(X)	-	-	-
Number of Panch	5	5	4	3
Population	15,957	19,130	22,563	6,159
Urban Population	0	0	0	0
Urbanization Rate (%)	0	0	0	0
Government Offices	10	8	8	8
Post office	1(A)	-	-	-
Police Station	1	1	-	-
Hospital	-	-	-	-
Health Unit	1	3	1	1
Hotel	-	-	-	-
Large Lodge	-	-	-	-
Secondary School	2	1	-	-
High Secondary School	-	-	-	-
College / University	-	-	-	-
Theater	1	1	1	1
Bank	-	-	-	-
Other Public Installations	1	1	-	-
Industries / Companies Large Scale	-	1	-	-
Large Scale	3	1	-	-
Medium Scale	12	3 (*)	2 (*)	3 (*)
Filling Station	1	-	-	-
Telephone Demand	10	8	8	8
1. Govt. Office	7	7	2	2
2. Social Facilities / Others	15	4	2	3
3. Indus. / Compan. / Shops	20	11	7	8
4. Residents (*)	53	30	19	21
Total Telephone Demand	0.33	0.16	0.08	0.34
Demand Density per 100 population (%)				
Communication Method of County Administration office				
From / to District Administration Office		Messages / Travel (Vehicles)		
From / to Sub - County Administration Offices		Messages / Travel (Foot)		
Main Products of County		Cotton / Millet & Sorghum / Sinsim / Potepo & Cassava		
Average Annual Income per Person		160,000 Uganda Shs (Farmer)		

NOTE : - NO POST OFFICE / NO TELECOM. FACILITY
 X EXISTING POST OFFICE / EXISTING TELECOM. FACILITIES
 (X) EXISTING TELECOM. FACILITIES BUT DAMAGED
 (A) AGENCY POST OFFICE
 (*) ESTIMATED DATA BY STUDY TEAM

Table 4-6 Telephone Demand at Sample County (5/13)

Region : Eastern District : Soroti County : Usuk Category : A2

Name of Sub - County	Katakwi	Usuk	Ngaram	Kapulan	Toroma	Megoro
Telecom. Post Office	X	-	-	-	X	-
Facilities Telephone Office	(X)	-	-	-	-	-
Number of Parish	8	9	6	3	6	4
Population	23,326	17,939	9,130	6,964	12,729	9,065
Urban Population (Katakwi T.B.)	3,670	0	0	0	0	0
Urbanization Rate (%)	15.73	0	0	0	0	0
Government Offices	17	6	6	6	6	6
Post office	1	-	-	-	1 (A)	-
Police Station	1	3	1	-	1	1
Hospital	-	-	-	-	-	-
Health Unit	2	3	1	(1)	2	1
Hotel	2	-	-	-	-	-
Large Lodge	1	-	-	-	-	-
Secondary School	1	1	-	-	1	-
High Secondary School	-	-	-	-	-	-
College / University	-	-	-	-	-	-
Theater	-	-	-	-	-	-
Bank	(1)	-	-	-	-	-
Other Public Installations	-	-	-	-	-	-
Industries / Companies	-	-	-	-	1	-
Large Scale	2	3	1	1	1	2
Medium Scale	10	5 (*)	3 (*)	3 (*)	8 (*)	5 (*)
Filling Station	(1)	-	-	-	-	-
Telephone Demand	17	6	6	6	6	6
1. Govt. Office	9	7	2	1	5	2
2. Social Facilities / Others	13	6	4	4	10	7
3. Indus. / Compan. / Shops	23	13	7	7	13	9
4. Residents (*)	62	34	19	18	94	24
Total Telephone Demand	0.27	0.19	0.21	0.26	0.27	0.26
Demand Density per 100 population (%)	Communication Method of County Administration Office					
From / to District Administration Office	Travel (Vehicles) / Post Office / Messengers					
From / to Sub - County Administration Offices	Messengers / Travel (Vehicles) / Travel (Foot)					
Main Products of County	Cotton / Millet & Sorghum / Simsim / Poteto & Cassava					
Average Annual Income per Person	40,000 Uganda Shs (Cash Income)					

NOTE : - NO POST OFFICE / NO TELECOM. FACILITY
 X EXISTING POST OFFICE / EXISTING TELECOM. FACILITIES
 (X) EXISTING TELECOM. FACILITIES BUT DAMAGED
 (A) AGENCY POST OFFICE
 (*) ESTIMATED DATA BY STUDY TEAM

Table 4-7 Telephone Demand at Sample County (6/13)

Region : Northern District : Aua County : Koboko Category : B
 (Pop. 65,493)

Name of Sub - County	Mida	Ludra	Lobula			
Telecom. Post Office	X	-	-			
Facilities Telephone Office	X	-	-			
Number of Parish	9	7	6			
Population	23,785	22,721	18,987			
Urban Population (Koboko T.B. / Mida)	4,723	0	0			
Urbanization Rate (%)	19.86	0	0			
Government Offices	20	2	1			
Post office	1	-	-			
Police Station	3	1	1			
Hospital	-	-	-			
Health Unit	2	1	1			
Hotel	-	-	-			
Large Lodge	2	-	-			
Secondary School	1	1	1			
High Secondary School	1	-	-			
College / University	-	-	-			
Theater	2	-	-			
Bank	2	-	-			
Other Public Installations	7	-	-			
Industries / Companies Large Scale	-	-	-			
Large Scale	17	1	1			
Medium Scale	26	4 (*)	3 (*)			
Filing Station	1	-	-			
Telephone Demand						
1. Govt. Office	20	2	1			
2. Social Facilities / Others	21	3	3			
3. Indus. / Compan. / Shops	46	5	4			
4. Residents (*)	52	6	5			
Total Telephone Demand	139	16	13			
Demand Density per 100 population (%)	0.56	0.07	0.07			
Communication Method of County Administration Office						
From / to District Administration Office		Message / Radio Announcement				
From / to Sub - County Administration Offices		Message				
Main Products of County		Tobacco / Cassava / Beans / Sorghum				
Average Annual Income per Person		72,000 Uganda Shs				

NOTE : - NO POST OFFICE / NO TELECOM. FACILITY
 X EXISTING POST OFFICE / EXISTING TELECOM. FACILITIES
 (X) EXISTING TELECOM. FACILITIES BUT DAMAGED
 (A) AGENCY POST OFFICE
 (*) ESTIMATED DATA BY STUDY TEAM

Table 4-8 Telephone Demand at Sample County (7/13)

Region : Northern District : Arua County : Madi-Okollo Category : B
 (Pop. 74,307)

Name of Sub - County	Okob	Ofake	Ogoko	Rhino Camp	Rigbo
Telecom. Post Office	X	-	-	X	-
Facilities Telephone Office	-	-	-	-	-
Number of Parish	4	4	3	4	3
Population	14,787	14,191	10,871	18,427	14,031
Urban Population	0	0	0	0	0
Urbanization Rate (%)	0	0	0	0	0
Government Offices	6	4	5	6	8
Post office	1(A)	-	-	1(A)	-
Police Station	-	-	-	1	-
Hospital	-	-	-	-	-
Health Unit	3	1	4	1	-
Hotel	-	-	-	-	-
Large Lodge	-	-	-	-	-
Secondary School	2	1	-	1	-
High Secondary School	-	-	-	-	-
College / University	-	1	1	-	-
Theater	-	-	-	-	-
Bank	-	-	-	1	-
Other Public Installations	1	-	-	3	2
Industries / Companies Large Scale	-	-	-	-	-
Large Scale	1	2	1	2	2
Medium Scale	4	5 (*)	3 (*)	6	5 (*)
Filling Station	-	-	-	-	-
Telephone Demand	6	4	5	6	8
1. Govt. Office	7	3	5	8	2
2. Social Facilities / Others	5	7	4	8	7
3. Indus./ Compan./ Shops	11	6	8	13	10
4. Residents (*)	20	22	22	35	27
Total Telephone Demand	0.20	0.16	0.20	0.19	0.17
Demand Density per 100 population (%)	Communication Method of County Administration Office				
From / to District Administration Office	Messengers / Travel (Bicycle)				
From / to Sub - County Administration Offices	Messengers / Travel (Bicycle)				
Main Products of County	Cotton / Simsim / Tobacco / Beans				
Average Annual Income per Person	72,000 Uganda Shs				

NOTE : - NO POST OFFICE / NO TELECOM. FACILITY
 X EXISTING POST OFFICE / EXISTING TELECOM. FACILITIES
 (X) EXISTING TELECOM. FACILITIES BUT DAMAGED
 (A) AGENCY POST OFFICE
 (*) ESTIMATED DATA BY STUDY TEAM

Table 4-9 Telephone Demand at Sample County (8/13)

Region : Nortem District : Moroto County : Bokora Category : C

Name of Sub - County	Ngoleriet	Matany	Iiri	Lopel	Lobime	Lolopo
Telecom. Post Office	-	-	-	-	-	-
Facilities Telephone Office	-	-	-	-	-	-
Number of Parish	5	5	9	3	4	4
Population	8,218	10,560	6,114	3,137	5,841	5,722
Urban Population	0	0	0	0	0	0
Urbanization Rate (%)	0	0	0	0	0	0
Government Offices	2	3	2	1	2	2
Post office	-	-	-	-	-	-
Police Station	1	-	1	1	-	-
Hospital	-	1	-	-	-	-
Health Unit	2	-	2	-	1	-
Hotel	-	-	-	-	-	-
Large Lodge	-	-	-	-	-	-
Secondary School	1	-	-	-	-	-
High Secondary School	1	-	-	-	-	-
College / University	1	1	1	-	1	-
Theater	-	-	-	-	-	-
Bank	-	-	-	-	-	-
Other Public Installations	4	3	3	1	3	1
Industries / Companies Large Scale	-	-	-	-	-	-
Large Scale	-	-	-	-	-	-
Medium Scale	-	3 (*)	2	-	4 (*)	-
Filling Station	1	-	-	-	-	-
Telephone Demand						
1. Govt. Office	2	3	2	1	2	2
2. Social Facilities / Others	10	5	7	2	5	1
3. Indus. / Compan. / Shops	1	3	2	0	4	0
4. Residents (*)	8	7	7	2	7	2
Total Telephone Demand	21	18	18	5	18	5
Demand Density per 100 population (%)	0.26	0.17	0.29	0.16	0.31	0.09
Communication Method of County Administration Office	NOTE : - NO POST OFFICE / NO TELECOM. FACILITY					
From / to District Administration Office	X EXISTING POST OFFICE / EXISTING TELECOM. FACILITIES					
From / to Sub - County Administration Offices	(X) EXISTING TELECOM. FACILITIES BUT DAMAGED					
Main Products of County	(A) AGENCY POST OFFICE					
Average Annual Income per Person	(*) ESTIMATED DATA BY STUDY TEAM					
	100,000 Uganda Shs					

Table 4-10 Telephone Demand at Sample County (9/13)

Region : Nortem District : Moroto County : Kadam (Chekwi) Category : C
 (Pop. 42,699)

Name of Sub - County	Mzuita	Kakomongole	Namalu	Nakapripit Town Council		
Telecom. Facilities						
Post Office	-	-	-	X		
Telephone Office	-	-	-	(X)		
Number of Parish	2	5	7	3		
Population	4,948	7,460	28,737	1,554		
Urban Population (Nakapripit T. C.)	0	0	0	1,554		
Urbanization Rate (%)	0	0	0	100.00		
Government Offices	11	4	5	2		
Post office	-	-	-	1(A)		
Police Station	1	-	1	-		
Hospital	-	-	-	-		
Health Unit	1	1	3	1		
Hotel	-	-	-	-		
Large Lodge	-	-	-	-		
Secondary School	-	-	-	-		
High Secondary School	-	-	-	-		
College / University	-	-	-	-		
Theater	1	-	-	-		
Bank	(1)	-	(1)	(1)		
Other Public Installations	2	1	4	1		
Industries / Companies	-	-	-	-		
Large Scale	-	-	1	-		
Medium Scale	8 (*)	2 (*)	4 (*)	3		
Filing Station	-	-	-	-		
Telephone Demand						
1. Govt. Office	11	4	5	2		
2. Social Facilities / Others	6	2	9	4		
3. Indus. / Compan. / Shops	8	2	5	3		
4. Residents (*)	15	5	11	5		
Total Telephone Demand	40	13	30	14		
Demand Density per 100 population (%)	0.81	0.17	0.10	0.90		
Communication Method of County Administration Office						
From / to District Administration Office		Travel (Vehicles) / Radio Call (Private)				
From / to Sub - County Administration Offices		Travel (Vehicles) / Travel (Foot)				
Main Products of County		Maize / Beans / Millet / Livestock (Hides , Skins)				
Average Annual Income per Person		100,000 Uganda Shs				

NOTE : - NO POST OFFICE / NO TELECOM. FACILITY
 X EXISTING POST OFFICE / EXISTING TELECOM. FACILITIES
 (X) EXISTING TELECOM. FACILITIES BUT DAMAGED
 (A) AGENCY POST OFFICE
 (*) ESTIMATED DATA BY STUDY TEAM

Table 4-11 Telephone Demand at Sample County (10/13)

Region : Western District : Rukungiri County : Kinkizi Category : D

Name of Sub - County	Khima	Rutegega	Rugweyo	Kambuga	Nyamirama	Kihhi	Kenyerozo	Keyonza
Telecom. Post Office	X	-	-	X	-	X	-	-
Telecom. Telephone Office	X	-	-	X	-	-	-	-
Number of Parish	9	4	7	6	5	9	(NEW)	6
Population	27,152	13,188	19,505	27,334	13,939	40,006	0	27,720
Urban Population (Kihhi)	0	0	0	0	0	1,786	(NEW)	1,504
Urbanization Rate (%)	0	0	0	0	0	4.46		5.42
Government Offices	3	1	1	1	1	4	1	4
Post office	1	-	-	1 (A)	-	1 (A)	-	-
Police Station	1	-	-	1	1	2	1	1
Hospital	-	-	-	-	-	-	-	-
Health Unit	1	1	1	1	2	1	1	2
Hotel	3	-	-	2	-	5	1	1
Large Lodge	1	-	-	2	-	4	-	1
Secondary School	2	1	2	3	1	2	1	1
High Secondary School	1	-	-	1	-	1	-	-
College / University	1	-	1	-	-	1	-	-
Theater	2	-	1	1	-	1	-	-
Bank	1	-	-	-	-	-	-	-
Other Public Installations	3	2	2	5	3	4	1	3
Industries / Companies	-	-	1	1	-	-	-	2
Large Scale	-	-	-	-	1	3	-	-
Medium Scale	5	4 (*)	3 (*)	7	2 (*)	10	5 (*)	4 (*)
Filling Station	1	-	-	1	-	3	-	-
1. Govt. Office	3	1	1	1	1	4	1	4
2. Social Facilities / Others	17	4	7	17	7	22	5	9
3. Indus./ Compan. / Shops	6	4	4	9	3	16	5	4
4. Residents (*)	16	5	7	16	7	25	7	10
Total Telephone Demand	42	14	19	43	18	67	18	27
Demand Density per 100 population (%)	0.15	0.11	0.10	0.16	0.13	0.17	---	0.10
Communication Method of County Administration Office	NOTE : - NO POST OFFICE / NO TELECOM. FACILITY							
From / to District Administration Office	X EXISTING POST OFFICE / EXISTING TELECOM. FACILITIES							
From / to Sub - County Administration Offices	(X) EXISTING TELECOM. FACILITIES BUT DAMAGED							
Main Products of County	(A) AGENCY POST OFFICE							
Average Annual Income per Person	(*) ESTIMATED DATA BY STUDY TEAM							

Table 4-12 Telephone Demand at Sample County (11/13)

Region : Western District : Kabarole County : Mwenge Category : E

Name of Sub - County	Bugakali	Kyerusazi	Nyantungo	Kakooke	Butump	Kihura
Telecom. Post Office	X	-	-	-	-	-
Facilities Telephone Office	X	-	-	-	-	-
Number of Parish	6	5	8	8	5	8
Population	26,481	32,289	35,851	38,802	12,458	25,206
Urban Population (Kyenjojo)	0	0	1,499	0	0	0
Urbanization Rate (%)	0	0	4.18	0	0	0
Government Offices	1	1	2	1	1	1
Post office	1 (A)	-	-	-	-	-
Police Station	1	1	1	1	1	1
Hospital	-	-	-	-	-	-
Health Unit	3	2	1	1	1	2
Hotel	-	-	-	-	-	-
Large Lodge	-	-	-	-	-	-
Secondary School	-	1	2	1	-	1
High Secondary School	1	-	-	-	-	-
College / University	1	-	-	-	-	-
Theater	1	1	1	1	-	1
Bank	-	-	1	-	-	-
Other Public Installations	-	-	-	-	-	-
Industries / Companies	-	1	1	-	-	-
Large Scale	1	-	2	2	-	2
Medium Scale	4	3 (*)	3 (*)	5 (*)	2 (*)	5 (*)
Filling Station	-	1	1	-	-	-
Telephone 1. Govt. Office	1	1	2	1	1	1
Demand 2. Social Facilities / Others	3	4	6	4	2	5
3. Indus. / Compan. / Shops	5	4	11	7	2	7
4. Residents (*)	3	5	11	7	3	8
Total Telephone Demand	22	18	30	19	6	21
Demand Density per 100 population (%)	0.08	0.09	0.08	0.05	0.06	0.08
Communication Method of County Administration Office	NOTE : - NO POST OFFICE / NO TELECOM. FACILITY					
From / to District Administration Office	X EXISTING POST OFFICE / EXISTING TELECOM. FACILITIES					
From / to Sub - County Administration Offices	(X) EXISTING TELECOM. FACILITIES BUT DAMAGED					
Main Products of County	(A) AGENCY POST OFFICE					
Average Annual Income per Person	(*) ESTIMATED DATA BY STUDY TEAM					
	Travel (Vehicles)					
	Travel (Vehicles)					
	Tea / Coffee / Banana / Millet					
	120,000 Uganda Shs					

Table 4-13 Telephone Demand at Sample County (12/13)

Region : Western District : Kabarole County : Burahya Category : E
(Pop. 145,541)

Name of Sub-County	Bukuru	Busoro	Hakibate	Kazembi	Kiwemba	Mugusu	Ruteete
Telecom. Post Office	-	-	X	-	-	-	-
Telecom. Telephone Office	-	-	-	-	-	-	-
Number of Parish	3	4	6	3	3	4	5
Population	15,499	15,790	28,591	16,475	19,891	15,602	33,612
Urban Population	0	0	0	0	0	0	0
Urbanization Rate (%)	0	0	0	0	0	0	0
Government Offices	1	1	1	1	1	1	1
Post office	-	-	1(A)	-	-	-	-
Police Station	1	-	1	-	-	-	1
Hospital	-	-	1	-	-	-	-
Health Unit	1	1	1	-	1	-	1
Hotel	-	1	-	-	-	-	-
Large Lodge	-	1	-	-	-	-	-
Secondary School	1	1	1	1	-	2	1
High Secondary School	1	-	-	-	-	-	1
College / University	1	-	-	-	1	-	-
Theater	-	-	-	-	-	-	-
Bank	-	-	-	-	-	-	-
Other Public Installations	4	5	6	6	4	3	5
Industries / Companies Large Scale	1	3	3	-	-	-	2
Large Scale	1	3	3	-	-	-	2
Medium Scale	2 (*)	4 (*)	5	1 (*)	1 (*)	1 (*)	3 (*)
Filling Station	-	2	1	-	-	-	1
Telephone Demand	1	1	1	1	1	1	1
1. Govt. Office	9	9	13	7	6	5	9
2. Social Facilities / Others	4	12	12	1	1	1	6
3. Indus. / Compan. / Shops	8	13	16	5	5	4	11
4. Residents (*)	22	35	42	14	13	11	29
Total Telephone Demand	0.14	0.22	0.15	0.08	0.07	0.07	0.09
Demand Density per 100 population (%)	Communication Method of County Administration Office						
From / to District Administration Office	Travel (Vehicles) / Telephone						
From / to Sub-County Administration Offices	Travel (Vehicles)						
Main Products of County	Tea / Cereals / Coffee						
Average Annual Income per Person	84,000 Uganda Shs						

NOTE : - NO POST OFFICE / NO TELECOM. FACILITY
 X EXISTING POST OFFICE / EXISTING TELECOM. FACILITIES
 (X) EXISTING TELECOM. FACILITIES BUT DAMAGED
 (A) AGENCY POST OFFICE
 (*) ESTIMATED DATA BY STUDY TEAM

Table 4-14 Telephone Demand at Sample County (13/13)

Region : Western District : Kibale County : Buyaga Category : E
 (Pop. 139,888)

Name of Sub - County	Kagadi	Mabaale	Muhoro	Bwikira	Kiryanga	Kyanasoike
Telecom. Facilities	X	-	-	-	-	-
Post Office	X	-	-	-	-	-
Telephone Office	X	-	-	-	-	-
Number of Parish	3	4	3	5	3	3
Population	23,993	27,201	21,686	33,277	13,620	18,691
Urban Population (Kagadi, Muhoro)	1,448	0	1,082	0	0	0
Urbanization Rate (%)	6.19	0	4.99	0	0	0
Government Offices	10	-	-	-	-	-
Post office	1 (A)	-	-	-	-	-
Police Station	1	1	1	1	-	1
Hospital	1	-	-	-	-	-
Health Unit	-	1	2	1	3	4
Hotel	-	-	-	-	-	-
Large Lodge	2	-	-	-	-	-
Secondary School	1	1	1	-	1	2
High Secondary School	-	-	-	-	-	-
College / University	1	-	-	-	-	-
Theater	1	-	-	-	-	-
Bank	1	-	-	-	-	-
Other Public Installations	5	2	3	1	-	3
Industries / Companies	1	-	-	2	-	-
Large Scale	1	-	1	-	-	1
Medium Scale	8	2	6 (*)	2 (*)	3 (*)	5 (*)
Filling Station	1	-	-	-	-	-
Telephone Demand	10	0	0	0	0	0
1. Govt. Office	14	5	7	3	4	10
2. Social Facilities / Others	11	2	7	4	3	6
3. Indus. / Compan. / Shops	21	4	8	4	4	10
4. Residents (*)	59	11	22	11	11	26
Total Telephone Demand	0.24	0.04	0.10	0.03	0.08	0.14
Demand Density per 100 population (%)	NOTE : - NO POST OFFICE / NO TELECOM. FACILITY					
Communication Method of County Administration Office	X EXISTING POST OFFICE / EXISTING TELECOM. FACILITIES					
From / to District Administration Office	(X) EXISTING TELECOM. FACILITIES BUT DAMAGED					
From / to Sub - County Administration Office	(A) AGENCY POST OFFICE					
Main Products of County	(*) ESTIMATED DATA BY STUDY TEAM					
Average Annual Income per Person	500,000 Uganda Shs					

Table 4-15 The Number of Existing Connection Lines in User Categories
(Field Survey Area)

	Exchange Name	Exchange Capacity	Region	Government use	Business use	Residence use	GOV. + BUS. use	Red./ Gov + Bus	Total
1	Masaka	2,000	Central	74	134	451	208	2.17	659
2	Luwero	70	Central	14	12	19	26	0.73	45
3	Mpigi	100	Central	16	12	18	28	0.64	46
4	Nakasongola	100	Central	10	10	12	20	0.60	32
5	Mubende	1,000	Central	46	21	17	67	0.25	84
6	Kakumiro	100	Western	5	4	11	9	1.22	20
7	Kasese	1,000	Western	50	157	31	207	0.15	238
8	Fort Portal	600	Western	180	200	70	380	0.18	450
9	Rukungiri	100	Western	24	62	14	86	0.16	100
10	Mbarara	2,000	Western	174	302	429	476	0.90	905
11	bushenyi	1,000	Western	59	30	51	89	0.57	140
12	Kabale	3,000	Western	68	144	472	212	2.23	684
13	Hoima	300	Western	50	88	30	138	0.22	168
14	Kitgum	110	Northrn	35	40	12	75	0.16	87
15	Arua	150	Northrn	40	48	8	88	0.09	96
16	Moroto	270	Northrn	90	18	2	108	0.02	110
17	Jinja	2,400	Eastern	317	580	537	897	0.60	1434
18	Mbale	1,380	Eastern	450	780	350	1230	0.28	1580
19	Tororo	1,000	Eastern	95	83	72	178	0.40	250
20	Busia	100	Eastern	10	50	26	60	0.43	86

Average (Res. / Gov. + Bus.) = 0.601159
 Percentage of Residential Use = 37.55%

UGANDA POSTS AND TELECOMMUNICATIONS CORPORATION
(QUESTIONNAIRE FOR MASTER PLAN OF JICA)

Marketing Survey for New Services (Data communications etc.)

Date : _____

1. Name of Institution/Organization ()
2. The category of Institution/Organization ()
3. The number of employees/staffs ()
4. The number of Branches in Uganda ()
5. Telecommunication Facilities & Office Automation (OA)

Existing Services

(1) How many telephones/other equipments are there in your institution/organization ?

- | | | |
|-------------|-----------------------|-----|
| Headquarter | Direct Exchange Lines | () |
| | Extensions Lines | () |
| | PABX | () |
| | Teleprinter (Telex) | () |
| | FAX machines | () |

Branches

Name of Branch	Telephone Lines	Extension Lines	PABX (Line)	Teleprinter	FAX

(2) How many leased circuits are there in your institution / organization ?

For Telephone (Lines)
For Data Communications (Lines)

- a) Which type of equipment is used ? ()
- b) State the communication Protocol used. ()
- c) Frequency of engagement of equipment. ()

(3) How many computers are there in your institution / organization ?

Main Frame Computers (Host Machine/Manufacturer) ()

Personal Computers/Work-stations connected to Main Frame (Sets / Sets)

(4) Special Telephone Services (at Kampala)

Are you using special telephone services such as the following in your institution/organization ?

Hotline ()
Detailed billing ()
Temporary Transfer ()
Abbreviated Dialling ()
Alarm Call ()
Conference Call ()
Registered Call ()
Do Not Disturb ()
Malicious Call Tracing ()
Home Location Meter ()
Priority Line ()
Out-going Calls ()
In-coming Calls ()
Restriction on Trunk and IDD Calls ()

Planned Services

(1) Does your institution/organization require data communication service ?

- a) Presently _____ (by 1994)
- b) Immediate future _____ (within 5 years)
- c) Long term _____ (within 20 years)

(2) Possible Communication Route

a) Locally

b) Trunk/National

c) Regional/Interstate

d) International

(3) Other facilities you would wish to be included :

(4) Data Speeds

- a) 1200 bps ()
- b) 2400 bps ()
- c) 4800 bps ()
- d) 9600 bps ()

(5) Does your institution/organization have any interest in the following new services ?

a) Mobile telephone (Car telephone/Handy-phone)

b) Radio-paging

(6) Does your institution/organization have the plan to establish Private Network?

System :

Network Configuration (Between which branches) :

From	To	Number of	
		Terminals	Lines

6. Any other comments

7. Address and Person (Optional) of firm/contact.

How many persons are working in OA (Office Automation) Division ? ()

8. Interviewer

UGANDA POSTS AND TELECOMMUNICATIONS CORPORATION
P.P. BOX 7171,
KAMPALA - UGANDA.

ADDITIONAL SHEET

Branches

Name of Branch	Telephone Lines	Extension Lines	PABX (Line)	Teleprinter	FAX

Table 4-16 List of Parastatal Bodies, Large Companies and Embassies
on Composite Accounts (1/4)

As of 1993

A. BANKS AND FINANCIAL INSTITUTIONS (The number of users : 15 , The number of estimated Data terminals : 105)			
No.	CODE	Sample	Name of Companies / Parastatals / Embassies
1	207	X	EAST AFRICAN DEVELOPMENT BANK
2	212		BANK OF UGANDA
3	255	X	BARCLAYS BANK OF UGANDA
4	261		GREENLAND BANK
5	226	X	STANDARD BANK
6	228		UGANDA DEVELOPMENT BANK
7	235	X	UGANDA COMMERCIAL BANK HQ.
(7)	(236)	(X)	UGANDA COMMERCIAL BANK (FINANCIAL DIVISION)
(7)	(237)	(X)	UGANDA COMMERCIAL BANK (INT. DIVISION)
(7)	(238)	(X)	UGANDA COMMERCIAL BANK (CITY BRANCH)
(7)	(239)	(X)	UGANDA COMMERCIAL BANK (SAVING BRANCH)
8	247		LIBYAN ARAB BANK
9	248		GOLD TRUST BANK
10	249		COOPERATIVE BANK
11	250		DIAMOND TRUST BANK
12	251		BANK OF BARODA
13	253		NILE BANK
14	254	X	GRINDLAYS (STANIBIC BANK)
15	274		FOREX BUREAU

Table 4-17 List of Parastatal Bodies, Large Companies and Embassies on Composite Accounts (2/4)

As of 1993

B. PUBLIC SERVICES (PARASTETALS)			
(The number of users : 42 , The number of estimated Data terminals : 147)			
No.	CODE	Sample	Name of Companies / Parastatals / Embassies
1	200		NATIONAL SOCIALSECURITY FUND
2	201		UGANDA RAILWAYS CORPORATION
3	203		CUSTOMS DEPARTMENT
4	204		CIVIL AVIATION
5	205		METEOROLOGICAL DEPARTMENT
6	206		VIRUS RESEARCH
7	208		UGANDA NATIONAL EDUCATION BOARD
8	209		INTER - UNIVERSITY COUNCIL
9	210	X	UGANDA ELECTRICITY BOARD
10	211		KAMPALA CITY COUNCIL
11	213		UGANDA HOTELS
12	214		NATIONAL HOUSING CONO. CORP.
13	216		UGANDA PHARMACEUTICAL LTD.
14	218		NATIONAL INSURANCE CORP.
15	219	X	UGANDA WATER SOWEGE CORP.
16	220		LINT MARKETING BOARD
17	221		COFFEE MARKETING BOARD
18	223		UGANDA DEVELOPMENT CORPORATION
19	224		DIALY CORPORATION
20	258		UGANDA TRANSPORT COMPANY
21	259		UGANDA REV. AUTHORITY
22	260		UGANDA INV. AUTHORITY
23	263		NEW VISION
24	267		STEEL - CORPORATION
25	268		SUGAR CORP. OF UGANDA
26	227		OIL MILLS
27	229		PMB - PRODUCE MARKETING BOARD
28	230		UGANDA GRAIN MILLING CORP.
29	231		CUSTODIAN BOARD
30	234		UGANDA INTERNATIONAL CONFERENCE CENTER
31	240		FOODS & BEVERAGES
32	242		TRANSOCEEN
33	244		JINJA MUNICIPALITY COUNCIL
34	246		NATIONAL ENTERPRISE LIMITED
35	252		GOVERNMENT CENTRAL PURCHASING BOARD
36	254		UGANDA NATIONAL PARKS
37	269		UGANDA TEA CORP.
38	300	X	B.A.T. - 1984 LTD.
39	301		SPEAR MOTORS LTD.
40	319		UGANDA COOPERATIVE CENTRAL UNION
41	326		AIDS CONTROL PROGRAMME
42	330		N.U.R. PROGRAMMS

Table 4-18 List of Parastatal Bodies, Large Companies and Embassies
on Composite Accounts (3/4)

As of 1993

C. INDUSTRIES (The number of users : 27 , The number of estimated Data terminals : 54)			
No.	CODE	Sample	Name of Companies / Parastatals / Embassies
1	217		FINA
2	222		UGANDA CEMENT INDUSTRY
3	262		CALTEX OIL
4	265		GOMBA FISHING
5	266		UGANDA LEATHER TENNING
6	241		UGANDA GARMENT INDUSTRY LTD.
7	243		NILE BREWERIES
8	245		NYTIL (TEXTILES)
9	307		SHELL UGANDA LIMITED
10	308		UGANDA BREWERIES LTD.
11	310		GAILEY & ROBERTS LTD.
12	311		BLENDERS LIMITED
13	315		VITE FOAM LTD.
14	316		DUNLOP LIMITED
15	317		CHILLINGTON UGANDA LIMITED
16	318		UGANDA BATA SHOES CO.
17	272		SCOUL LIMITED
18	273		METRO POLITAN PROTERTIES
19	275		TOTAL U - LTD.
20	276		AGIP U - LTD.
21	296		HB - GAUF
22	302		MUKWANO INDUSTRIES LTD.
23	305		MEDHVANI
24	306		SEOWRIKO
25	320		UGNA
26	327		AMREF
27		X	ESSO STANDARD LTD.
D. TRANSPORTS (The number of users : 6 , The number of estimated Data terminals : 30)			
No.	CODE	Sample	Name of Companies / Parastatals / Embassies
1	202	X	UGANDA AIRLINES CORP.
2	270	X	ETHIOPIAN AIRLINES
3	271		AIR FRANCE
4	297		SABENA AIRLINES
5	303	X	BRITISH AIRWAYS
6	329		KENYA AIRWAYS
E. HOTELS (The number of users : 5 , The number of estimated Data terminals : 15)			
No.	CODE	Sample	Name of Companies / Parastatals / Embassies
1	215		SHARATON HOTEL
2	225		CRESTED CRANE HOTEL
3	233		NILE HOTEL
4	323		LAKE VICTRIA HOTEL
5	328		HOTEL EQUATORIA

Table 4-19 List of Parastatal Bodies, Large Companies and Embassies on Composite Accounts (4/4)

As of 1993

F. EMBASSIES			
(The number of users : 26 , The number of estimated Data terminals : 24)			
No.	CODE	Sample	Name of Companies / Parastatals / Embassies
1	401		BRITISH HIGH COMMISSION
2	402	X	AMERICAN EMBASSY
3	403	X	GERMANY EMBASSY
4	404		FRENCH EMBASSY
5	405	X	ITALIAN EMBASSY
6	406		S. KOREAN EMBASSY
7	407		TANZANIAN HIGH COMMISSION
8	408	X	INDIAN HIGH COMMISSION
9	409	X	RUSSIAN EMBASSY
10	410		SUDAN EMBASSY
11	412		KENYA HIGH COMMISSION
12	413		LIBYAN PEOPLE'S BUREAU
13	414		BURUNDI EMBASSY
14	415		SOMALI EMBASSY (CLOSED)
15	416		EGYPTIAN EMBASSY
16	417		ZAIRE EMBASSY
17	418		CUBA EMBASSY
18	419		VATICAN EMBASSY
19	420		ROYAL DANISH EMBASSY
20	421		ALGERIAN EMBASSY
21	422		SAUD ARABIA (CLOSED)
22	423		RWANDA EMBASSY
23	424		CHINEESE EMBASSY
24	430		PALESTENIAN EMBASSY
25	435		N.KOREAN EMBASSY
26	438		FRANCH EMBASSY COMMERCIAL SECTION
G. N.G.O.s			
(The number of users : 14 , The number of estimated Data terminals : 42)			
No.	CODE	Sample	Name of Companies / Parastatals / Embassies
1	314		CHURCH OF UGANDA
2	331		C.O.U. KAMPALA DIOCECA
3	332		C.O.U. NAMIRAMBE
4	425		UNDP
5	426		EEC
6	427		WORLD BANK
7	428		USAID
8	429		WHO
9	431		ICRC
10	432		UNHCR
11	434		FAO
12	436		W.F.P.
13	237		US PEACE CORP.
14		X	UNICEF

5. Field Survey Data in Telecom. Facilities

General & Schedule

Team 3 consisting of four engineers of JICA and two engineers of UPTC as counterparts concentrated on telephone facility survey as shown on the following schedule. Questionnaires for subscribers, call traffic, facilities and so on, were used for data collection. And at the same time, the team obtained personnel organization data from the Regional Telecommunications Managers (RTM).

Table 5-1 Field Survey Schedule for Team 3

Days	Date (Nov., 93)	Route	Visiting Place	Stay
1	15 (Mon.)	Kampala > Mbale		Mbale
2	16 (Tue.)	Mbale > Kapchorwa > Mbale	Kapchorwa T/F Mbale T/F	Mbale
3	17 (Wed.)	Mbale > Bushangi > Tororo	Bushangi R/S Tororo T/F	Tororo
4	18 (Thur.)	Tororo > Busia > Jinja	Busia T/F Jinja T/F	Jinja
5	19 (Fri.)	Jinja > Iganga > Kakira > Mwiri > Jinja	Iganga T/F Kakira T/F Mwiri R/S	Jinja
6	20 (Sat.)	Jinja > Kampala		Kampala
7	21 (Sun.)	Day Off		Kampala
8	22 (Mon.)	Kampala > Mbarara		Mbarara
9	23 (Tue.)	Mbarara > Bushenyi > Mbarara > Kabale	Mbarara T/F Bushenyi T/F	Kabale
10	24 (Wed.)	Kabale > Kihumiro > Kabale	Kabale T/F Kihumiro R/S	Kabale
11	25 (Thur.)	Kabale > Masaka		Masaka
12	26 (Fri.)	Masaka > Matale > Kyebe > Masaka	Matale R/S Kyebe R/S Masaka T/F	Masaka
13	27 (Sat.)	Masaka > Buwama > Kampala	Buwama T/F	Kampala

Note: T/F... Telephone Facility, R/S... Repeater Station

Members of the Field Survey Team 3 were as follows:

JICA Side: Mr. Katayama (Network, 1 to 13 day)
Mr. Iwami (Switching, 1 to 6 day)
Mr. Okeda (Transmission, 1 to 13 day)
Mr. Ohba (International, 8 to 13 day)
Mr. Nishinohara (Admin., 1 to 6 day)

UPTC Side: Mr Onyango (Switching, 1 to 13 day)
Mr.Kulinga (Transmission, 1 to 13 day)

The team also made site survey at Konge R/S on 4th November, Dundu R/S and Entebbe T/H on 9th November. Mpoma Earth Station was surveyed on 27th October, and Kampala T/H was surveyed frequently through this study term.

Following pages are the result of the above survey. Contains are as follows.

- a) Summary of The Supporting Facilities at Surveyed Sites
 - b) Present conditions of exchange and transmission systems
 - c) Site plan and Floor layout
- Data b) and data c) are combined site by site.

Table 5-2 Summary of the Supporting Facilities at Surveyed Sites

Site Name	LOCATION (Town/Hilltop)		POWER SYSTEM				BUILDING			TOWER				
	Access Road (Krn)	Commercial Power	Diesel Capacity (KVA)	Engine Generator		Others	Present Condition	Vacant Room	Expandable Land	Structure	Height (m)	Existing Parabolic Antennas	Additional Antenna Availability	
				Mfg. Year	Condition									
Dundu	Rep. H	1.0	Bad	Exist	-	-	Solar Sys.	Good	No	No	S/Support	23	6	No
Entebbe	EO T			Exist	30	1991	Good	Good	No	Yes	S/Support	50	1	Yes
Konge	Rep. H	1.0	Bad	Exist			Fair	Good	No	Yes	Concrete, S/Support	48, 50	5, 6	No
Kampala	NSC T			Exist				Good	Yes	No	S/Support x 2	20, 10	3, 2	Yes
Kapchorwa	EO T			Not	5		Fair	Solar Sys.	No	No	Guy	30	1	Yes
Mbale	ASC T			Exist	125	1988	Good	Good	No	Yes	S/Support	70	1	Yes
Bushangi	Rep. H	3.8	Bad	Exist	150		Fair	Fair	Yes	Yes	S/Support	23	2	Yes
Tororo	EO T			Exist	15		Fair	Fair	No	Yes	S/Support	50	2	Yes
Busia	EO T			Exist	-	-	-	No Back Up	No	Yes	-	-	-	-
Iganga	EO T			Exist	16.5		Good	Good	No	Yes	-	-	-	-
Kakira	EO T			Exist	-	-	-	Batt Only	Yes	Yes	-	-	-	-
Mwiri	Rep. H	5.0	Fair	Exist	15	1973	Fair	Fair	No	No	S/Support	20	4	No
Jinja	ASC T			Exist	120	1987 (*1)	Fair	Fair	No (*2)	No	Concrete	48	2	Yes
Mbarara	ASC T			Exist	70	1987 (*1)	Good	Good	No	Yes	S/Support x 2	23, 50	2, 1	Yes
Bushenyi	EO T			Exist	16.5	1991 (*1)	Good	Good	No	No	-	-	-	-
Kihumiro	Rep. H	11.6	Fair	Exist	10	1993 (*1)	Good	Good	No	Yes	S/Support	80	4	Yes
Kabale	GSC T			Exist	70 X 2	1990 (*1)	Good	Good	No	Yes	Guy, S/Support	13, 50	0, 1	Yes
Matale	Rep. H	1.0	Fair	Exist	16.5	1990 (*1)	Good	Good	Yes	Yes	S/Support	60	2	Yes
Kyebe	Rep. H	1.2	Bad	Not	-	-	-	Solar Sys. 4 Batt.	No	Yes	S/Support	23	2	Yes
Masaka	ASC T			Exist	70	1986	Good	Good	No	Yes	S/Support	81	4	Yes

NOTE: (*1)... Installed Year
 (* 2)... There are vacant space for New Switch.

(SUPPORT.WK3)

KAMPALA

PEE/SWP

DF 2033
7th June, 1993.

To C/P
Thro' PEE/SWP

TRAFFIC MEASUREMENT ON E10B EXCHANGES

Find attached traffic measurements for E10B exhnages, for the months of february and May 1993. The measurements were taken on the indicated dates between 9.30 a.,. and 12.30 p.m.

Remarks

1 Calling Rate on Kampala E10B GSC


At the time of the record there were about 9225 Subscriber connections with an average calling rate of 0.08 erlangs/line.

2 Completion/Failure Rate of Calls

Attached also are the completion and failure rates of calls for various categories. Failures due to the network are mainly attributed to cct congestion, register and line sinalling faults. This is especially so on Kampala TSU, probably because it has more connections with other exchanges.

3 Subscriber Connections on KLA GSC

None of the Subscriber connection Units (URA) has reached the maximum design value of about 96 erlangs. The highest recorded was about 43 erlangs. Call rejection has however been observed on URA 76. This is due to overload of some of the input sections on this URA. In particular input sections 42 and 43 have been identified as overloaded. There is need to readjust the accomodation on the above sections.


.....
Ssemu Bakyasenga
STE/Traffic

cc. GM/EP&C
PEE/SWM
PTE/N&D

COMPLETION/FAILURE RATE OF CALLS ON MAKERERE E10B GSC (FEB. 1993)

	<u>Intra-Office Calls (%)</u>	<u>Out Going Calls (%)</u>	<u>Incoming Calls (%)</u>
Effective	6	36	39
Failure due to Sub Dialling	89	13	13
Failure due to Sub Busy, Ringing not answered	4	42	43
Failure due to Network	1	9	5
TOTAL (%)	100	100	100

COMPLETION/FAILURE RATE OF CALLS ON MAKERERE E10B GSC (MAY. 1993)

	<u>Intra-Office Calls (%)</u>	<u>Out Going Calls (%)</u>	<u>Incoming Calls (%)</u>
Effective	5	30	36
Failure due to Sub Dialling	87	12	9
Failure due to Sub Busy, Ringing not answered	7	46	51
Failure due to Network	1	12	4
TOTAL (%)	100	100	100

MAKERERE E10B GSC EXCHANGE

AUTOMATIC TRAFFIC RECORDER RESULTS

Route	Circuit Working	Month of FEBRUARY 1993		Rep. Traffic	Circuits Justified	% Reject	ASR
		Traffic in Erl.					
		25/2	26/2				
OKPLG	57/119	17.27	22.21	22.21	33	0	41
IKPLG	60/90	10.5	10.83	10.83	19	0	39
OKTSU	15/30	5.41	4.17	5.41	12	0	23
IKTSU	15/30	2.48	3.07	3.07	8	0	34
IOT TFC		2.03	1.97				
O/B TFC		18.62	22.21				
I/C TFC		12.93	12.86				
T/T TFC							
UNDEFINED TFC		2.79	3.14				
TOTAL TFC		36.34	39.97	39.97			
TOTAL CALLS		1250	1161	1250			

MAKERERE E10B GSC EXCHANGE

AUTOMATIC TRAFFIC RECORDER RESULTS

Route	Circuit Working	Month of MAY 1993.			Rep. Traffic	Circuits Justified	% Reject	ASR
		Traffic in Erl.						
		12/5	13/5	14/5				
OKPLG	118/119	16.31	13.12	17.59	17.59	27	0	35
IKPLG	121	11.63	12.76	13.06	13.06	22	0	38
OKTSU	29/30	3.74	4.29	2.69	4.29	10	0	20
IKTSU	30	3.1	2.94	3.62	3.62	9	0	31
IOT TFC		1.87	3.49	1.88				
O/B TFC		20.21	17.8	19.88				
I/C TFC		14.9	15.49	17.62				
T/T TFC								
UNDEFINED TFC		3.21	4.03	4.03				
TOTAL TFC		38.72	40.8	43.41	43.41			
TOTAL CALLS		1427	1694	1694	1694			

COMPLETION/FAILURE RATE OF CALLS ON KAMPALA E10B GSC (FEB. 1993)

	<u>Intra-Office Calls (%)</u>	<u>Out Going Calls (%)</u>	<u>Incoming Calls (%)</u>	<u>Trans Calls (%)</u>
Effective	25	28	40	40
Failure due to Sub Dialling	44	8	15	7
Failure due to Sub Busy, Ringing not answered	30	34	42	43
Failure due to Network	1	30	1	11
TOTAL (%)	100	100	100	100

COMPLETION/FAILURE RATE OF CALLS ON KAMPALA E10B GSC (MAY. 1993)

	<u>Intra-Office Calls (%)</u>	<u>Out Going Calls (%)</u>	<u>Incoming Calls (%)</u>	<u>Trans Calls (%)</u>
Effective	22	29	39	30
Failure due to Sub Dialling	44	8	13	9
Failure due to Sub Busy, Ringing not answered	32	36	47	50
Failure due to Network	0	27	1	11
TOTAL (%)	100	100	100	100

KLA E10B 450 EXCHANGE

AUTOMATIC TRAFFIC RECORDER RESULTS

Route	Circuit Working	Month of FEBRUARY 1993		Rep. Traffic	Circuits Justified	% of ABR %	
		Traffic in Ecl.				Rejected	Calls
		25/2	26/2				
IKABA	24/25	2.66	1.97	2.66	8	0	32
INCBY	6/7	0.43	0.33	0.43	3	0	44
IKPLU	357	91.58	91.28	91.58	108	0	20
IMAKE	60/90	10.41	10.28	10.41	18	0	36
IENTH	22	8.17	8.79	8.17	16	0	43
INPUS	30	7.97	10.83	10.83	19	0	47
UDBSE 1/	5	1.22	1.73	2.34	6	0	0.1
0/G		0.72	0.73				
UDBSO 1/	277	0.35	0.7	0.88	4	0	
0/G		0.13	0.03			96	4
UDBSI 1/	3	1.32	0.0	1.32	5	0	6
0/G		0	0.02				0
UDBDI 1/	4	1.8	2.1	2.58	6	0	
0/G		0.03	0.39			9	
UDBAU 1/	3	0.37	0.26	0.36	3	0	
0/G		0	0				0
UDBLA 1/	3	0	0			0	0
0/G		0	0			0	0
UDBRI 1/	2	0	0			0	0
0/G		0	0			73	0
IK409	71/104	7.77	6.36	7.77	15	0	32
IMAKE	118	16.9	23.21	23.21	34	0	42
IKPLU	269/300	67.7	74.52	74.52	90	0	44
IJINJ	23	6.5	8.03	8.03	15	0	39
INENS	12/14	5.46	4.73	5.46	12	2	13
IKYAM	16/18	0.83	3.68	3.68	9	0	5
UAMPI 1/	4	0.75	0.82	1.07	5	0	
0/G		0.1	0.35				
UDBSO 1/	1	0	0			0	0
0/G		0	0				0
IENTH	26/27	21.36	18.45	21.36	32 *	4.3	77.3
IKPLS	30	1.23	1.41	1.41	6	2	59.5
UINBO	10	0.14	0.14	0.14	2	0	57
UNARO	6/11	2.28	3.76	3.76	9	4.5	38.5
IC TFC		246.57	245.45				
0/G TFC	26/27	134.69	138.93				
I/C TFC	11	97.62	104.72				
TRANSIT TFC		12.34	12.14				
UNDEFINED TFC		54.32	53.41				
TOTAL TFC		537.78	548.65	545.45			
TOTAL CALLS		16976	16450	16936			

KLA E10B ~~880~~ EXCHANGE

AUTOMATIC TRAFFIC RECORDER RESULTS

Route	Circuit Working	Month of MAY 1993. Traffic in Erl.			Rep. Traffic	Circuits Justified	% of Rejected Calls	ASR %
		12/75	13/75	14/75				
IKARA	25	2.69	3.87	2.28	3.87	10	0	35.8
OCCBI	7	1	0.97	0.21	1	5	0	24.6
OKPLU	313/354	93.72	102.3	95.46	102.3	120	0	20.6
OMAKE	90/120	11.86	13.21	12.76	13.21	22	0	37.6
OENFB	20/22	10.47	10.1	10.07	10.47	19	0	37
OPUS	30	10.2	10.03	13.73	13.73	23	0	41.4
ODMRE IC	5	0.69	1.17	1.03	2.69	7	0	0.12
O/G		0.59	0.86	1.52				
ODSLU IC	7	2.37	2.53	3.03	3.82	8	0	0.37
O/G		0.2	0.55	0.79			26	0.84
ODHOT IC	3	1.14	1.28	0.72	1.17	4	0	
O/G		0.03	0	0.03				0
ODMDT IC	4	2	0.77	1.53	3.9	8	0	0.12
O/G		1.53	1.9	1.21			53	0.38
ODUA IC	2	0	0	0			0	0
O/G		0	0	0				0
ODLRA IC	2	0	0	0			0	0
O/G		0	0	0				0
IKYAM	30	2.1	1.57	0.86	2.1	6	0	28.5
IMENG	29/30	1.31	1.83	1.52	1.83	5	0	33.4
ODKAY IC	0/5	0	0	0			0	0
O/G		0	0	0			0	0
ODSRT IC	1/2	0.87	0.97	0	0.97	4	0	0.19
O/G		0	0.03	0			75	0
IK400	87/104	2.14	2.34	3.14	3.14	8	0	34.6
IMAKE	118	15.24	15.45	17.38	17.38	27	0	34.8
IKPLU	299/300	76.9	77.86	83.79	83.79	100	0	41
IJINJ	23	13	12.48	11.41	13	22	0	29
OMENG	11/44	4.97	4.31	5.45	5.45	12	0	17.2
OKYAM	28/30	2.59	1.37	2.45	2.59	8	0	31.4
OAMPT IC	4	0.47	0	0	0.47	3	0	
O/G		0	0.03	0				0
ODBBO IC	1	0	0	0			0	0
O/G		0	0	0				0
OENFB	26/27	20.75	21.87	20.67	21.87	32 *	15.6	79
OKPL5	30	0.14	0.72	0.07	0.72	4	0	77.4
OINBO	10	0.24	0.24	0.3	0.3	3	0	67
ONABO	11	4.28	3.31	3.87	4.28	10	0	38.8
IOG TFC		290.03	281.07	272.21				
O/G TFC		129.55	135.93	133.41				
I/C TFC		115.66	114.69	119.03				
ASANSI1 TFC		10.75	11.66	14.66				
UNDEFINED TFC		61.19	62.36	62.31				
ASIN TFC		593.62	605.34	601.63	605.34			
TOTAL CALLS		19146	19139	19733	19732			

COMPLETION/FAILURE RATE OF CALLS ON KAMPALA E10B TSU (FEB. 1993)

	<u>Intra-Office Calls (%)</u>	<u>Out Going Calls (%)</u>	<u>Incoming Calls (%)</u>	<u>Trans Calls (%)</u>
Effective	5	23	3	30
Failure due to Sub Dialling	46	21	49	12
Failure due to Sub Busy, Ringing not answered	41	25	3	33
Failure due to Network	8	31	45	25
TOTAL (%)	100	100	100	100

COMPLETION/FAILURE RATE OF CALLS ON KAMPALA E10B TSU (MAY. 1993)

	<u>Intra-Office Calls (%)</u>	<u>Out Going Calls (%)</u>	<u>Incoming Calls (%)</u>	<u>Trans Calls (%)</u>
Effective	5	28	4	28
Failure due to Sub Dialling	37	25	52	12
Failure due to Sub Busy, Ringing not answered	55	18	4	34
Failure due to Network	3	29	40	26
TOTAL (%)	100	100	100	100

KLA E10B TSU EXCHANGE

AUTOMATIC TRAFFIC RECORDER RESULTS

Route	Circuit Working	Month of FEBRUARY 1993.			Rep. Traffic	Circuits Justified	% of Rejected Calls	ASR %
		Traffic in Erl.						
		23/2	24/2	25/2				
OKGLI	13/15	0	0.52	0.29	0.52	4	0	28
IGANG	6	3.59	5.47	4.44	5.47	12 *	0	13
OKABA	17/25	9.66	10.22	9.03	10.22	18	4	40
ITORO	5	1.69	1.72	1.78	1.78	6	0	29
OTORO	3/5	1.54	1.97	1.81	1.97	7 *	28	49
IKSEE	12	4.76	4.41	4.17	4.76	11	3	15
OKSEE	6/9	4.14	4.08	3.14	4.14	10	30	48
IMASA	30	7.67	7.71	6.63	7.71	15	0	30
IMBLE	21/22	9.9	9.67	10.05	10.05	18	0	29
OMAKE	15/30	3	2.98	2.1	3	8	0	40
IMAKE	30	3.62	4.91	4.31	4.91	11	0	22
OPDAR	3	0	0	0			0	
OMTYA	4/5	2.44	2.34	2.12	2.44	7 *	57	59
ONBII	56/60	37.57	33.28	35.39	37.57	50	8	30
OBUJA	8/10		0.58	0.49	0.58	4	16	22
IIENG	6			2.95	2.95	8	0	13
ODARI	4/8						0	
IDARI	8	1.88	1.05	1.08	1.88	6	29	1
IMTYA	5	1.64	0.61	1.29	1.64	6	3	21
OGANG	3/4	1.15	1.15	1.93	1.93	7 *	68	51
INAIR	67/70	24.02	24.47	21.2	24.47	35	0	33
OBKBA	5/6	0.19	0.14	0.17	0.19	3	0	33
IBKBA	6	0.34	0.86	0.14	0.86	4	0	59
IKACB	2						0	
OMWANZ	9/12	2.64	2.1	2.85	2.85	8	4	19
IMWANZ	9/11	1.17	0.63	0.29	1.17	6	32	26
IITEB	6	2.92	1.63	1.25	2.92	8	9	31
IKGLI	15		0.83	0.37	0.83	4	29	1
IIJIN	10	0.58	0.48	1.1	1.1	5	4	19
IBUJA	10	1.12	2.93	0			62	0
IIKYA	3	0	0	0.03			0	0
IIBLE	5	0.5	0.37	0.05	0.05		2	17
IIFPT	1	0.24	0.07	0	0.24		0	55
OVFMB	6/10	2.91	3.25	2.52	3.25	9	77	32
ODARS	11/18	6.61	7.33	7.1	7.33	14	24	10
OMASA	36/40	7.63	4.87	6.82	7.63	15	0	48
OFFOR	7/8	5.88	6.22	6.07	6.22	13 *	81	58
OMBAR	13/20	8.97	9.52	9.34	9.52	17	6	25
OJINJ	26/34	17.57	17.22	15.93	17.57	27	5	16
OENTE	13/15	5.22	5.79	5.72	5.79	12	1	24
OKPUS	3/5	0.51	0.83	1.17	1.17	5	50	20
OKFLG	269/300	79.61	75.51	69.63	79.61	96	0	44
IVFMB	11	2.93	2.84	3.2	3.2	9	0	24

CTD.

ROUTE	CCTS WORKING	TRAFFIC 23/2	TRAFFIC 24/2	TRAFFIC 25/2	ADJ. TRAFFIC	CCTS JUSTIFIED	% of RESPECTIVE CAP	ASR %
IAORE	7	0.44	0.13	0.03	0.44	3	0	37
IDARS	21/23	1.09	1.3	2.18	2.18	7	28	12
IMBAR	18/19	10.21	7.75	8.07	10.21	18	5	14
IKABA	22/23	1.38	0.97	1.02	1.38	6	54	7
IFPOR	5/12	4.14	3.25	2.53	4.14	10	1	21
IJINJ	19/20	10	8.1	6.35	10	18	0	18
IKPUS	50	3.31	3.27	2.16	3.31	9	1	20
IKPLG	373/377	100.59	97.02	97.33	100.59	118	0	21
IENTE	11	2.76	2.21	2.36	2.76	8	0	9
OKYAM	5	3.2	3.1	3.24			100	0
OLUGA	3/6	2.03	1.88	2.03	2.03	7	66	65
ILUGA	6	1.97	2.35	2.36	2.36	7	0	31
OMENG	6/15	6	6	6			100	0
OMBLE	10	5.03	7.53	4.54	7.53	15 *	14	34
OPNAR		0	0	0				
IOT TFC		0.17	0.12	0.05				
O/G TFC		0.76	0.78	0.81				
I/C TFC		4.9	3.43	5.12				
TRANSIT TFC		169.92	160.93	156.69				
UNDEFINED TFC		5.09	4.83	4.88				
TOTAL TFC		172.26	169.38	167.51	172.26			
TOTAL CALLS		15173	14238	14797	15173			

KLA E10B TSU EXCHANGE

AUTOMATIC TRAFFIC RECORDER RESULTS

Route	Circuit Working	Month of MAY 1993. Traffic in Erl.			Rep. Traffic	Circuits Justified	% of Rejected Calls	ASR (%)
		12/5	13/5	14/5				
OKGLI	14/15	0.58	1.08	1.17	1.17	5	0	48
IGANG	5/6	4.05	3.66	2.54	4.05	10 *	0	11
OKABA	21/25	7.75	9.98	8.45	9.98	18	3	39
ITORD	5	1.69	1.76	2.33	2.33	7 *	0	8
OTORD	3/5	0.85	1.17	1.55	1.55	6 *	48	46
IKSEE	12	4.29	5.24	5.1	5.24	12	3	16
OKSEE	7/9	4.78	4.37	4.63	4.78	11 *	43	30
IMASA	30	6.75	9.93	7.53	9.93	18	0	26
IMBLE	20/22	10.64	9.41	9.36	10.64	19	0	21
OMAKE	30	2.41	2.71	4.59	4.59	11	0	33
IMAKE	30	2.74	3.6	2.51	3.6	9	0	22
OPDAR	3	0.12	0.05	0.05	0.12	2	0	12
OMTYA	5	4.17	4.05	4.1	4.17	10 *	44	47
ONBII	54/56	32.46	37.55	35.58	37.55	50	11	25
OBUJA	8/10	0	0.95	1.54	1.54	6	0	29
IIENG	6	0	0	0			0	
ODARI	1/8	0.47	0.34	0.1	0.47	4	0	29
IDARI	8	0.02	0.55	0.07	0.55	4	0	
IMTYA	5	1.31	1.86	1.73	1.73	6	0	22
IGANG	4	1.67	2.03	1.68	2.03	7 *	29	43
INAIR	68	23.66	23.61	23.63	23.66	34	0	34
IBKBA	4/6	0.22	0.64	0.1	0.64	4	8	46
IBKBA	5/6	0.21	0.22	0.29	0.29	3	8	50
IKACB	2	0	0	0.03			0	0
OMWANZ	8/12	1.47	1.32	1.66	1.66	6	3	25
IMWANZ	7/11	0.42	0.32	0.26	0.42	3	0	23
ITEB	6	2.19	1.83	0.88	2.19	7	7	24
IKGLI	15	0.46	1.19	0.39	1.19	5	23	3
IIJIN	10	0.85	0.83	0.85	0.85	4	9	32
IBUJA	10	0.12	0.41	0.64	0.64	4	17	6
IKYA	6	0	0	0			0	0
IBLE	5	0.1	0.05	0.03			0	0
IIFPT	1	0.05	0.24	0.14	0.24	3	0	28
OVFMB	6/10	1.75	3.45	2.93	3.45	9	74	16
ODARS	15/18	5.59	4.41	5.98	5.98	13	9	7
OMASA	38/40	6.47	12.1	8.05	8.87	16	0	41
OPPOR	7/8	5.88	5.69	6.02	6.02	13 *	82	57
OMBAR	14/20	8.86	9.41	8.56	9.41	17	2	31
OJINJ	25/34	18.93	20.73	19.93	20.73	31	9	17
ONTE	15	7.36	8.98	7.67	8.98	17	4	27
OKPUS	3/5	0.52	1.44	1.1	1.44	6	62	4
ORPLG	299/300	77.57	77.25	81.93	81.93	98	0	42
OVFMB	11	2.87	0.95	3.22	3.22	9	0	27
LODR	2/7	0	0	0			0	

ROUTE	CC TS WORKING	TRAFFIC 12/5	TRAFFIC 12/5	TRAFFIC 14/5	REP TRAFFIC	CC TS SUFFICED	% of CALLS REJECTED	ASR (%)
IADRE	2/7	0	0	0			0	
IDARS	21/23	1.63	1.44	1.51	1.63	6	6	19
IMBAR	19	8.15	8.21	8.31	8.31	16	14	26
IKABA	22/23	0.95	1.62	1.27	1.62	6	37	11
IFPOR	11/12	2.88	2.81	3.38	3.38	9	1	25
IJINJ	19/20	7.19	5.35	6.79	7.19	14	1	20
IKPUS	50	0.78	3.88	1.98	3.88	10	0	11
IKPLG	374/377	95.98	106.46	106.05	106.46	124	0	21
IENTE	11	2.38	2.74	2.31	2.74	8	0	21
OKYAM	10	0.22	0.37	0.24	0.37	3	0	18
OLUGA	3/6	2.22	1.44	2.08	2.22	7	42	44
ILUGA	6	2.37	2.06	4.64	4.64	11 *	0	28
OMENG	9/15	3.68	3.74	7.69	5.03	11	0	25
OMBLE	9/10	2.79	7.63	5.53	7.63	18 *	30	36
OKYAM	4	0	0	0				
OPNAR	4	0	0	0				
IOT TFC		0.05	0.02	0.22				
O/B TFC		0.92	1.22	1.31				
I/C TFC		4.78	3.66	5.79				
TRANSIT TFC		156.86	173.24	177.36				
UNDEFINED TFC		4.53	4.78	3.88				
TOTAL TFC		166.66	182.9	187.12	187.12			
TOTAL CALLS		14895	14459	13415	14895			

Present Conditions of Transmission System

Station Name	Kampala	1/3	Survey Date	8/ Dec./93
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Link Name	Kampala - Entebbe,	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	2 GHz
Equipment	Details:		
System Type:	HG-2	960ch, 2+1 sys.	
Manufact. Year:	1983 (Installed)		
Manufacturer:	Telettra		
MUX Equipment	Details:		
System Type :		3 SG = 180ch Equipped	
Manufact. Year:	1983 (Installed)		
Manufacturer :	Telettra		
Other Equipment			

same

Link Name	Kampala - Masaka - Mbarara	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:		11 SG = 660ch Equipped.	
Manufact. Year:	1984 (Installed)		
Manufacturer:	Telettra		
Other Equipment			

Link Name	Kampala - Jinja - Nairobi	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	Coaxial (buried)
Equipment	Details:		
System Type:		960ch, 1+1 sys	
Manufact. Year:			
Manufacturer:	Fujitsu		
MUX Equipment	Details:		
System Type:		12 SG = 920ch Equipped.	
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name	KLA - FPL - MBE - KSE	Function	Terminal / Repeater
TR System	Radio (Micro) (UHF, VHF, HF), OWC, OW	Analog / Digital	400 MHz
Equipment	Details:		
System Type:	TR-400D24-2	24ch, 1+0 sys	
Manufact. Year:	1978		
Manufacturer:	NEC		
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Present Conditions of Transmission System

Station Name	Kampala	2/3	Survey Date	8/Dec./93
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Link Name	KLA - MDT - GLU	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	400MHz
Equipment	System Type: TR4FM24 Manufact. Year: 1987 Manufacturer: NEC	Details: 24ch. 1+1 sys	
MUX Equipment	System Type: Manufac. Year: Manufacturer:	Details:	
Other Equipment			

Link Name	Kampala - Mpoma	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	66/L Hz
Equipment	System Type: Manufact. Year: 1980 (Installed) Manufacturer: NEC	Details: 960ch. 1+1 sys	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details: 4 SG = 240ch Equipped	
Other Equipment			

Link Name	Kampala - Mpigi	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
MUX Equipment	System Type: PST 3L Manufact. Year: Manufacturer: Telettra	Details: 12ch	
Other Equipment			

Link Name	KBO MUX	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details: 15 SG (KBL, DAR, MBA, KGL, BKB, MWZ) addition to original 9 SG link of KLA - MSA - MBA	
Other Equipment			

Present Conditions of Transmission System

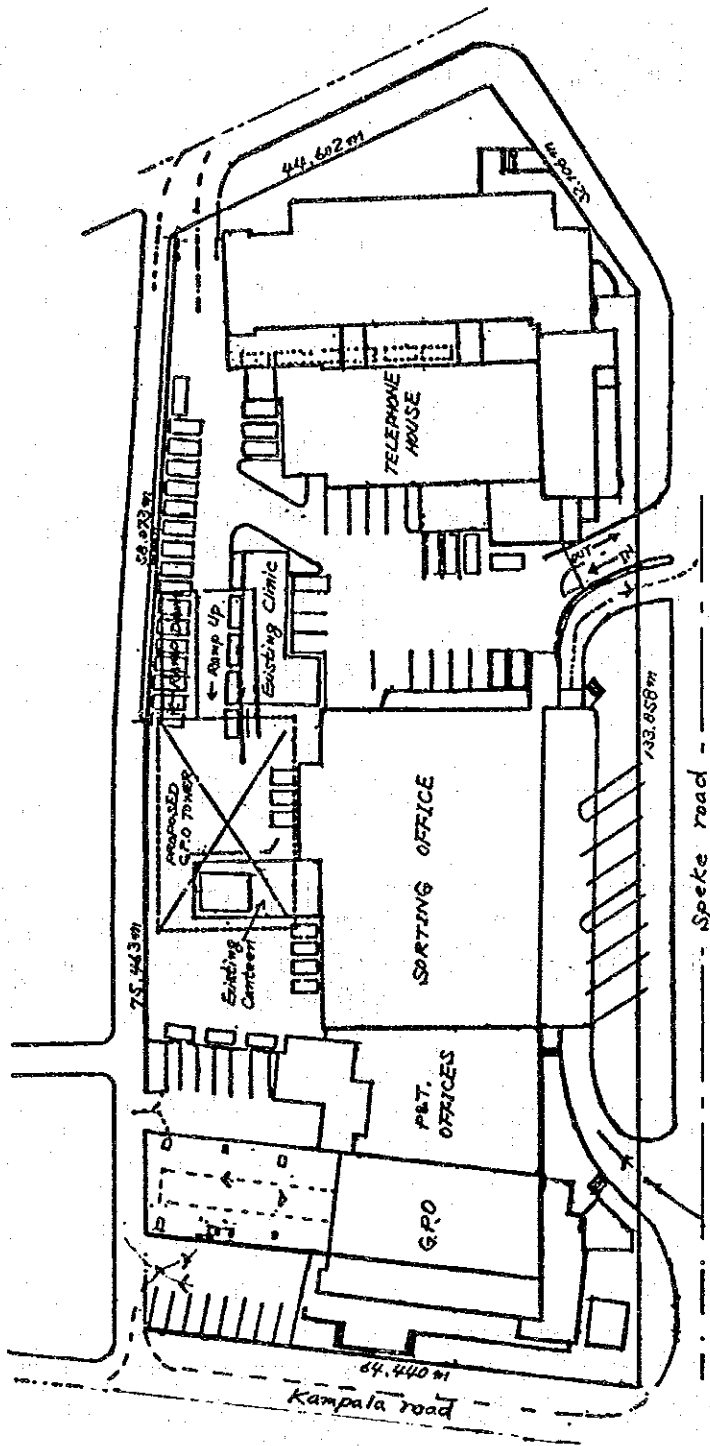
Station Name	Kampala	3/3	Survey Date	8/ Dec./ 93
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Link Name	Radio(Micro, UHF, VHF, HF), OWC, OW	Function	Terminal / Repeater
TR System	Radio(Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	FOTS / Coax
Equipment	Details:		
System Type:	FOTS 140M - Kyambogo (2+1)		
Manufact. Year:	1993 (Installed)		
Manufacturer:	Fujitsu		
MUX Equipment	Details:		
System Type :	PCM Coax - Mengo (1+1)		
Manufac. Year:	1993 (Installed)		
Manufacturer :	Fujitsu		
Other Equipment	Outside Plant Rehabilitation Project.		

Link Name	Radio(Micro, UHF, VHF, HF), OWC, OW	Function	Terminal / Repeater
TR System	Radio(Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name	Radio(Micro, UHF, VHF, HF), OWC, OW	Function	Terminal / Repeater
TR System	Radio(Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name	Radio(Micro, UHF, VHF, HF), OWC, OW	Function	Terminal / Repeater
TR System	Radio(Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

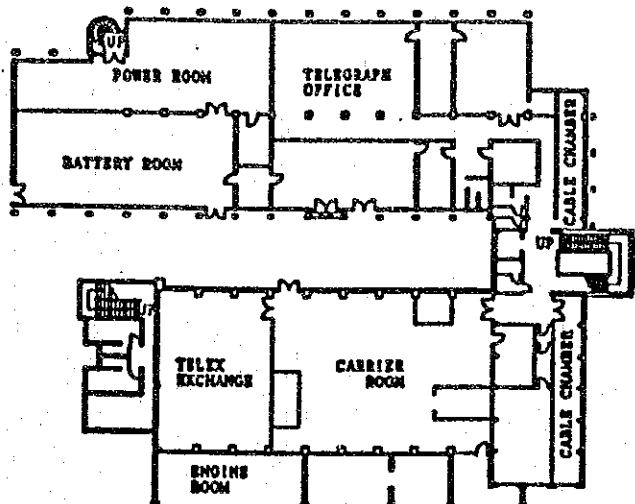


Approx. Scale

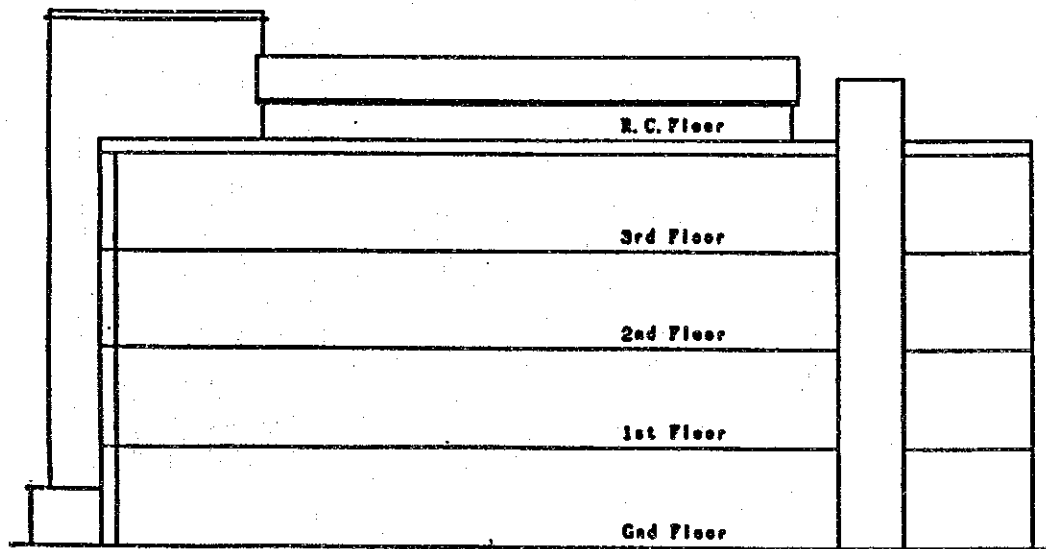


Site Name	CENTRAL KAMPALA
District Name	KAMPALA
Survey Date	2 / 11 / 93

Site Layout



GF

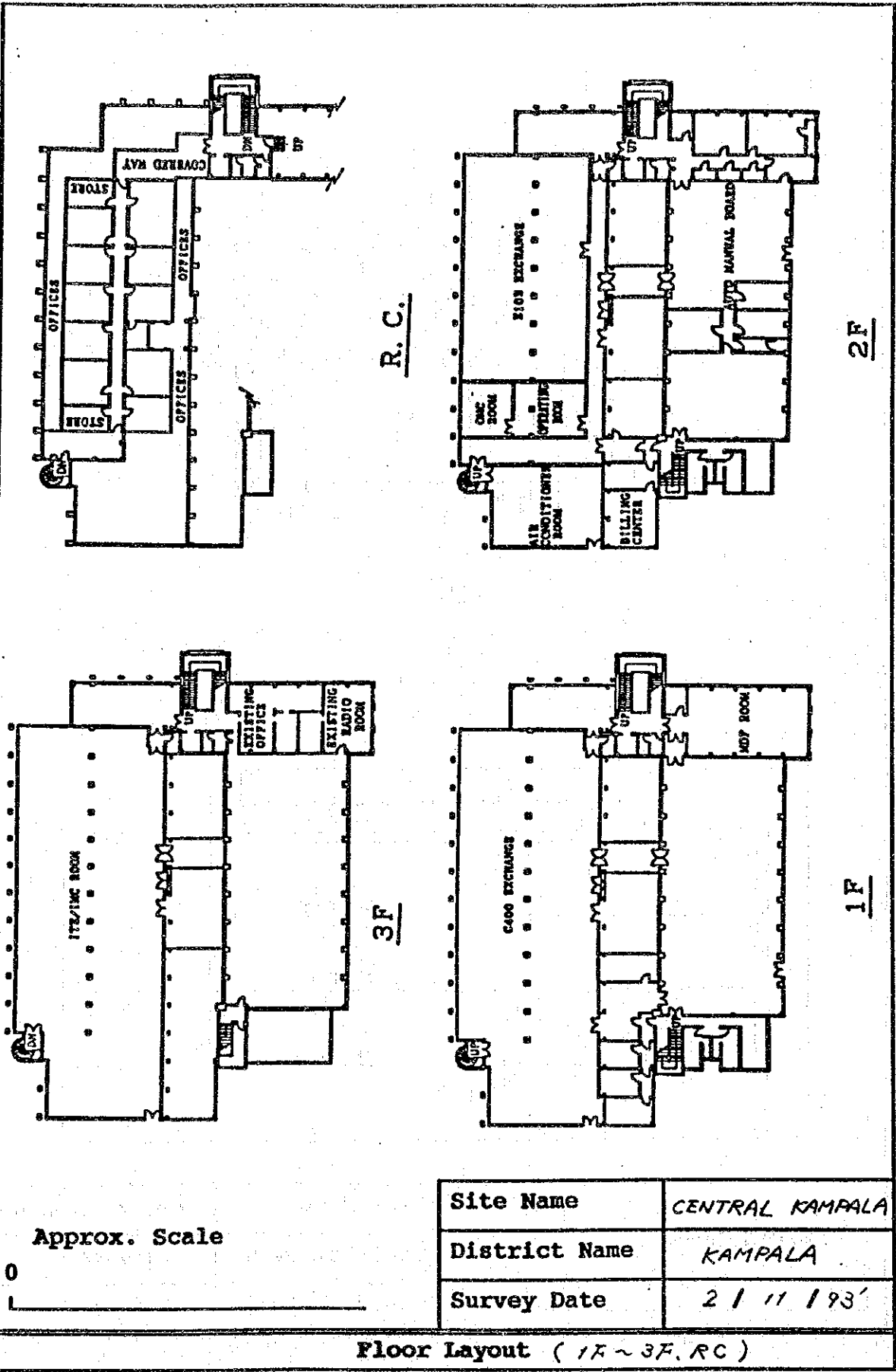


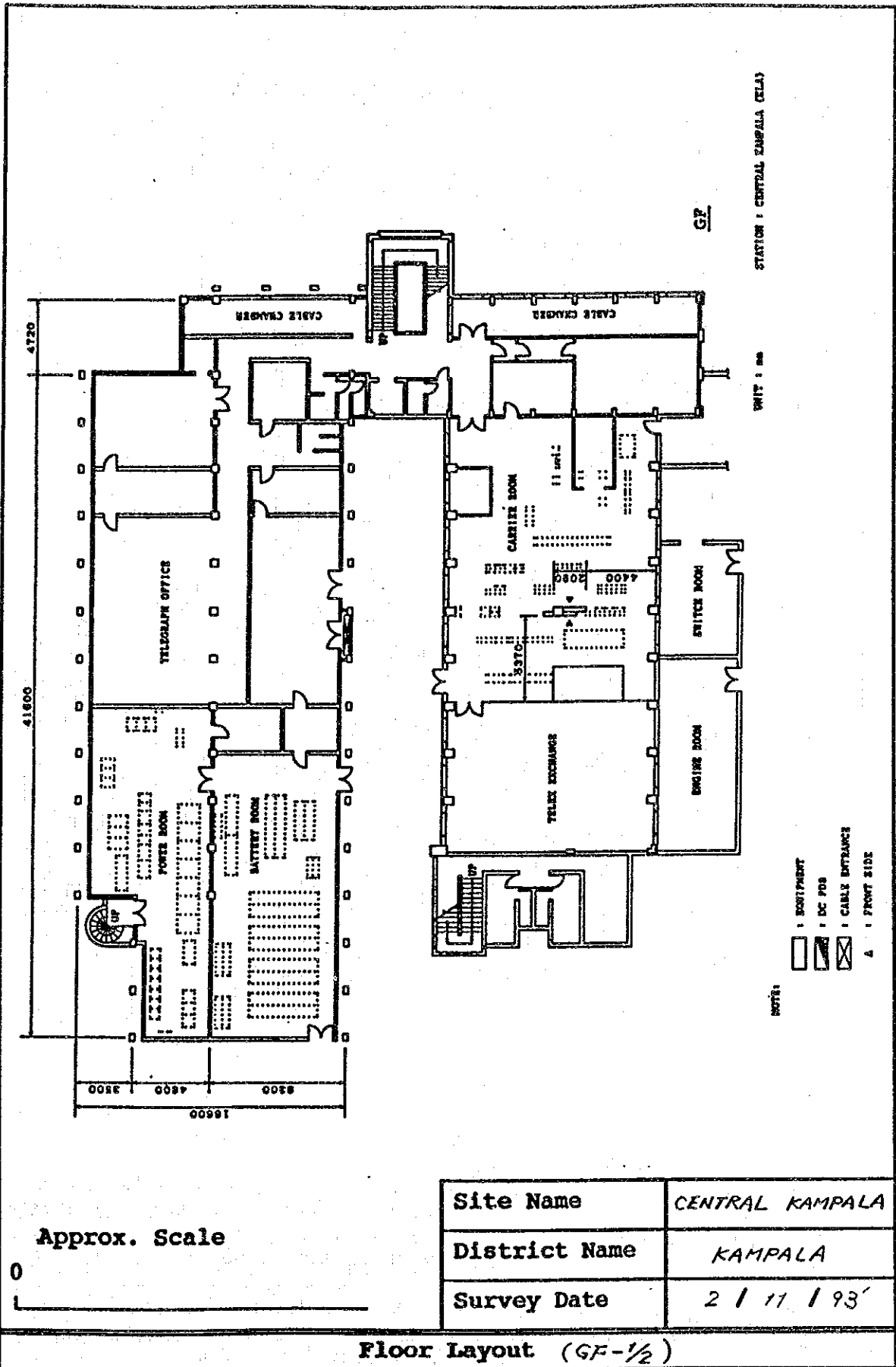
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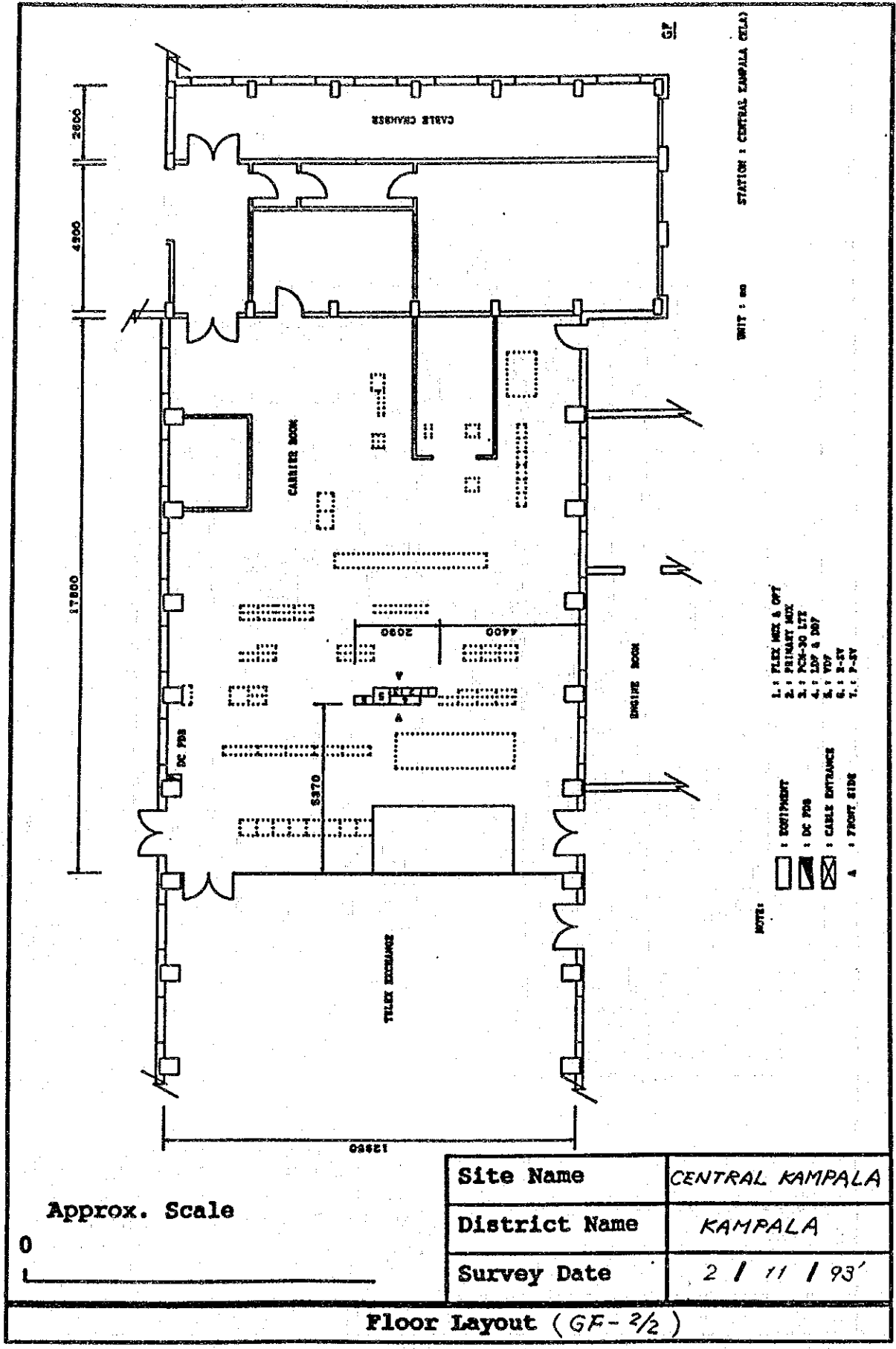


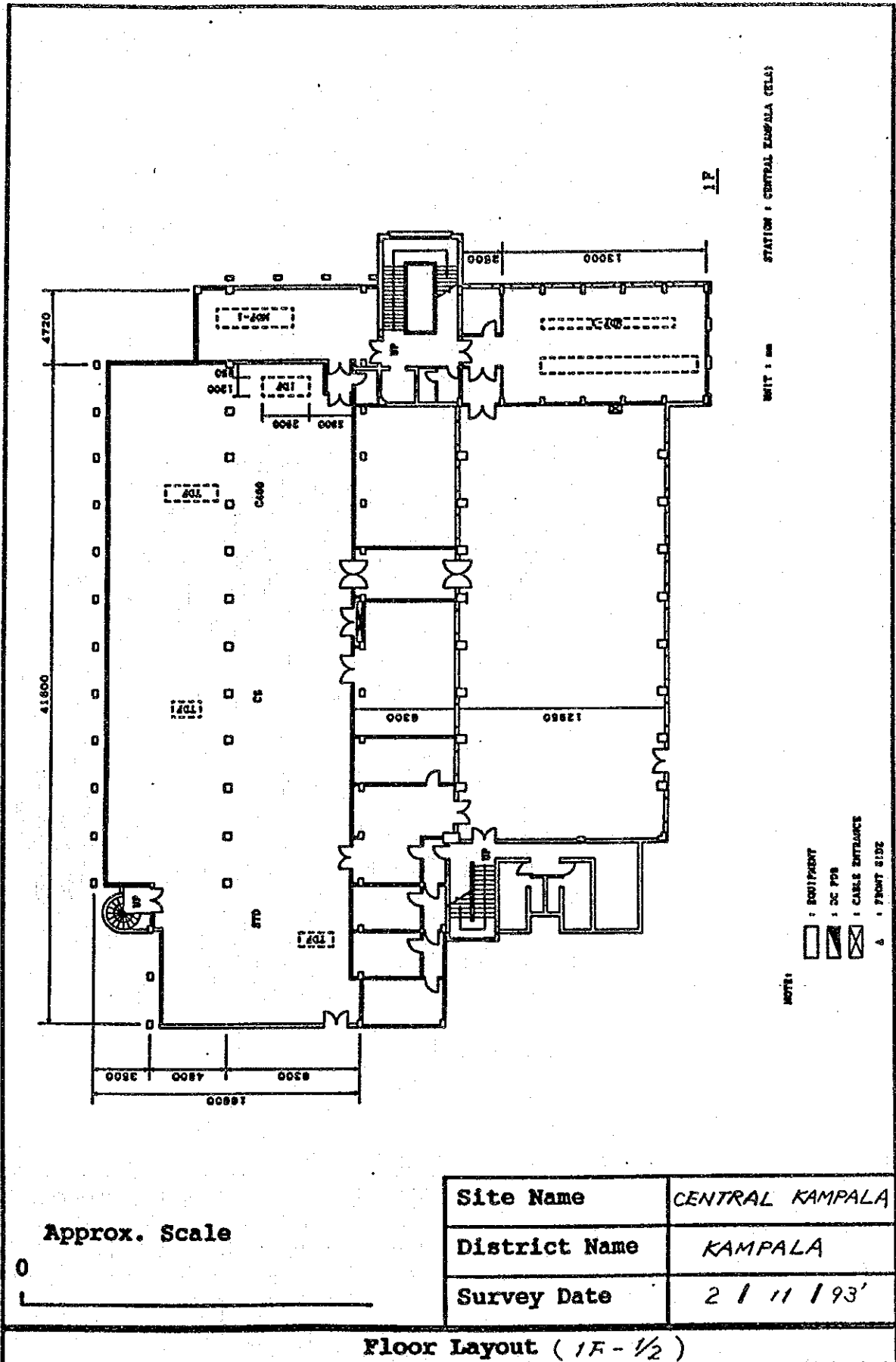
Site Name	CENTRAL KAMPALA
District Name	KAMPALA
Survey Date	2 / 11 / 93'

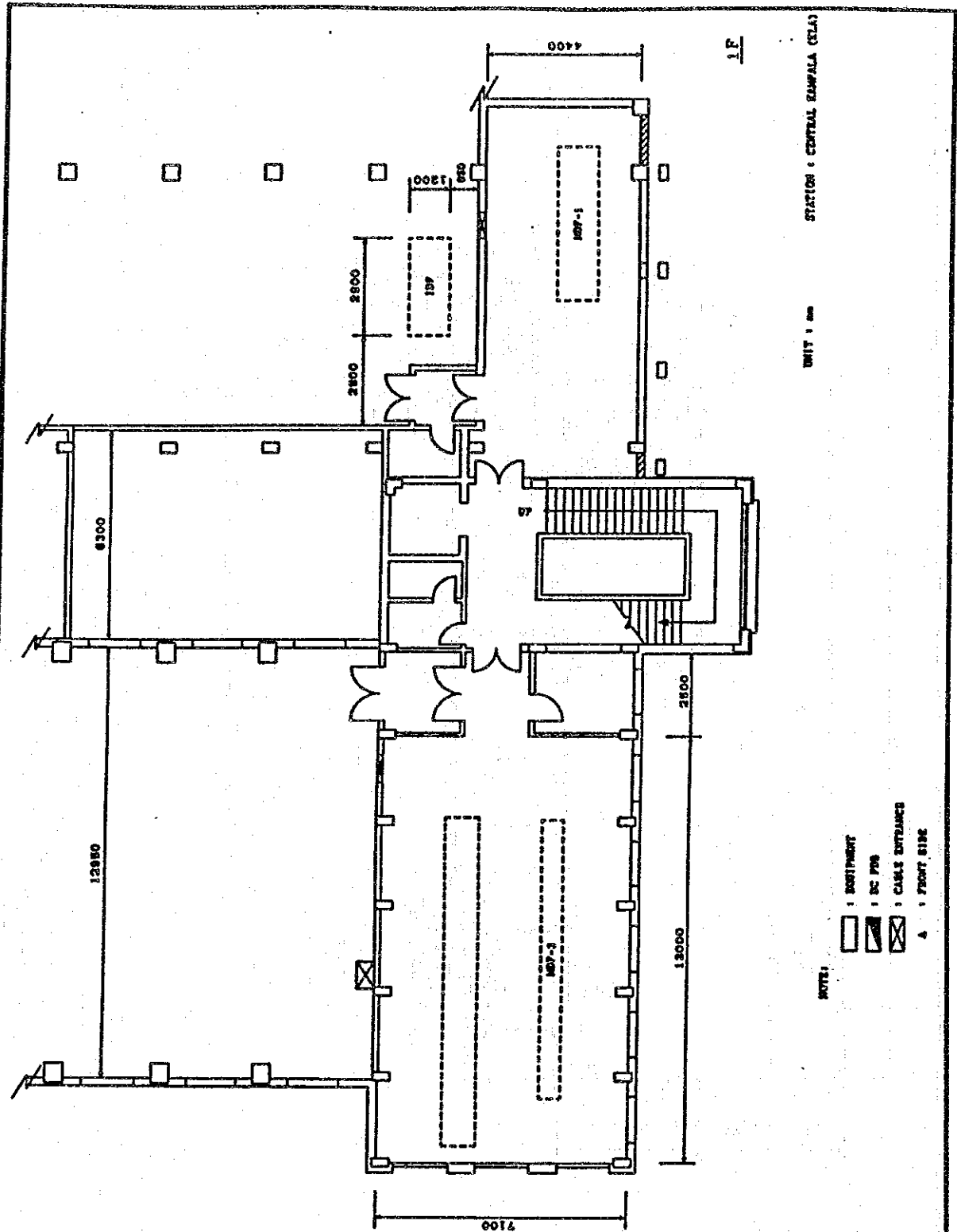
Floor Layout (SECTIONAL VIEW & GF)











STATION : CENTRAL KAMPALA (CELA)

UNIT : mm

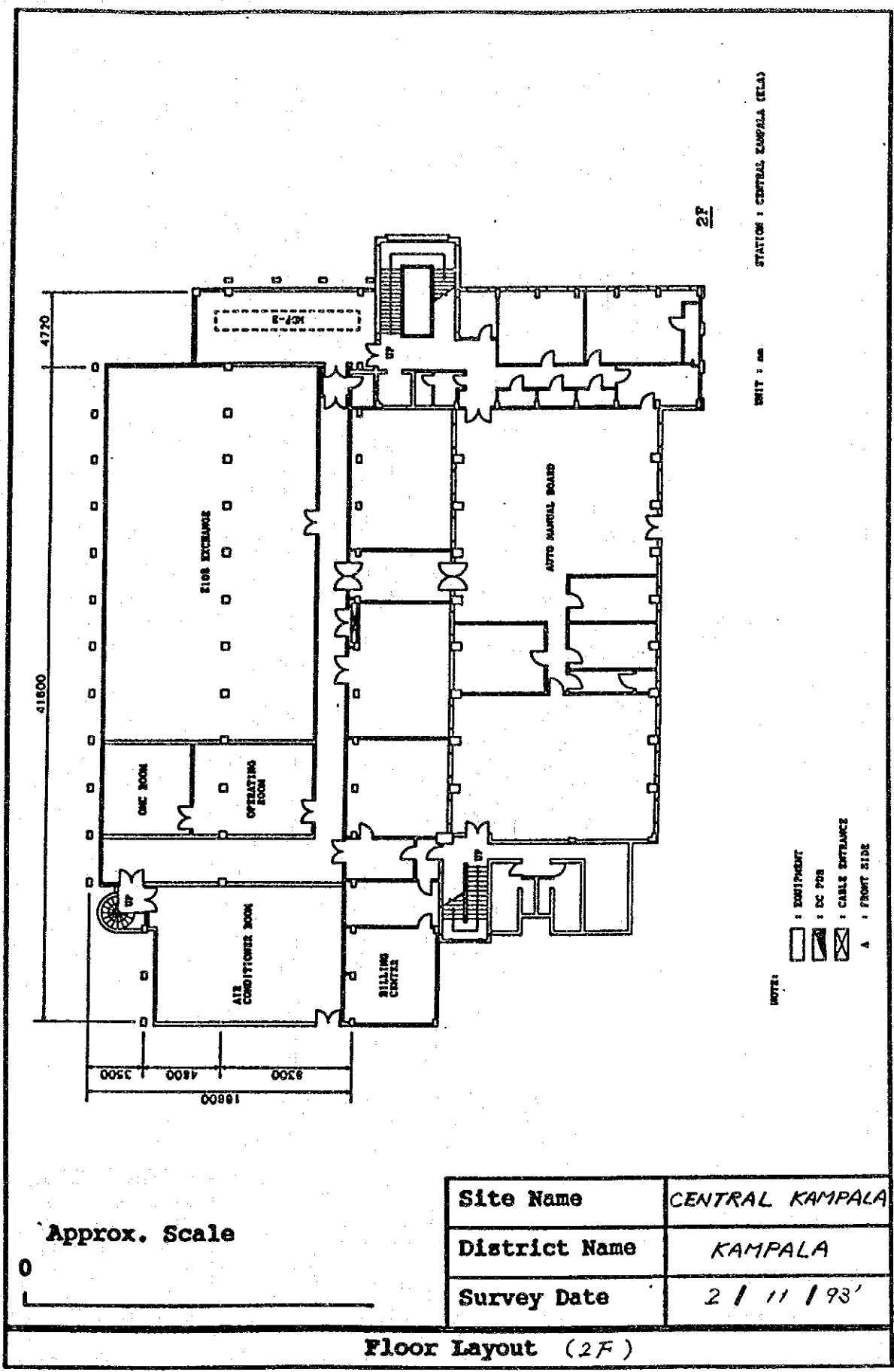
NOTE:
 □ : ROOM/THREAT
 ▨ : DC P/B
 X : CABLE ENTRANCE
 A : FRONT SIDE

Approx. Scale



Site Name	CENTRAL KAMPALA
District Name	KAMPALA
Survey Date	2 / 11 / 93'

Floor Layout (1F-2/2)

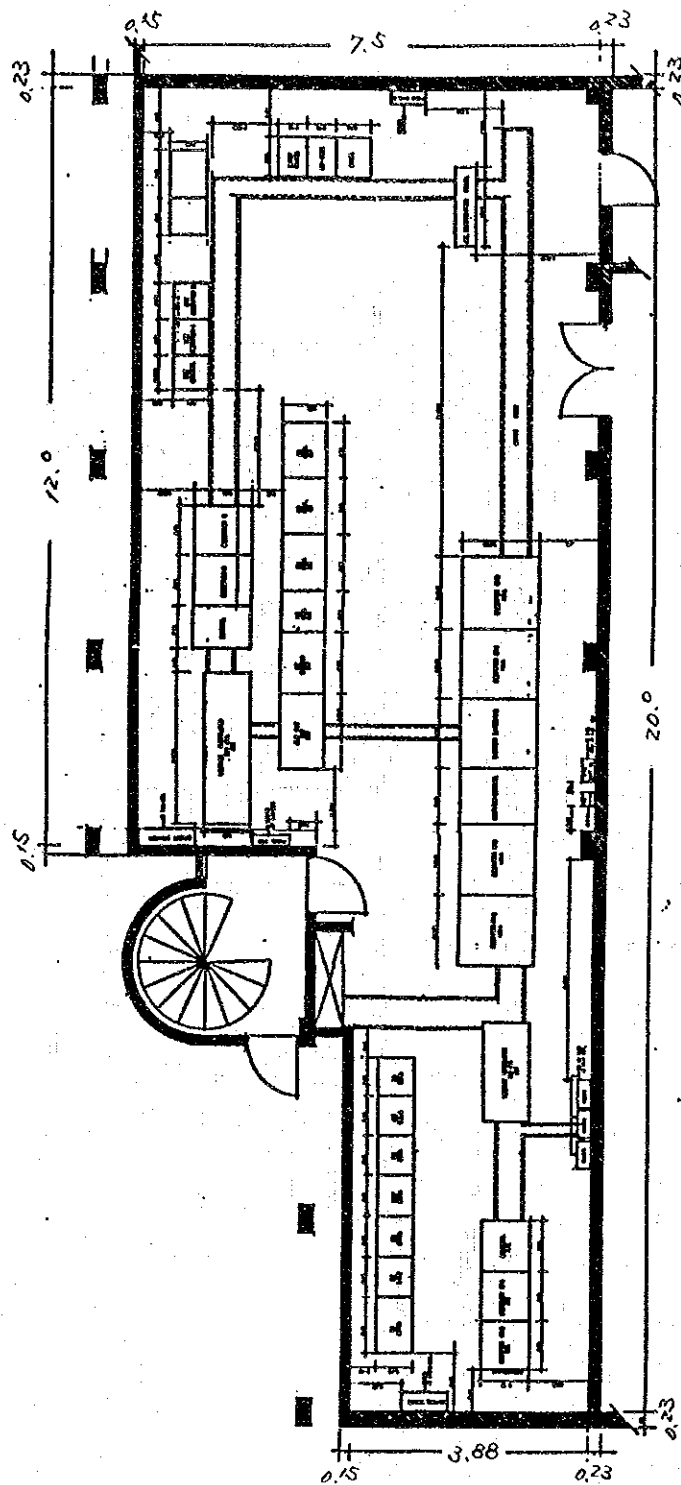


Approx. Scale



Site Name	CENTRAL KAMPALA
District Name	KAMPALA
Survey Date	2 / 11 / 93'

Floor Layout (2F)

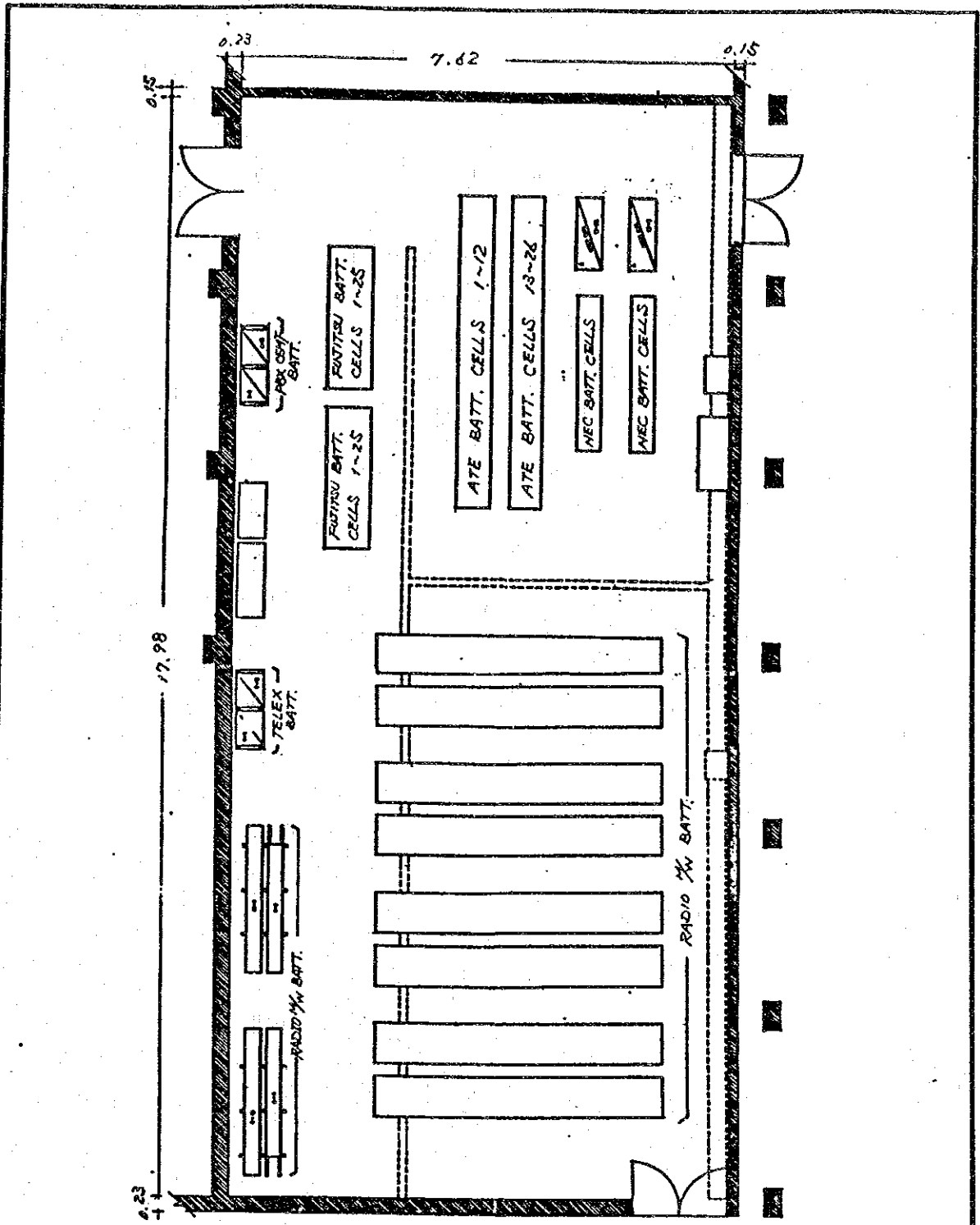


Approx. Scale

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Site Name	CENTRAL KAMPALA POWER ROOM
District Name	KAMPALA
Survey Date	2 / 11 / 93'

Floor Layout

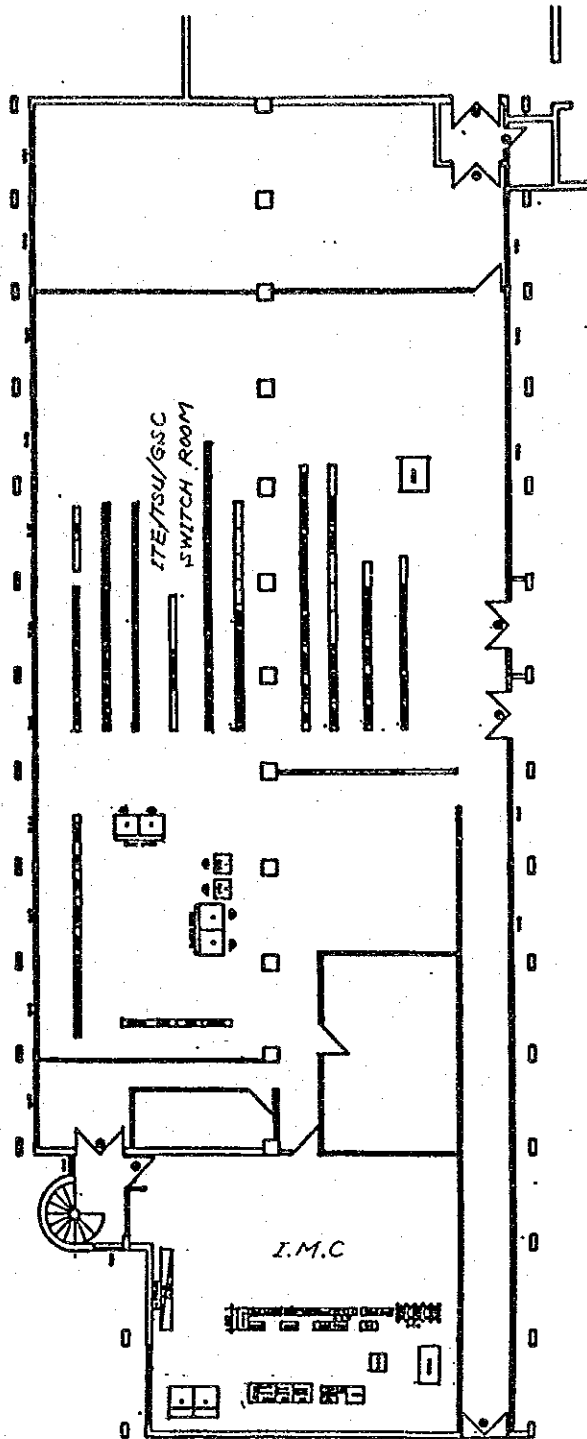


Approx. Scale



Site Name	CENTRAL KAMPALA BATTERY ROOM
District Name	KAMPALA
Survey Date	2 / 11 / 93'

Floor Layout



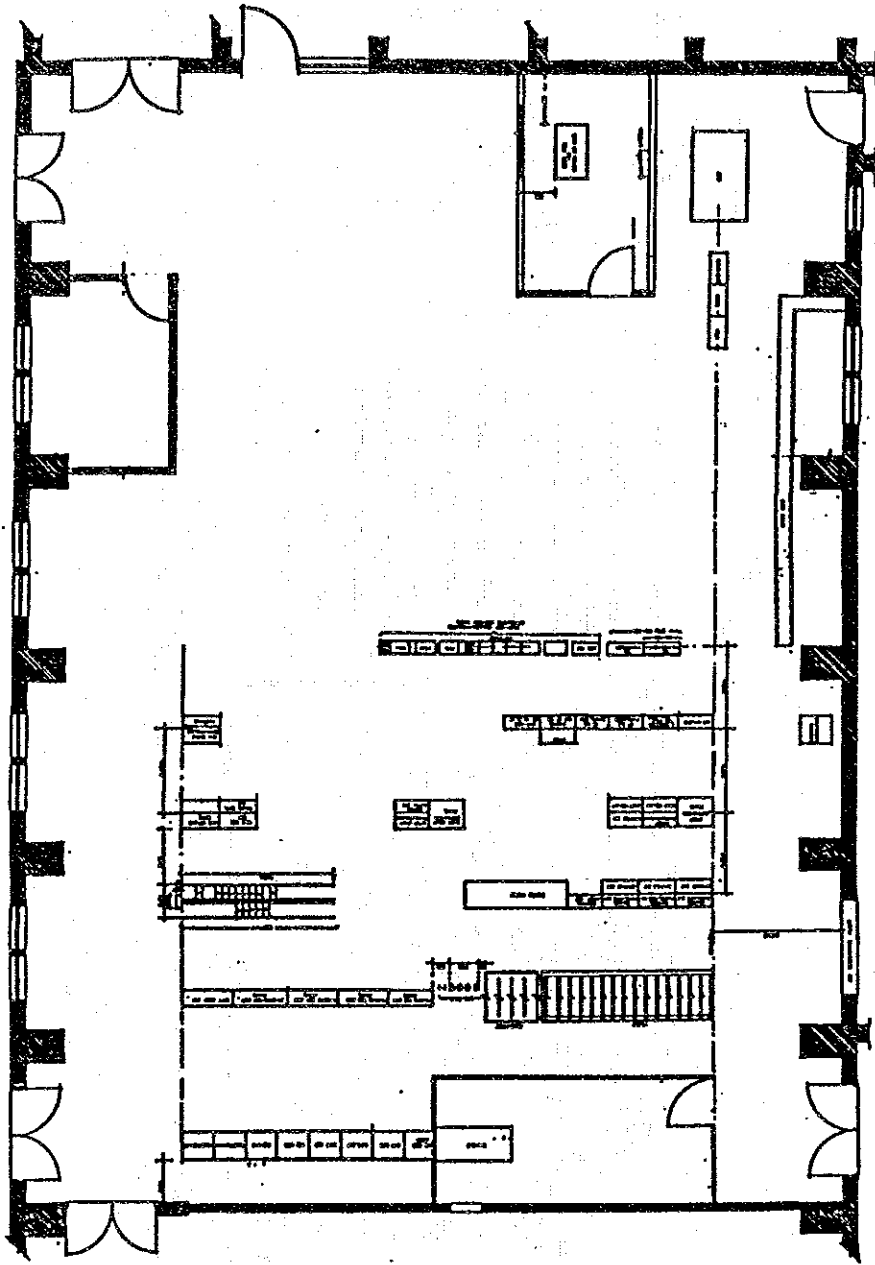
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Site Name	CENTRAL KAMPALA ITE TSU GSC (3F)
District Name	KAMPALA
Survey Date	2 / 11 / 93'

Floor Layout



Approx. Scale



Site Name	CENTRAL KAMPALA CARRIER ROOM
District Name	KAMPALA
Survey Date	2 / 11 / 93'

Floor Layout

ENTEBBE

Present Conditions of Manual Exchange

Date: 9 NOV 1993
 Exch. Name: ENTEBBE

Attendant (Exchange Side)
 • PAUL MUKASA SSEMALUULU
 (DIVISIONAL TELECOMMS OFFICER)
 • DAN SEBAGGACA
 (ASSISTANT ENGINEER)

1. Subscribers	No. of Connected Subscribers	No. of Waiting Applicant	Expected Demand after 5 Years
Government use:	_____	_____	_____
Business use:	_____	_____	_____
Resident use:	_____	_____	_____
Total:	<u>1050</u>	<u>60</u>	_____

2. Call Traffic (Mr. SSEMPA checking item in UPTC)	Local Calls	Trunk Calls	Trunk calls in same GSC
No. of calls/month	_____ calls	_____ calls	_____
Holding time	_____ min.	_____ min.	_____

3. Facilities

Switch board Type C400 X-BAR ~~Common Batt. / Magneto~~
 Capacity 1200 lines
 Manufacturer HITACHI JAPAN
 Manufact. year 1975 (Installed year 1977)

Trunk lines	Destination	(Route-1)	(Route-2)
		Destination	_____
Type of lines		<u>OW/OWC/Cable</u>	<u>OW/OWC/Cable</u>
	<u>2GHZ BAND</u>	<u>UHF/Microwave</u>	<u>UHF/Microwave</u>
Signalling		<u>Automat/Manual</u>	<u>Automat/Manual</u>
No. of channels		<u>Cap. 960^{CH} (Working 113^{CH})</u>	_____
Manufacturer		<u>TELLETRA</u>	_____
Manufact. year		<u>Installed 1983</u>	_____

Engine generator Capacity 30 kVA
 Manufact. year 1990-1991? ← Mr. Ssempe checking item
 Model (M4/LISA 42M3)
 4WS/240V 3phase 4wire
 50HZ 1500RPM
 Local cables Total pairs New 4800 pairs (800^P/IV x 6V = 4800^P)
 Usable pairs 4800 pairs

4. No. of Staff

Post master: 1
 Tel. operator: — Day time: _____ Night time: _____
 Tel. maintenance: 25
 Postal services: _____

Switching 2
 Transmission 3
 Local Cable 5
 Subs. Maintenance 7
 Support stuff 8

5. Problems

Reasons of waiting applicant:

Exchange is full.

Other problems:

Transportation
Building
Lighting

Attendant
 UPTC side: Mr. Kulinga (Transmission)
Mr. Ssempe (Switching)
Mr. C. B. Sekamanje (Radio)
 JICA side: A. IWAMI
R. KATAYAMA
D. OKEDA

Present Conditions of Transmission System

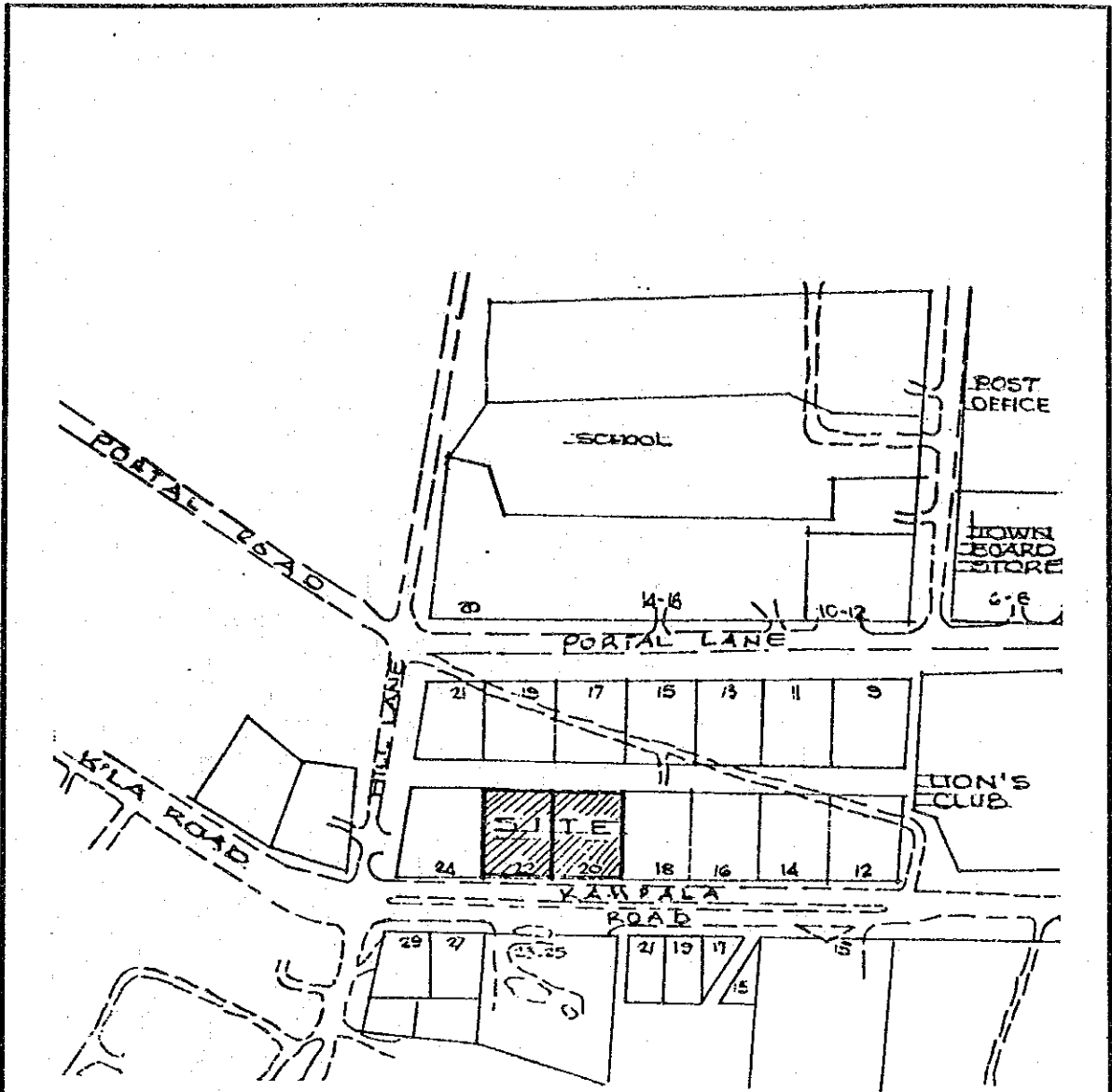
Station Name	Entebbe	Survey Date	9 / Nov. / 93
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Link Name	Kampala - Entebbe	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	(Analog) Digital	2.4 GHz
Equipment	Details:		
System Type:	960ch sys. 1+1		
Manufact. Year: (1983 (installed))			
Manufacturer: Telettra			
MUX Equipment	Details:		
System Type :	35G		
Manufac. Year:	13G = 156 ch prepared (113 ch in use		
Manufacturer : Telettra	43 ch fault		
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			



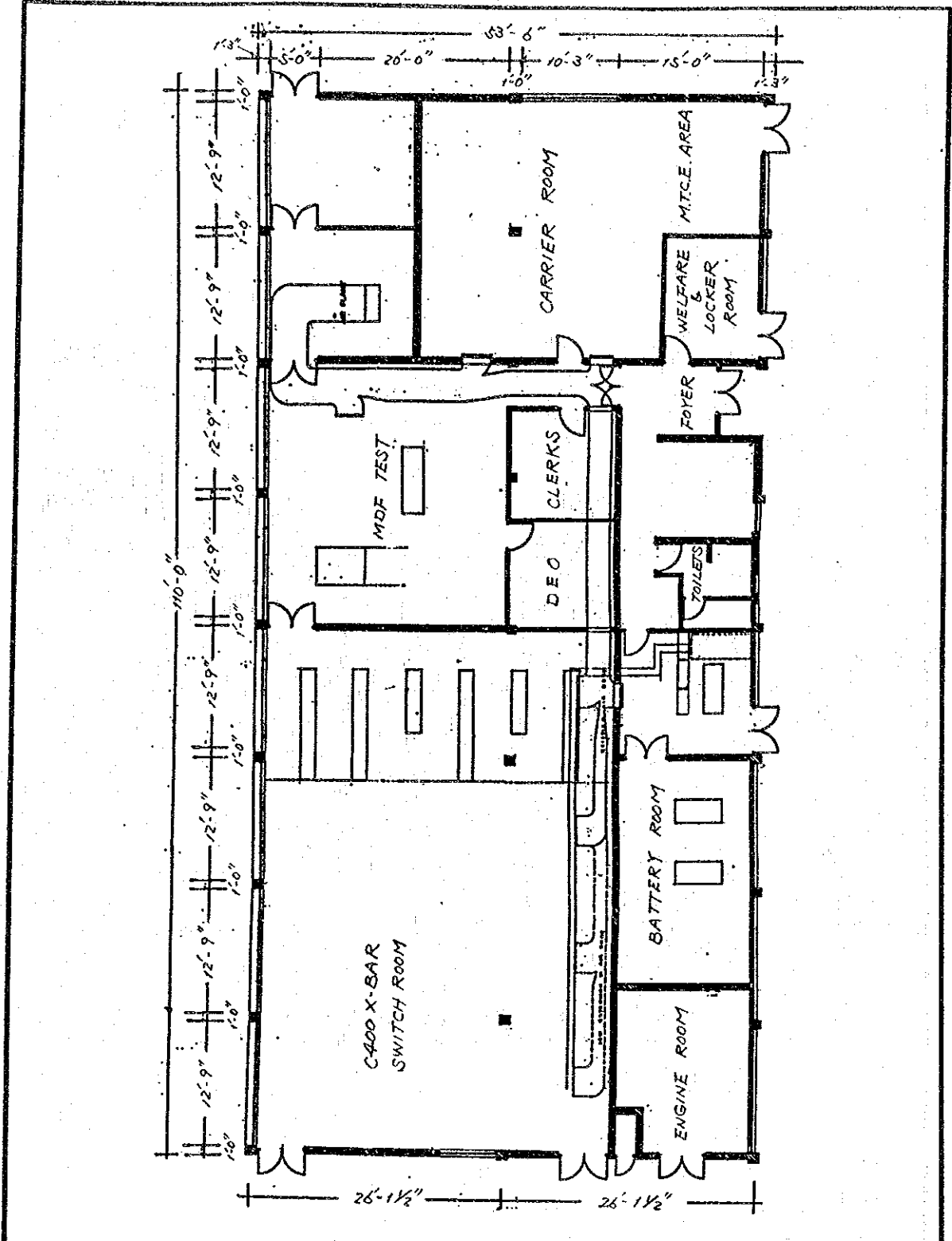
LOCATION

Approx. Scale



Site Name	ENTEBBE TELEPHONE EXCHANGE
District Name	MPIGI
Survey Date	9 / 11 / 93

Site Layout

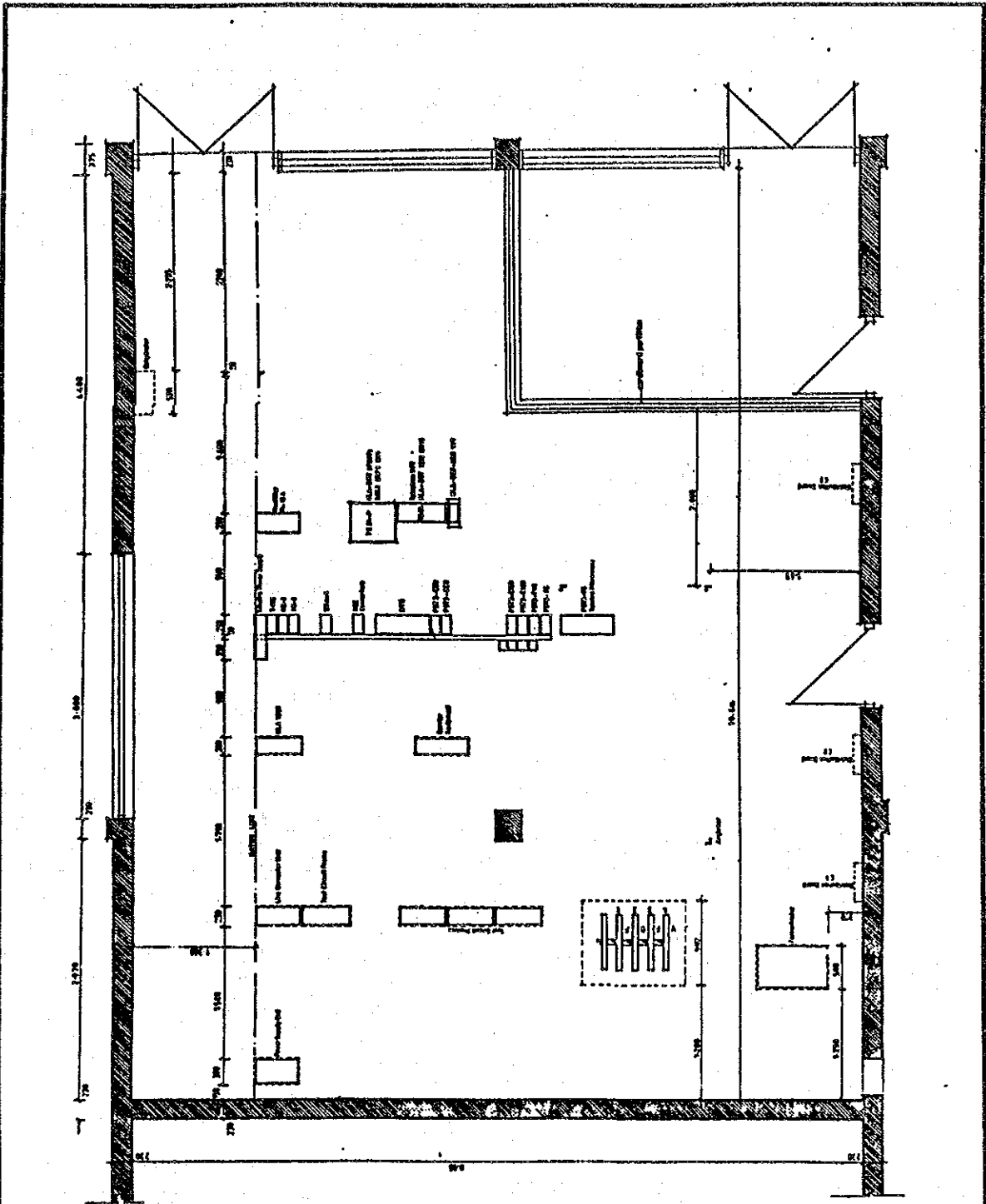


Approx. Scale



Site Name	ENTEBBE TELEPHONE EXCHANGE
District Name	MPIGI
Survey Date	9 / 11 / 93'

Floor Layout



Approx. Scale



Site Name	ENTEBBE CARRIER ROOM
District Name	MPIGI
Survey Date	9 / 11 / 93'

Floor Layout

Present Conditions of Transmission System

Station Name	Konge Rep.	1/2	Survey Date	4/Nov./93
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Link Name	Kampala - Masaka - Mbarara	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	24Hz
Equipment	Details:		
System Type:	960ch.		
Manufact. Year: 1984 (Installed)	Kampala - Konge 2+1 sys		
Manufacturer: Telettra	Konge - to Mbarara 1+1 sys		
MUX Equipment	Details:		
System Type :			
Manufac. Year:			
Manufacturer :			
Other Equipment			

Link Name	Kampala - Entebbe	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	24Hz
Equipment	Details:		
System Type:			
Manufact. Year: 1983 (Installed)	Konge - to Entebbe 1+1 sys		
Manufacturer: Telettra			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name	Konge - Bwerenga	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type: Transmitter	30ch sys. 4ch in use.		
Manufact. Year: 1993 (Installed)	Link with other micro sys. to Kampala T/H		
Manufacturer: AWA Codan (Australia)			
MUX Equipment	Details:		
System Type:	This transmitter works for RCS sending via Bwerenga Station. (4ch)		
Manufact. Year:			
Manufacturer:			
Other Equipment	RCS receiving are done at Konge. (4ch)		

Link Name	Konge - Kalangala	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:	Old Equipment.		
Manufact. Year: 1987 (Installed)			
Manufacturer: Motorola			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Present Conditions of Transmission System

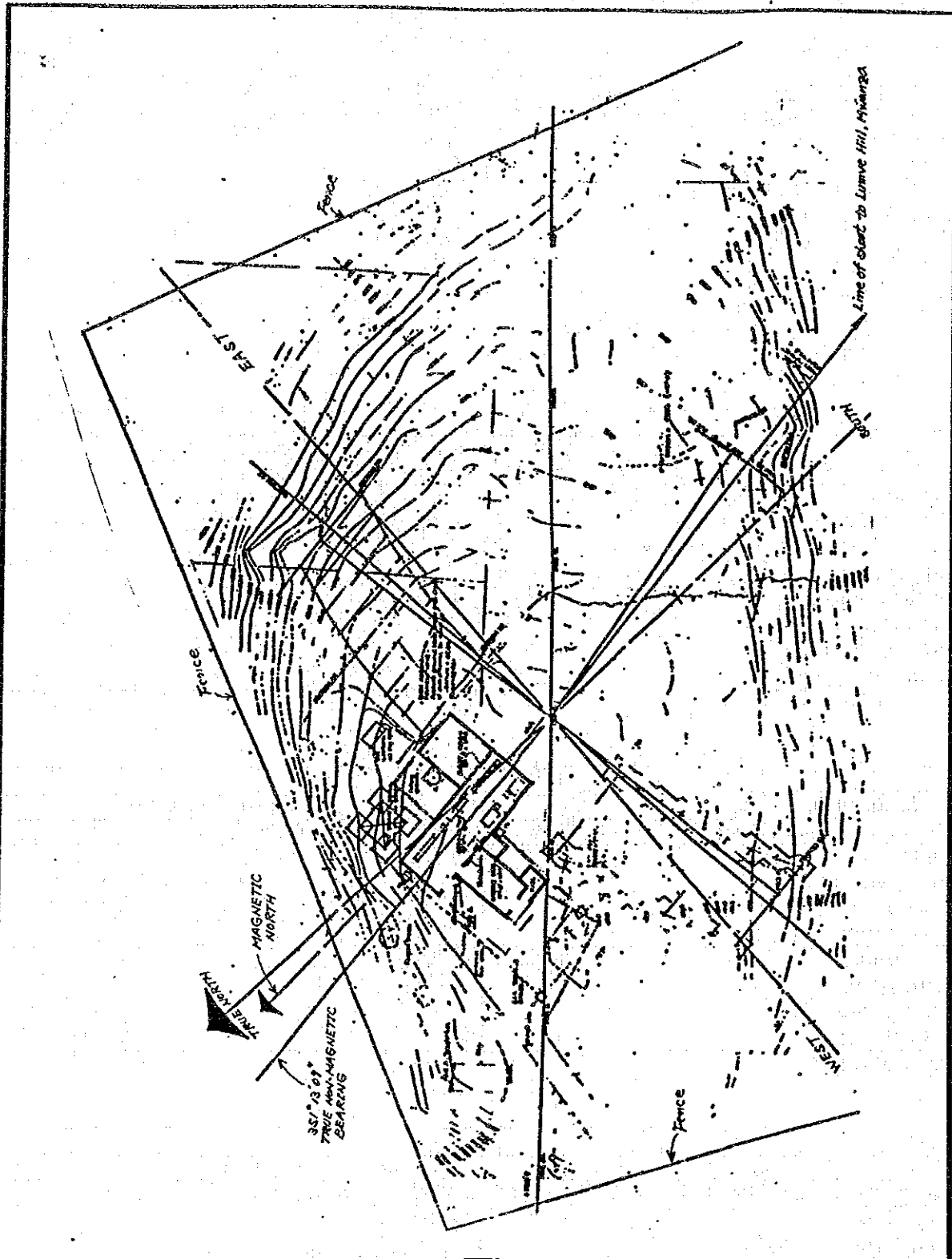
Station Name	Kongze Rep.	2/2	Survey Date	4/Nov. 193
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Link Name	Kampala - Mpoma	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	6G/L Hz
Equipment	Details:		
System Type:	960CH, 1+1 sys		
Manufact. Year:	1980 (Installed)		
Manufacturer:	NEC		
MUX Equipment	Details:		
System Type :			
Manufac. Year:			
Manufacturer :			
Other Equipment			

Link Name	Kampala - Masindi - Gulu	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:	24CH, 1+1 sys		
Manufact. Year:	1987 (Installed)		
Manufacturer:	NEC		
MUX Equipment	Details:		
System Type:			
Manufac. Year:			
Manufacturer:			
Other Equipment			

Link Name	Kampala - Fort Portal	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:	24CH, 1+0 sys		
Manufact. Year:	1988 (Installed)		
Manufacturer:	NEC		
MUX Equipment	Details:		
System Type:			
Manufac. Year:			
Manufacturer:			
Other Equipment			

Link Name	Kampala - Jinja - Nairobi	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	2GHz
Equipment	Details:		
System Type:	960CH, 1+1 sys		
Manufact. Year:	1993 (Installed)		
Manufacturer:	Fujitsu		
MUX Equipment	Details:		
System Type:			
Manufac. Year:			
Manufacturer:			
Other Equipment	Kampala - Konge ... coaxial cable		



Approx. Scale

0

Site Name	KONGE VHF/UHF REPEATER STATION
District Name	KAMPALA
Survey Date	4 / 11 / 93'

Site Layout

Present Conditions of Transmission System

Station Name	Dundu Rep.	Survey Date	9/Nov./93
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Link Name	Kampala - Masaka - Mbarara	Function	Terminal /Repeater
TR System	Radio(Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	2 GHz
Equipment	System Type: Manufact. Year: 1984 (Installed) Manufacturer: Telettra	Details: 1+1	
MUX Equipment	System Type: Manufac. Year: Manufacturer:	Details:	
Other Equipment			

Link Name	Kampala - Entebbe	Function	Terminal /Repeater
TR System	Radio(Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	2 GHz
Equipment	System Type: Manufact. Year: 1983 (Installed) Manufacturer: Telettra	Details: 1+1	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			

Link Name	Konge - Bwerenga	Function	Terminal /Repeater
TR System	Radio(Micro, UHF VHF, HF), OWC, OW	Analog / Digital	
Equipment	System Type: Manufact. Year: 1993 (Installed) Manufacturer: AWA	Details: 30ch sys. 4ch in use. For RCS Tx, Rx	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio(Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			

Present Conditions of ~~Manual~~ Exchange

MBALE

Date: 17-NOV-1993
 Exch. Name: MBALE

NAME: TAMALE PAUL
 TITLE: REGIONAL TELECOMMS MANAGER

1. Subscribers	No. of Connected Subscribers	No. of Waiting Applicant	Expected Demand after 5 Years
Government use:	<u>350 (450)</u>	<u>11 (110)</u>	<u>11 (200)</u>
Business use:	<u>183 (780)</u>	<u>34 (235)</u>	<u>60 (465)</u>
Resident use:	<u>152 (350)</u>	<u>96 (216)</u>	<u>180 (584)</u>
Total:	<u>685 (1580)</u>	<u>141 (561)</u>	<u>251 (1249)</u>

C23 C23+SXS

2. Call Traffic	Local Calls	Trunk Calls	Trunk calls in same GSC
No. of calls/month	<u>calls</u>	<u>calls</u>	<u>7</u>
Holding time	<u>min.</u>	<u>min.</u>	

3. Facilities

Switch ~~board~~ Type C23X-BAR ~~Common Batt. / Magneto~~ (with ANI-PAK)
 Capacity 800 lines
 Manufacturer HITACHI JAPAN
 Manufact. year 1975.1 (Installed year 1972)

Trunk lines	Destination	(Route-1)	(Route-2)
		Destination	<u>OW/OWC/Cable</u>
Type of lines		<u>UHF/Microwave</u>	<u>UHF/Microwave</u>
Signalling		<u>Automat/Manual</u>	<u>Automat/Manual</u>
No. of channels		<u>_____</u>	<u>_____</u>
Manufacturer		<u>_____</u>	<u>_____</u>
Manufact. year		<u>_____</u>	<u>_____</u>

Engine generator Capacity 125 kVA
 Manufact. year CONDITION Good
 (Before 4-5 Years?)

Local cables Total pairs 1600 pairs
 Usable pairs _____ pairs
 (40% Un-usable)

4. No. of Staff

Post master: 1 8:00~13:00
 Tel. operator: _____ Day time: 13:00~18:00 Night time: 18:00~8:00
 Tel. maintenance: _____
 Postal services: _____

5. Problems

Reasons of waiting applicant:

Other problems:

- 1- THE MBALE-KAMPALA LINK IS VERY BAD
- 2- CONGESTION DURING PEAK HOURS
- 3- THE SXS SWITCH IS VERY OLD TO SERVE ALL THE OPS CCTS

Present Conditions of ~~Manual~~ Exchange ^{MBALE}

Date: 18-NOV-1993
Exch. Name: MBALE

1. Subscribers	No. of Connected Subscribers	No. of Waiting Applicant	Expected Demand after 5 Years
Government use:	_____	_____	_____
Business use:	_____	_____	_____
Resident use:	_____	_____	_____
Total:	_____	_____	_____

2. Call Traffic (1-20 OCT. 93 on Manual Board)	Local Calls	Trunk Calls	Trunk calls in same GSC
No. of calls/month	<u>557 calls</u>	<u>3584 calls</u>	<u>1</u>
Holding time	<u>min.</u>	<u>min.</u>	
Un-successful Calls/month	<u>434 calls</u>	<u>2010 calls</u>	

3. Facilities			
Switch board	Type <u>SxS</u> Capacity Manufacturer Manufact. year	Common Batt./ Magneto <u>800 lines</u> <u>PLESSEY, UK</u> <u>1960? (Very old)</u>	
Trunk lines	Destination	(Route-1)	(Route-2)
	Type of lines	<u>OW/OWC/Cable</u>	<u>OW/OWC/Cable</u>
	Signalling	<u>UHF/Microwave</u>	<u>UHF/Microwave</u>
	No. of channels	<u>Automat/Manual</u>	<u>Automat/Manual</u>
	Manufacturer	_____	_____
	Manufact. year	_____	_____
Engine generator	Capacity Manufact. year	<u>kVA</u>	
Local cables	Total pairs	<u>pairs</u>	
	Usable pairs	<u>pairs</u>	

4. No. of Staff
 Post master: 1
 Tel. operator: _____ Day time: _____ Night time: _____
 Tel. maintenance: _____
 Postal services: _____

5. Problems
 Reasons of waiting applicant:

 Other problems:

Present Conditions of Transmission System

Station Name	Mbale	1/3	Survey Date	16/Nov./93
--------------	-------	-----	-------------	------------

Link Name	Jinja - Mbale	Function	(Terminal)/ Repeater
TR System	Radio (Micro, <u>UHF</u> , VHF, HF), OWC, OW	(Analog)/ Digital	(+1) 800MHz
Equipment	System Type: TR800D120-5A UHF Tx/Rx Manufact. Year: 1977 Manufacturer: NEC	Details:	
MUX Equipment	System Type: PST MP120 Manufac. Year: ? Manufacturer: Telettra	Details: 120CH ... 110CH In Use	
Other Equipment			

Link Name	Mbale - Kumi	Function	(Terminal)/ Repeater
TR System	Radio (Micro, <u>UHF</u> , VHF, HF), OWC, OW	(Analog)/ Digital	(+0) 400MHz
Equipment	System Type: TR4EM12-1A Tx/Rx Manufact. Year: 1987 (Installed) Manufacturer: NEC	Details: MUX Equip. Attached (5CH ... 2CH In Use)	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			

Link Name	Mbale - Soroti	Function	(Terminal)/ Repeater
TR System	Radio (Micro, <u>UHF</u> , VHF, HF), OWC, OW	(Analog)/ Digital	(+1) 400MHz
Equipment	System Type: TR400D60-6A UHF Tx/Rx Manufact. Year: 1977 Manufacturer: NEC	Details: Fading Problem is occur because of insufficiency of path clearance.	
MUX Equipment	System Type: PST MP120 Manufact. Year: ? Manufacturer: Telettra	Details: 24CH Installed	
Other Equipment			

Link Name	Mbale - Pallisa	Function	(Terminal)/ Repeater
TR System	Radio (Micro, UHF, <u>VHF</u> , HF), OWC, OW	(Analog)/ Digital	
Equipment	System Type: TU01603AA Manufact. Year: 1978? Manufacturer: Motorola	Details: 1CH	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			

Present Conditions of Transmission System

Station Name	Mbale	2/3	Survey Date	16/Nov.193
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Link Name	Mbale - Tororo	Function	(Terminal) Repeater
TR System	Radio (Micro, UHF, VHF, HF), (OWC) OW	(Analog) Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type :	PST L12		
Manufac. Year:	? (old.)		
Manufacturer :	Telettra		
Other Equipment	12ch In Use		

Link Name	Mbale - Tororo	Function	(Terminal) Repeater
TR System	Radio (Micro, UHF, VHF, HF), (OWC) OW	(Analog) Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:	PST L12		
Manufact. Year:	? (old.)		
Manufacturer:	Telettra		
Other Equipment	12ch In Use		

Link Name	Mbale - Tororo	Function	(Terminal) Repeater
TR System	Radio (Micro, UHF, VHF, HF), (OWC) OW	(Analog) Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:	PST L12		
Manufact. Year:	? (old.)		
Manufacturer:	Telettra		
Other Equipment	12ch In Use		

Link Name	Mbale - Busia	Function	(Terminal) Repeater
TR System	Radio (Micro, UHF, VHF, HF), (OWC) OW	(Analog) Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:	PST L12		
Manufact. Year:	? (old.)		
Manufacturer:	Telettra		
Other Equipment	12CH - 6ch In Use		

Present Conditions of Transmission System

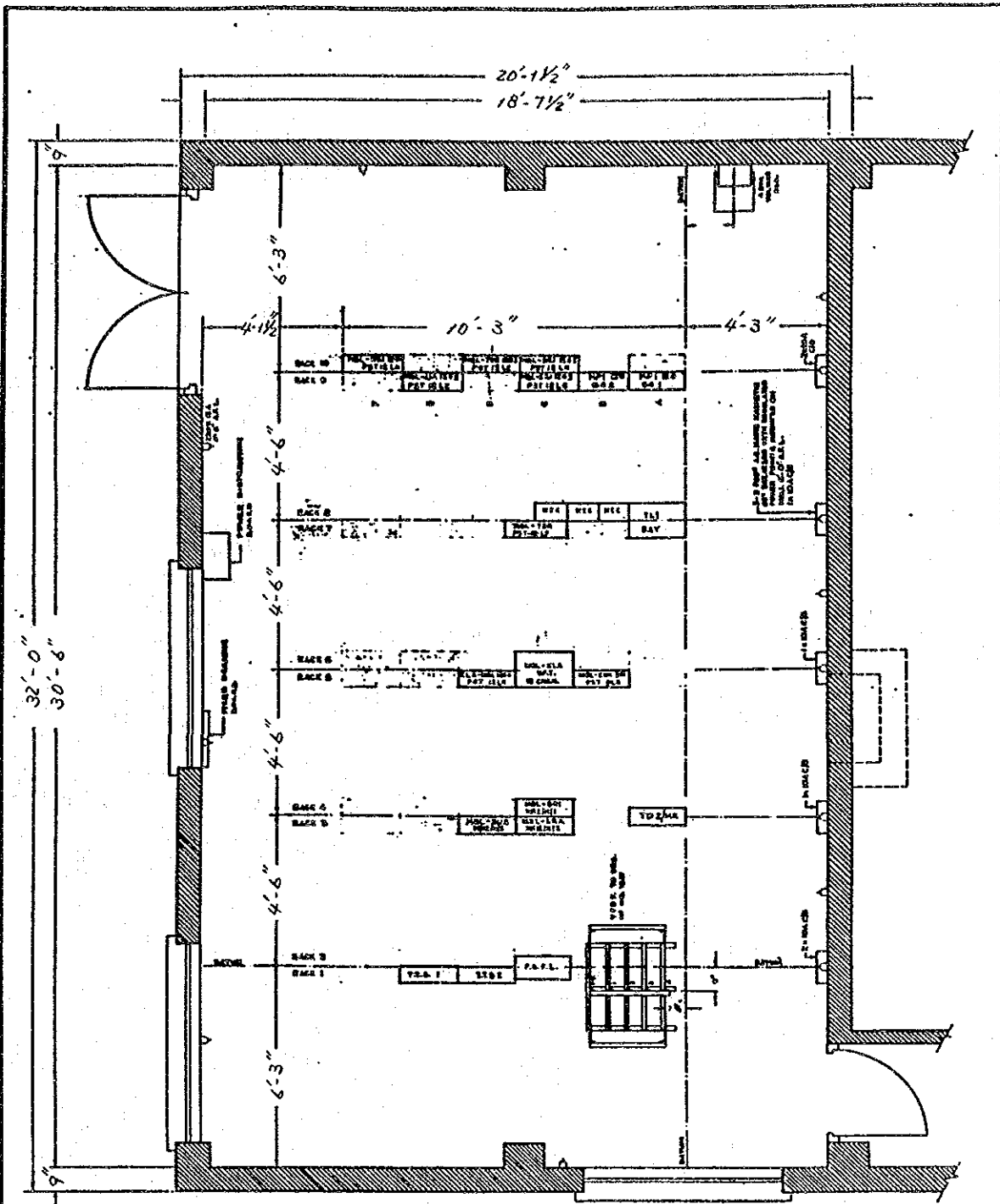
Station Name	Mbale	3/3	Survey Date	16/Nov./93
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Link Name	Mbale - Budadivi	Function	(Terminal) / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	(Analog) / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type :	PST L12		
Manufac. Year :	? (old)		
Manufacturer :	Telettra		
Other Equipment			

Link Name	Mbale - Mayenze - Bududa	Function	(Terminal) / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	(Analog) / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:	TD2		
Manufact. Year:	? (very old)		
Manufacturer:	Telettra		
Other Equipment			

Link Name	Mbale - Nakaloke	Function	(Terminal) / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	(Analog) / Digital	
Equipment	Details:		
System Type:	From DP, 10 pairs Connected.		
Manufact. Year:	5 pairs in use now.		
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name	Mbale - Bulucheke, Sivonko	Function	(Terminal) / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	(Analog) / Digital	
Equipment	Details:		
System Type:	1ch each connection		
Manufact. Year:	to the both stations.		
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			



32'-0"
30'-6"

Approx. Scale

0

Site Name	MBALE CARRIER ROOM
District Name	MBALE
Survey Date	16 / 11 / 93'

Floor Layout

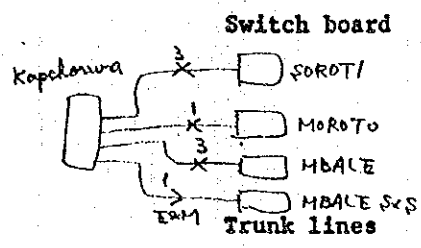
Present Conditions of Manual Exchange

Date: 16 Nov 1993
 Exch. Name: KAPCHORWA

1. Subscribers	No. of Connected Subscribers	No. of Waiting Applicant	Expected Demand after 5 Years
Government use:	_____	_____	_____
Business use:	_____	_____	_____
Resident use:	_____	_____	_____
Total:	_____	_____	_____

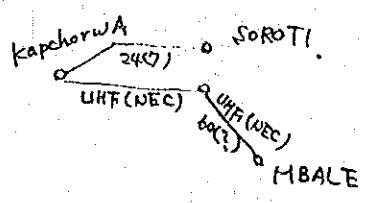
2. Call Traffic	Local Calls	Trunk Calls	Trunk calls in same GSC
No. of calls/month	_____ calls	_____ calls	_____
Holding time	_____ min.	_____ min.	_____

3. Facilities



Switch board	Type	Common Batt. / Magneto
	Capacity	_____ lines
	Manufacturer	<u>L.M. ERICSON</u>
	Manufact. year	<u>1960</u>

Destination	(Route-1)	(Route-2)
	Type of lines	<u>MBALE</u>
Signalling	<u>OW/OWC/Cable</u>	<u>OW/OWC/Cable</u>
No. of channels	<u>UHF/Microwave</u>	<u>UHF/Microwave</u> <u>VHF</u>
Manufacturer	<u>Automat/Manual</u>	<u>Automat/Manual</u>
Manufact. year	<u>179ps</u>	<u>1 channel</u>
	_____	<u>MOTOROLA</u>
	_____	<u>?</u> <u>1975</u>



Engine generator	Capacity	<u>5 kVA</u>
	Manufact. year	_____
		<u>STAMFORD (UK)</u>
Local cables	Total pairs	<u>120 pairs</u>
	Usable pairs	<u>150 pairs</u>
		<u>110</u>

4. No. of Staff

Post master: 1
 Tel. operator: 6
 Tel. maintenance: 2
 Postal services: 2
 Security guard: 1

Day time: 8.00 - 1.00 pm
 Night time: 6.00 - 8.00 am
1.00 - 6 pm

5. Problems

Reasons of waiting applicant:
~~SWBD~~ SWBD full up
 Other problems:
 Local network is limited in distribution

MR. H.S.K. TURKEI
 Technical officer
 MR. C.F. OKELLO
 Postal officer

Present Conditions of Transmission System

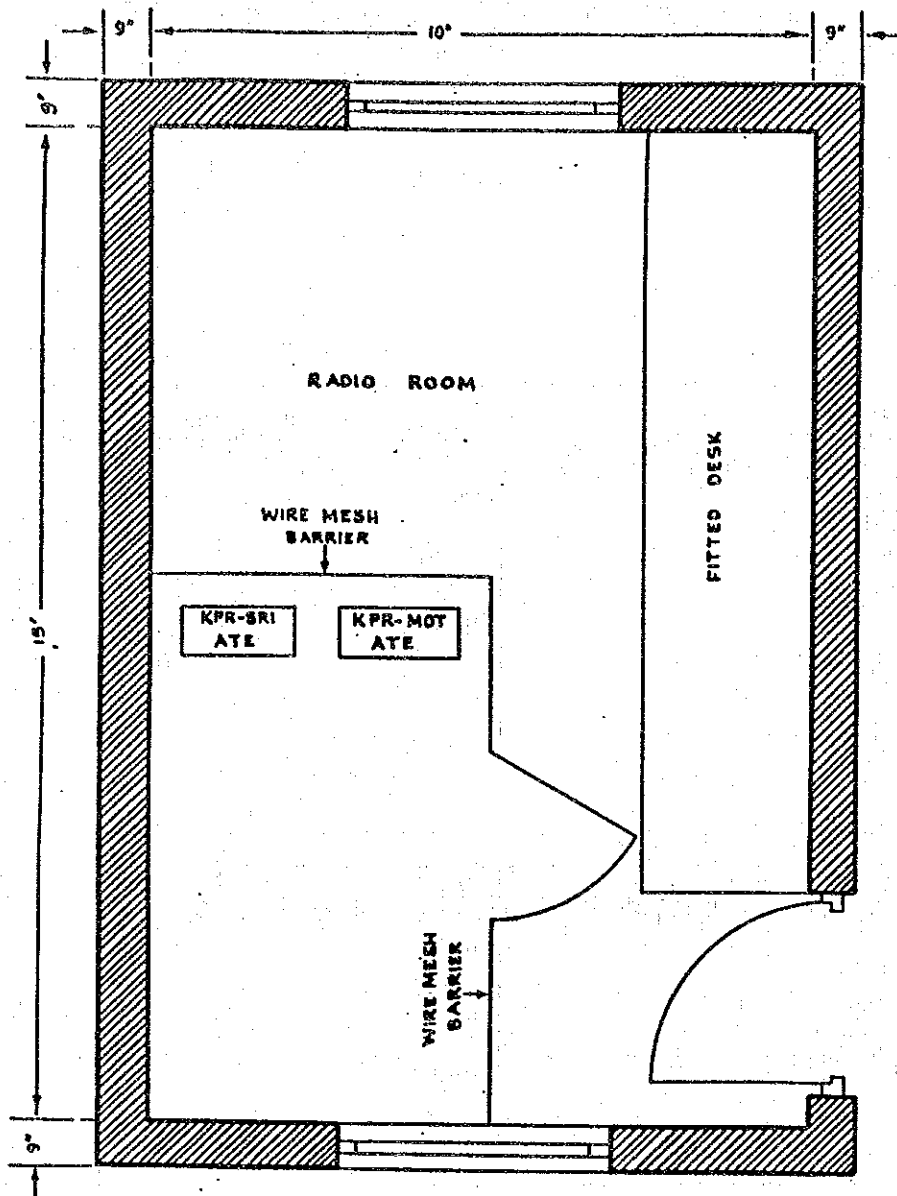
Station Name	Kapchorwa	Survey Date	16/Nov./93
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Link Name	Soroti - Kapchorwa	Function	(Terminal) Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	(Analog) Digital	1+1 400MHz
Equipment	System Type: TR4FM 24-1A Tx/Rx Manufact. Year: 1991 (Installed) Manufacturer: NEC	Details:	MAX Equip. Attached. (24ch 7ch In Use)
MUX Equipment	System Type : Manufac. Year: Manufacturer :	Details:	
Other Equipment			

Link Name	Kapchorwa - Moroto	Function	(Terminal) Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	(Analog) Digital	160MHz
Equipment	System Type: TUD1603AA Manufact. Year: 1975? Manufacturer: Motorola	Details:	1ch
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			

Link Name	Kapchorwa - Moroto	Function	(Terminal) Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	(Analog) Digital	160MHz
Equipment	System Type: TUD1603AA Manufact. Year: 1975? Manufacturer: Motorola	Details:	1ch
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			



NOTE:-
 THE 150FT. MAST IS SITUATED
 AT 9 1/2 FT. AWAY FROM THE
 WESTERN PART OF THE BUILDING
 AS PER THE DIAGRAM.

Approx. Scale

0



Site Name	KAPCHORWA V.H.F REPEATER STATION
District Name	KAPCHORWA
Survey Date	16 / 11 / 93'

Floor Layout

Present Conditions of Transmission System

Station Name	Bushangi Rep.	Survey Date	17/Nov/93
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Link Name	Jinja - Mbale	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	800 MHz
Equipment	Details:		
System Type:	TR800D120-5A UHF Tx/Rx		
Manufact. Year:	1977		
Manufacturer:	NEC		
MUX Equipment	Details:		
System Type :			
Manufac. Year:			
Manufacturer :			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

TORORO

Present Conditions of Manual Exchange

Date: 17 Nov. 1993
 Exch. Name: TORORO

1992 → 420
 1993 → 300

1. Subscribers	No. of Connected Subscribers	No. of Waiting Applicant	Expected Demand after 5 Years
Government use:	<u>95 (38%)</u>	_____	_____
Business use:	<u>83 (33%)</u>	_____	_____
Resident use:	<u>72 (29%)</u>	_____	_____
Total:	<u>425</u> 250	<u>10</u>	_____

2. Call Traffic	Local Calls	Trunk Calls	Trunk calls in same GSC
No. of calls/month	_____ calls	_____ calls	_____ x
Holding time	_____ min.	_____ min.	

3. Facilities	Type <u>C23X-8AR</u> Common Batt. / Magneto		
✓ Switch board	Capacity	<u>1000</u>	lines
	Manufacturer	<u>HITACHI JAPAN</u>	
	Manufact. year	<u>1980 (1988)</u>	
		Installed year.	
✓ Trunk lines	Destination	(Route-1)	(Route-2)
	Type of lines	<u>OW/OWC/Cable</u>	<u>OW/OWC/Cable</u>
		<u>UHF/Microwave</u>	<u>UHF/Microwave</u>
	Signalling	<u>Automat/Manual</u>	<u>Automat/Manual</u>
	No. of channels	_____	_____
	Manufacturer	_____	_____
	Manufact. year	_____	_____
Engine generator	Capacity	<u>15</u>	kVA
<u>INTEX (UK)</u>	Manufact. year	_____	
Local cables	Total pairs	<u>1000</u>	pairs
	Usable pairs	<u>850</u>	pairs

4. No. of Staff		
Post master:	<u>1</u>	
Tel. operator:	<u>1 (PCO)</u>	Day time: <u>8:00/7:00</u> Night time: _____
Tel. maintenance:	<u>8</u>	
Postal services:	<u>7</u>	
Telegraphist:	<u>1</u>	
Messenger:	<u>1</u>	

5. Problems

Reasons of waiting applicant:
 Long distance subs. cannot be connected. i.e. > 10km.

Other problems:
 Trunks to Mbale and Kampala are congested.

PADDY WANDI
 DTO/TORORO DISTRICT
 ASSISANT ENGINEER
 11/11/93

Present Conditions of Transmission System

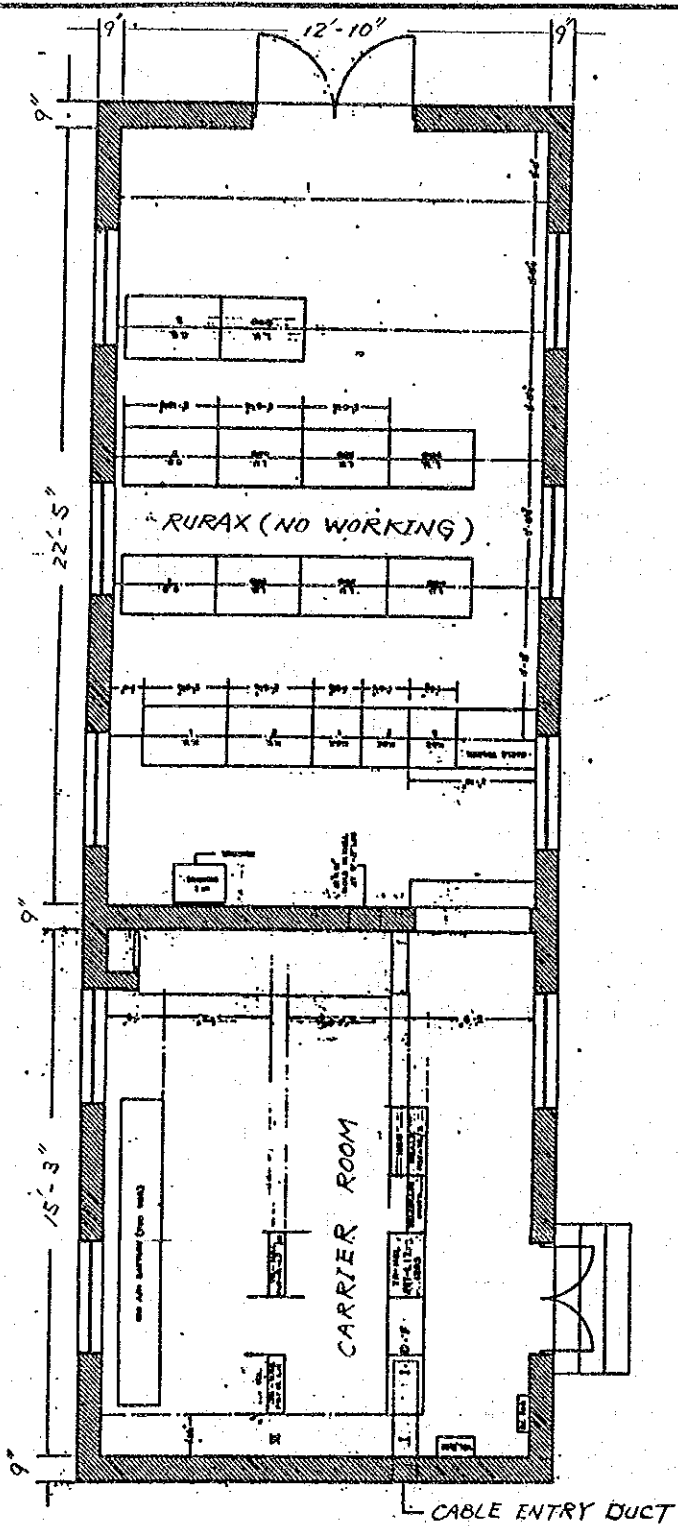
Station Name	Tororo	Survey Date	17/Nov.193
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Link Name	Jinja - Mbale	Function	Terminal / Repeater
TR System	Radio (Micro, <u>UHF</u> , VHF, HF), OWC, OW	<u>Analog</u> / Digital	800 MHz
Equipment	System Type: TR-800D120-5A UHF Tx/Rx Manufact. Year: 1997 Manufacturer: NEC	Details: No Drop at Tororo.	
MUX Equipment	System Type: Manufac. Year: Manufacturer:	Details:	
Other Equipment			

Link Name	Tororo - Malaba	Function	Terminal / Repeater
TR System	Radio (Micro, <u>UHF</u> , VHF, HF), OWC, OW	<u>Analog</u> / Digital	400 MHz
Equipment	System Type: TR4FM12-1A Manufact. Year: 1988 Manufacturer: NEC	Details: 5CH Equipped. All in use.	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details: These 5CHs are all connected to Mbale.	
Other Equipment			

Link Name	Tororo - Mbale	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), <u>OWC</u> , OW	<u>Analog</u> / Digital	
Equipment	System Type: PST L12 x 3 Manufact. Year: Manufacturer: Telettra	Details: 12CH x 3 = 36 CH in use	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment E.g. Tororo 8Mbps Digital Link is on going. (Alcatel)			



Approx. Scale



Site Name	TORORO RURAX & CARRIER ROOM
District Name	TORORO
Survey Date	17 / 11 / 93

Floor Layout

Present Conditions of Manual Exchange

Date: 18-11-1993
 Exch. Name: BUSIA

64 Wh : working
 77 LOS : Temporarily out of Service

1. Subscribers	No. of Connected Subscribers	No. of Waiting Applicant	Expected Demand after 5 Years
Government use:	<u>10</u>	<u>20</u>	
Business use:	<u>4050</u>	<u>150</u>	
Resident use:	<u>26</u>	<u>45</u>	
Total:	<u>86</u>	<u>215</u>	

2. Call Traffic	Local Calls	Trunk Calls	Trunk calls in same GSC
No. of calls/month	<u>400 calls</u>	<u>120 calls</u>	<u>2</u>
Holding time	<u>5 min.</u>	<u>6 min.</u>	

3. Facilities

Switch board	Type	Common Batt. / Magneto
	Capacity	<u>100 lines</u>
	Manufacturer	<u>L.M. ERICSON</u>
	Manufact. year	<u>INST. 1971.</u>

Trunk lines	Destination	(Route-1)	(Route-2)
		Destination	<u>MBALE.</u>
Type of lines	Type of lines	<u>OW(OWC) Cable</u>	<u>OW/OWC (Cable)</u>
		<u>UHF/Microwave</u>	<u>UHF/Microwave</u>
Signalling	Signalling	<u>Automat/Manual</u>	<u>Automat/Manual</u>
No. of channels	No. of channels	<u>2ccs/4ccs</u>	<u>1 ccl (-faulty 1 yr)</u>
Manufacturer	Manufacturer	<u>TELEIRA</u>	
Manufact. year	Manufact. year		

Engine generator	Capacity	<u>Nil</u>	<u>kVA</u>
	Manufact. year		

Local cables	Total pairs	<u>120 pairs</u>
	Usable pairs	<u>120 pairs</u>

4. No. of Staff

Post master: 1
 Tel. operator: 4 (15) Day times: 8:00-13:00 Night times: 13:00-18:00
 Tel. maintenance: 2
 Postal services: 4 (2+1)

MR. BARASA T.O.
 MR. WANDERA SSE
 MR. MURUGAK, TEL. SUP.
 4 OPERATORS
 1 TELEGRAPHER

5. Problems

Reasons of waiting applicant:
 Switch Board is full up
 Local network is not wide enough.

Other problems:
 Old System. Teletra, open wire 6km.

MR. HALABI M. P/MR
 BARAZA F. P.O
 MAGINA P. P.O
 BULIRE J. P.O.
 J. MUBOGI message

Present Conditions of Transmission System

Station Name	Busia	Survey Date	18/Nov/93
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Link Name	Ubalé - Busia	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type :	L12H		
Manufac. Year:	1970s		
Manufacturer :	Telettra		
Other Equipment			

Link Name	Busia - Lumino	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:	Fault for 1 year.		
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

KUM/JJM
PETER KIRENGA

FORM-F

Jinja
Present Conditions of Manual Exchange

Date: 19-11-1993
Exch. Name: Jinja

1. Subscribers	No. of Connected Subscribers	No. of Waiting Applicant	Expected Demand after 5 Years
Government use:	<u>317</u>	<u>-</u>	<u>-</u>
Business use:	<u>580</u>	<u>-</u>	<u>-</u>
Resident use:	<u>537</u>	<u>43</u>	<u>-</u>
Total:	<u>1434</u>	<u>43</u>	<u>-</u>

2. Call Traffic	Local Calls	Trunk Calls	Trunk calls in same GSC
No. of calls/month	<u>calls</u>	<u>calls</u>	<u>7</u>
Holding time	<u>min.</u>	<u>min.</u>	

3. Facilities			
Switch board	Type <u>C400X-BAR</u>	Common Batt.	Magneto
	Capacity	<u>2400</u>	lines
	Manufacturer	<u>HITACHI JAPAN</u>	
	Manufact. year	<u>(Installed year 1972)</u>	
Trunk lines	Destination	(Route-1)	(Route-2)
	Type of lines	<u>OW/OWC/Cable</u>	<u>OW/OWC/Cable</u>
		<u>UHF/Microwave</u>	<u>UHF/Microwave</u>
	Signalling	<u>Automat/Manual</u>	<u>Automat/Manual</u>
	No. of channels	<u>-</u>	<u>-</u>
	Manufacturer	<u>-</u>	<u>-</u>
	Manufact. year	<u>-</u>	<u>-</u>
Engine generator	Capacity	<u>kVA</u>	
	Manufact. year	<u>-</u>	
Local cables	Total pairs	<u>8200 pairs</u>	
	Usable pairs	<u>8200 pairs</u>	

4. No. of Staff			
Post master:	<u>1</u>	<u>8:00 ~ 14:00</u>	<u>18:00 ~ 21:00</u>
Tel. operator:	<u>-</u>	<u>12:00 ~ 12:00 None</u>	<u>8:00pm ~ 6:00am</u>
Tel. maintenance:	<u>-</u>	<u>Day time: 8:00 ~ 5:00</u>	<u>Night time: -</u>
Postal services:	<u>25 + (own post 17) = 42</u>		

5. Problems

Reasons of waiting applicant:
Transport & staffing.

Other problems:
Exchange is old.
Carrier equipment for OTH winds are old.
maintenance is often with ³ nots - very difficult
no staff and transport for maintenance.
Training is inadequate for maintenance.

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Present Conditions of Transmission System

Station Name	Jinja	1/4	Survey Date	19/Nov. 193
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Link Name	Kampala - Jinja - Nairobi	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	2.4GHz
Equipment	Details:		
System Type:	FM-24-2		
Manufact. Year:	1973 (Installed)		
Manufacturer:	Fujitsu		
MUX Equipment	Details:		
System Type :	MD-SW-1, MD-SW-2		
Manufac. Year:	1973 (Installed)		
Manufacturer :	Fujitsu		
Other Equipment			

Link Name	Jinja - Mbale	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	800MHz
Equipment	Details:		
System Type:	TR-800D120-5A UHF Tx/Rx		
Manufact. Year:	1978 (Installed)		
Manufacturer:	NEC		
MUX Equipment	Details:		
System Type:	MP120		
Manufact. Year:			
Manufacturer:	Telettra		
Other Equipment			

Link Name	Jinja - Lugazi	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	400MHz
Equipment	Details:		
System Type:	TR4FM12-1A		
Manufact. Year:	1988 (Installed)		
Manufacturer:	NEC		
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name	Jinja - Iganga	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC) OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:	PST L12/3 x 2		
Manufact. Year:			
Manufacturer:	Telettra		
Other Equipment			

Present Conditions of Transmission System

Station Name	Jinja 2/4	Survey Date	19/Nov./93
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Link Name	Jinja - Kamuli	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), (OWC) OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type : PST L12/3.			
Manufac. Year:			
Manufacturer : Telettra			
Other Equipment			

Link Name	Jinja - Bugiri	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), (OWC) OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type: TD2	3 CH / 3CH		
Manufact. Year:			
Manufacturer: Telettra			
Other Equipment			

Link Name	Jinja - Kaliro	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), (OWC) OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type: TD2	2 CH / 5CH		
Manufact. Year:			
Manufacturer: Telettra			
Other Equipment			

Link Name	Jinja - Busembatia	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), (OWC) OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type: TD2	2 CH / 5CH		
Manufact. Year:			
Manufacturer: Telettra			
Other Equipment			