

5.4 Estimation of Trunk Circuits

After estimation of the future traffic, by using the Erlang's loss formula (2.4), the number of trunk circuits between two Zone Centres has been estimated under the following conditions:

<u>Interexchange Traffic</u>	<u>Conditions</u>
- Less than 200 erlangs	Erlang's B Loss Formula at G.O.S. = 0.01
- 200 erlangs or more	80% occupancy limit per line

N.B. G.O.S. = Grade of Service

The detailed results of traffic forecast every 5 years (1990 - 2015 A.D.) are summarized in Tables III-12 thru III-14 for Kota Kinabalu (Sabah) and Tables III-15 thru III-17 for Kuching (Sarawak), respectively.

As a result of our study, we have roughly estimated the number of the trunk circuits between Zone Centres, depending on the GDP growth rates per annum as follows:

- (1) Between Peninsular Malaysia and Kota Kinabalu Zone Centre Area

<u>GDP p.a.</u>	<u>'90</u>	<u>'95</u>	<u>'00</u>	<u>'05</u>	<u>'10</u>	<u>'15</u>
2%	505	549	602	724	804	901
4%	564	752	950	1,186	1,500	1,914
6%	633	964	1,362	1,945	2,794	4,057

(2) Between Peninsular Malaysia and Kuching Zone Centre Area

GDP p.a.	'90	'95	'00	'05	'10	'15
2%	1,010	1,106	1,231	1,368	1,523	1,719
4%	1,138	1,422	1,800	2,279	2,904	3,727
6%	1,298	1,845	2,635	3,787	5,482	8,007

(3) Between Peninsular Malaysia and Sabah/Sarawak

GDP p.a.	'90	'95	'00	'05	'10	'15
2%	1,515	1,655	1,833	2,092	2,327	2,620
4%	1,702	2,174	2,750	3,465	4,404	5,641
6%	1,931	2,809	3,997	5,732	8,276	12,064

The above three results, (1) - (3) are illustrated in Figure III-12 indicating exponential trends between time and the number of the trunk circuits.

The following equations have been obtained according to the above data (3):

- For 2%,

$$Y = 1,194.76 \cdot \text{Exp}^{(0.0222472 \cdot x)}, r = 0.9986 \dots (5.1)$$

- For 4%,

$$Y = 1,058.54 \cdot \text{Exp}^{(0.0476585 \cdot x)}, r = 0.9999 \dots (5.2)$$

- For 6%,

$$Y = 932.43 \cdot \text{Exp}^{(0.0729322 \cdot x)}, r = 0.9999 \dots (5.3)$$

where,

Y = Number of trunk circuits

x = Time

r = Multiple correlation coefficient

By using these equations, the total number of trunk circuits as of 1985 is estimated below.

- For 2%, 1,336 circuits (1500 was actually provided)
- For 4%, 1,344 circuits (1500 was actually provided)
- For 6%, 1,343 circuits (1500 was actually provided)

These estimated equations (5.1, 5.2 or 5.3) show an approximate relationship between time and the number of the trunk circuits between Peninsular Malaysia and Sabah/Sarawak and are applicable to estimate the number of the trunk circuits at a certain point of time.

In our study, however, as stated in paragraph 3.3 earlier, the values estimated at 4% GDP growth rate (by formula 5.2) are considered to be reasonable to design the new submarine cable system from technical and economical points of view.

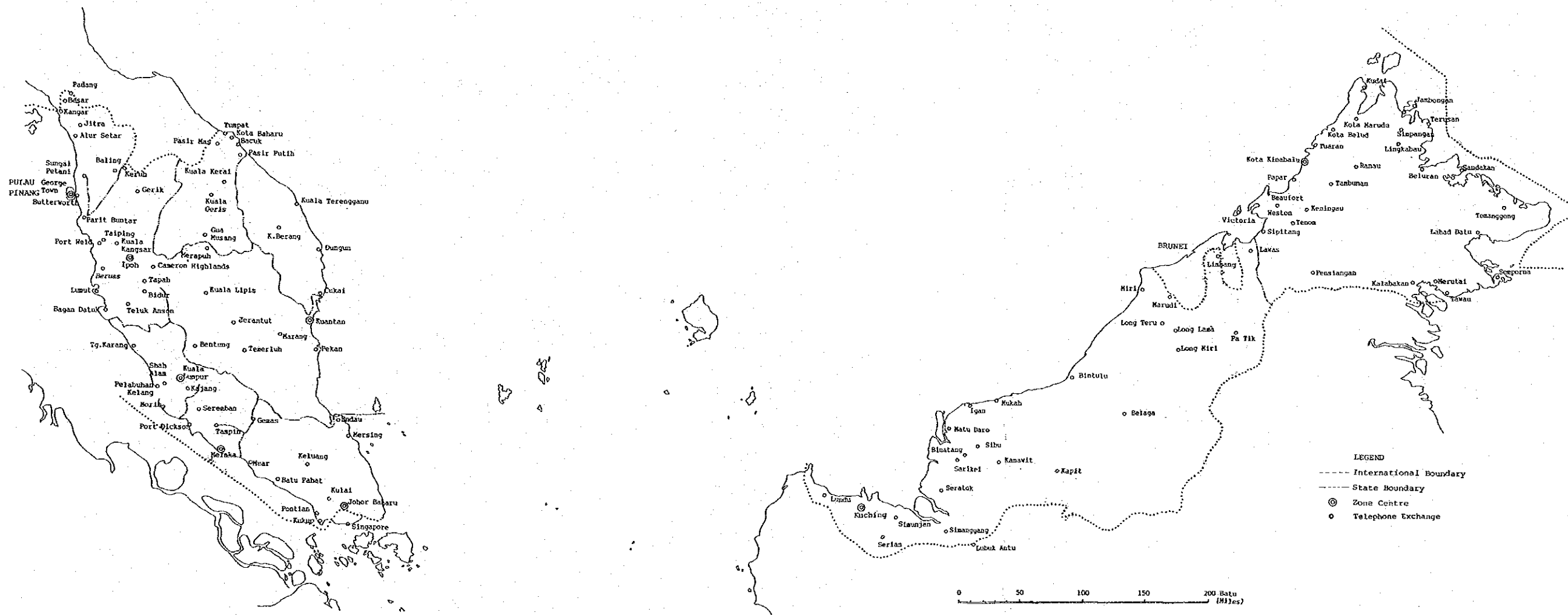
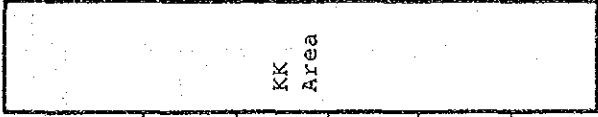


Figure III-9 Location of Major Telephone Exchanges in Malaysia

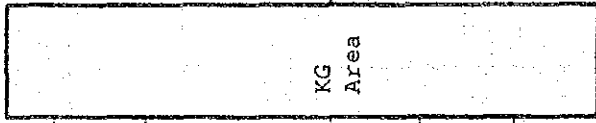
ZC	I/C		O/G		O/G		I/C		ZC
	Ccts	Erl	Erl	Ccts	Ccts	Erl	Erl	Ccts	
PG	11	2.29	5.05	12	134	28.29	14.50	141	KG
		1.87	5.61			17.50	10.70		
IP	19	2.98	4.07	14					
		1.80	3.40						
KN	40	1.51	4.02	36					
		2.54	5.05						
KL	81	42.94	58.09	135					
		59.10	49.10						
MC	8	0.78	2.31	7					
		0.80	1.60						
JB	72	3.97	5.60	23					
		4.58	5.07						



(Notes) Upper figures: Traffic readings at KK Zone Centre
 Lower figures: Traffic readings at Other Zone Centres
 O/G: Outgoing
 I/C: Incoming

Figure III-10 Carried Toll Traffic Diagram for Kota Kinabalu

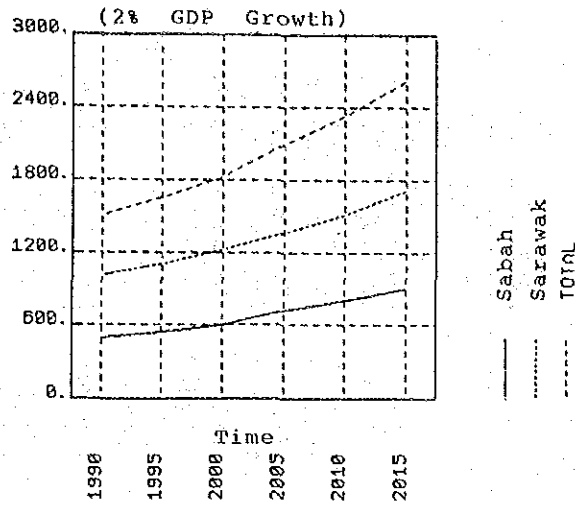
ZC	Carried Traffic		Carried Traffic		O/G	I/C	ZC
	Ccts	Erl	Ccts	Erl			
PG	6	3.10	2.60	11			
		2.29	4.03				
IP	9	1.40	1.50	13			
		0.70	2.00				
KN	25	2.50	2.40	21			
		4.46	1.97				
KL	72	43.90	49.70	86			
	214	115.70	155.60		82	10.70	17.50
						14.50	28.29
MC	6	1.30	2.60	6			
		1.40	2.10				
JB	15	2.70	4.10	21			
		1.49	1.15				



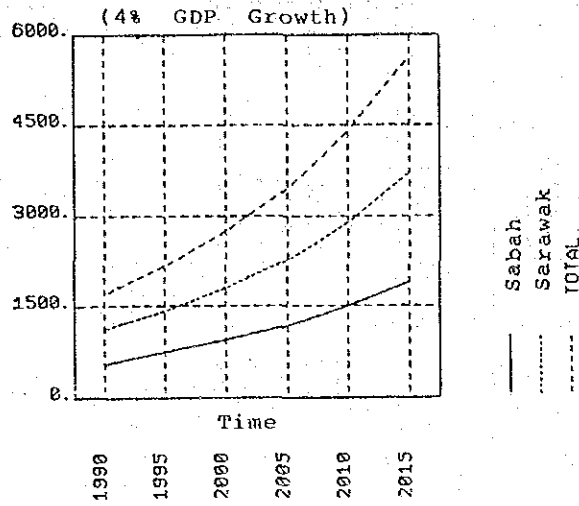
(Notes) Upper figures: Traffic readings at KZ Zone Centre
 Lower figures: Traffic readings at Other Zone Centres
 O/G: Outgoing
 I/C: Incoming

Figure III-11 Carried Toll Traffic Diagram for Kuching

NO. of Trunk Circuits



No. of Trunk Circuits



No. of Trunk Circuits

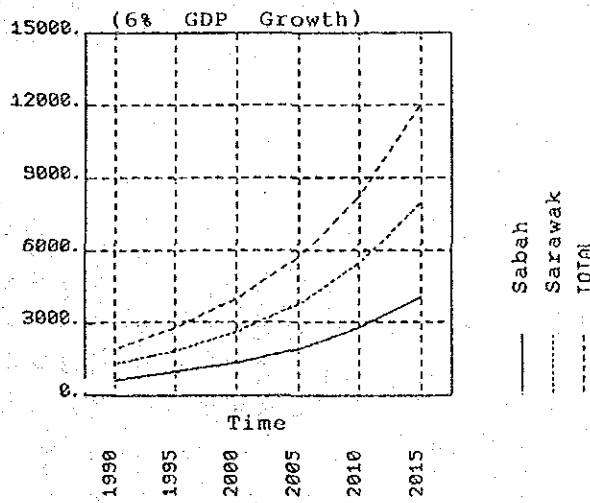


Figure III-12 Growth of the Trunk Circuits Between Sabah/Sarawak and Peninsular Malaysia

Table III-6 (1/2) Results of Traffic Forecasting up to 2015 A.D. Between Kota Kinabalu (KK) and Each Zone Centre Area (In Case of 2% GDP Growth)

Routes	Highest Values by the Current Measurements		Safety Margin (b)	Network Improvement (c)		Additional New Services		Subs. (1985)	Subs. (1990)	Traffic 1990
	(a) (Erl)	(a)x1.5		(b)x1.2	(c)x1.3					
1. Outgoing Circuits										
From KK to PG	5.61	8.42	10.10	13.13	119,381	131,610	14.39			
From KK to IP	4.07	6.11	7.33	9.52	95,860	105,288	10.42			
From KK to KN	5.05	7.58	9.09	11.82	75,736	83,178	12.95			
From KK to KL	58.09	87.14	104.56	135.93	352,238	386,407	148.60			
From KK to MC	2.31	3.47	4.16	5.41	64,864	71,596	5.94			
From KK to JB	5.60	8.40	10.08	13.10	112,337	123,187	14.33			
From KK to KG	28.29	42.44	50.92	66.20	68,790	75,807	72.64			
No. of KK Subs.					69,392	75,807				
2. Incoming Circuits										
To KK from PG	2.29	3.44	4.12	5.36	119,381	131,610	5.88			
To KK from IP	2.98	4.47	5.36	6.97	95,860	105,288	7.63			
To KK from KN	2.51	3.77	4.52	5.87	75,736	83,178	6.43			
To KK from KL	59.10	88.65	106.38*	138.29	352,238	386,407	151.18			
To KK from MC	0.80	1.20	1.44	1.87	64,864	71,596	2.05			
To KK from JB	4.58	6.87	8.24	10.72	112,337	123,187	11.73			
To KK from KG	14.50	21.75	26.10	33.93	68,790	75,807	37.23			
No. of KK Subs.					69,392	75,807				

Table III-6 (2/2) Results of Traffic Forecasting up to 2015 A.D. Between Kota Kinabalu (KK) and Each Zone Centre Area (In Case of 2% GDP Growth)

	Subs. (1995)	Traffic 1995	Subs. (2000)	Traffic 2000	Subs. (2005)	Traffic 2005	Subs. (2010)	Traffic 2010	Subs. (2015)	Traffic 2015
1. Outgoing Circuits										
From KK to PG	144,773	15.83	161,843	17.70	180,871	19.78	202,092	22.10	228,759	25.02
From KK to IP	115,818	11.47	129,475	12.82	144,697	14.33	161,674	16.01	183,008	18.12
From KK to KN	91,496	14.24	102,285	15.92	114,310	17.79	127,722	19.88	144,576	22.50
From KK to KL	425,052	163.46	475,172	182.73	531,036	204.22	593,343	228.18	671,638	258.29
From KK to MC	78,756	6.54	88,043	7.31	98,394	8.17	109,938	9.12	124,445	10.33
From KK to JB	135,507	15.77	151,485	17.62	169,295	19.70	189,158	22.01	214,119	24.91
From KK to KG	83,389	79.90	93,222	89.32	104,181	99.82	116,405	111.54	131,765	126.25
No. of KK Subs.	83,389		93,222		104,181		116,405		131,765	
2. Incoming Circuits										
To KK from PG	144,773	6.46	161,843	7.22	180,871	8.07	202,092	9.02	228,759	10.21
To KK from IP	115,818	8.39	129,475	9.38	144,697	10.49	161,674	11.72	183,008	13.26
To KK from KN	91,496	7.07	102,285	7.91	114,310	8.84	127,722	9.87	144,576	11.17
To KK from KL	425,052	166.30	475,172	185.91	531,036	207.76	593,343	232.14	671,638	262.77
To KK from MC	78,756	2.26	88,043	2.53	98,394	2.82	109,938	3.15	124,445	3.57
To KK from JB	135,507	12.90	151,485	14.42	169,295	16.12	189,158	18.01	214,119	20.39
To KK from KG	83,389	40.95	93,222	45.78	104,181	51.16	116,405	57.17	131,765	64.71
No. of KK Subs.	83,389		93,222		104,181		116,405		131,765	

Table III-7 (1/2) Results of Traffic Forecasting up to 2015 A.D. Between Kota Kinabalu (KK) and Each Zone Centre Area (In Case of 4% GDP Growth)

Routes	Highest Values by the Current Measurements		Safety Margin (b)	Network Improvement (c) Factor	Additional New Services		Subs. (1985)	Subs. (1990)	Traffic 1990
	(a) (Erl)	(a)x1.5			(b)x1.2	(c)x1.3			
1. Outgoing Circuits									
From KK to PG	5.61	8.42	10.10	13.13	119,381	149,158	16.31		
From KK to IP	4.07	6.11	7.33	9.52	95,860	119,326	11.81		
From KK to KN	5.05	7.58	9.09	11.82	75,736	94,268	14.67		
From KK to KL	58.09	87.14	104.56	135.93	352,238	437,928	168.41		
From KK to MC	2.31	3.47	4.16	5.41	64,864	81,142	6.73		
From KK to JB	5.60	8.40	10.08	13.10	112,337	139,612	16.24		
From KK to KG	28.29	42.44	50.92	66.20	68,790	85,915	82.32		
No. of KK Subs.					69,392	85,915			
2. Incoming Circuits									
To KK from PG	2.29	3.44	4.12	5.36	119,381	149,158	6.66		
To KK from IP	2.98	4.47	5.36	6.97	95,860	119,326	8.65		
To KK from KN	2.51	3.77	4.52	5.87	75,736	94,268	7.29		
To KK from KL	59.10	88.65	106.38	138.29	352,238	437,928	171.34		
To KK from MC	0.80	1.20	1.44	1.87	64,864	81,142	2.33		
To KK from JB	4.58	6.87	8.24	10.72	112,337	139,612	13.29		
To KK from KG	14.50	21.75	26.10	33.93	68,790	85,915	42.19		
No. of KK Subs.					69,392	85,915			

Table III-7 (2/2) Results of Traffic Forecasting up to 2015 A.D. Between Kota Kinabalu (KK) and Each Zone Centre Area (In Case of 4% GDP Growth)

	Subs. (1995)	Traffic 1995	Subs. (2000)	Traffic 2000	Subs. (2005)	Traffic 2005	Subs. (2010)	Traffic 2010	Subs. (2015)	Traffic 2015
1. Outgoing Circuits										
From KK to PG	188,204	20.58	240,155	26.26	306,089	33.47	392,469	42.92	506,321	55.37
From KK to IP	150,563	14.91	192,124	19.02	244,871	24.24	313,975	31.08	405,057	40.10
From KK to KN	118,945	18.51	151,778	23.62	193,448	30.11	248,041	38.60	319,995	49.80
From KK to KL	552,568	212.50	705,094	271.15	898,677	345.60	1,152,290	443.13	1,486,558	571.68
From KK to MC	102,383	8.50	130,644	10.84	166,512	13.82	213,503	17.72	275,438	22.86
From KK to JB	176,159	20.49	224,785	26.15	286,499	33.33	367,351	42.74	473,916	55.14
From KK to KG	108,406	103.87	138,329	132.54	176,307	168.93	226,062	216.61	291,641	279.44
No. of KK Subs.	108,406		138,329		176,307		226,062		291,641	
2. Incoming Circuits										
To KK from PG	188,204	8.40	240,155	10.72	306,089	13.66	392,469	17.52	506,321	22.60
To KK from IP	150,563	10.91	192,124	13.93	244,871	17.75	313,975	22.76	405,057	29.36
To KK from KN	118,945	9.19	151,778	11.73	193,448	14.95	248,041	19.17	319,995	24.73
To KK from KL	552,568	216.19	705,094	275.86	898,677	351.60	1,152,290	450.82	1,486,558	581.60
To KK from MC	102,383	2.94	130,644	3.75	166,512	4.78	213,503	6.12	275,438	7.90
To KK from JB	176,159	16.77	224,785	21.40	286,499	27.28	367,351	34.97	473,916	45.12
To KK from KG	108,406	53.24	138,329	67.93	176,307	86.58	226,062	111.02	291,641	143.23
No. of KK Subs.	108,406		138,329		176,307		226,062		291,641	

Table III-8 (1/2) Results of Traffic Forecasting up to 2015 A.D. Between Kota Kinabalu (KK) and Each Zone Centre Area (In Case of 6% GDP Growth)

Routes	Highest Values by the Current Measurements		Safety Margin (b)	Network Improvement (c) Factor	Additional New Services (c)x1.3	Subs. (1985)	Subs. (1990)	Traffic 1990
	(a) (Erl)	(a)x1.5	(b)x1.2	(c)x1.3	(1985)	(1990)		
1. Outgoing Circuits								
From KK to PG	5.61	8.42	10.10	13.13	119,381	171,093	18.71	
From KK to IP	4.07	6.11	7.33	9.52	95,860	136,874	13.55	
From KK to KN	5.05	7.58	9.09	11.82	75,736	108,131	16.83	
From KK to KL	58.09	87.14	104.56	135.93	352,238	502,329	193.18	
From KK to MC	2.31	3.47	4.16	5.41	64,864	93,075	7.72	
From KK to JB	5.60	8.40	10.08	13.10	112,337	160,143	18.63	
From KK to KG	28.29	42.44	50.92	66.20	68,790	98,550	94.43	
No. of KK Subs.					69,392	98,550		
2. Incoming Circuits								
To KK from PG	2.29	3.44	4.12	5.36	119,381	171,093	7.64	
To KK from IP	2.98	4.47	5.36	6.97	95,860	136,874	9.92	
To KK from KN	2.51	3.77	4.52	5.87	75,736	108,131	8.36	
To KK from KL	59.10	88.65	106.38	138.29	352,238	502,329	196.53	
To KK from MC	0.80	1.20	1.44	1.87	64,864	93,075	2.67	
To KK from JB	4.58	6.87	8.24	10.72	112,337	160,143	15.25	
To KK from KG	14.50	21.75	26.10	33.93	68,790	98,550	48.40	
No. of KK Subs.					69,392	98,550		

Table III-8 (2/2) Results of Traffic Forecasting up to 2015 A.D. Between Kota Kinabalu (KK) and Each Zone Centre Area (In Case of 6% GDP Growth)

	Subs. (1995)	Traffic 1995	Subs. (2000)	Traffic 2000	Subs. (2005)	Traffic 2005	Subs. (2010)	Traffic 2010	Subs. (2015)	Traffic 2015
1. Outgoing Circuits										
From KK to PG	246,113	26.91	355,011	38.82	514,786	56.29	749,792	81.99	1,101,095	120.41
From KK to IP	196,891	19.49	284,009	28.12	411,829	40.77	599,834	59.38	880,876	87.21
From KK to KN	155,544	24.21	224,367	34.92	325,345	50.64	473,869	73.75	695,892	108.31
From KK to KL	722,589	277.88	1,042,312	400.84	1,511,411	581.24	2,201,389	846.58	3,232,815	1,243.23
From KK to MC	133,886	11.11	193,126	16.03	280,043	23.24	407,887	33.85	598,996	49.71
From KK to JB	230,362	26.80	332,290	38.66	481,839	56.06	701,805	81.65	1,030,625	119.90
From KK to KG	141,761	135.83	204,486	195.93	296,517	284.12	431,880	413.82	634,231	607.70
No. of KK Subs.	141,761		204,486		296,517		431,880		634,231	
2. Incoming Circuits										
To KK from PG	246,113	10.99	355,011	15.85	514,786	22.98	749,792	33.47	1,101,095	49.15
To KK from IP	196,891	14.27	284,009	20.59	411,829	29.85	599,834	43.48	880,876	63.85
To KK from KN	155,544	12.02	224,367	17.34	325,345	25.15	473,869	36.63	695,892	53.79
To KK from KL	722,589	282.71	1,042,312	407.79	1,511,411	591.33	2,201,389	861.27	3,232,815	1,264.81
To KK from MC	133,886	3.84	193,126	5.54	280,043	8.03	407,887	11.70	598,996	17.18
To KK from JB	230,362	21.93	332,290	31.64	481,839	45.87	701,805	66.81	1,030,625	98.12
To KK from KG	141,761	69.62	204,486	100.42	296,517	145.62	431,880	212.10	634,231	311.47
No. of KK Subs.	141,761		204,486		296,517		431,880		634,231	

Table III-9 (1/2) Results of Traffic Forecasting up to 2015 A.D. Between Kuching (KG) and Each Zone Centre Area (In Case of 2% GDP Growth)

Routes	Highest Values by the Current Measurements		Safety Margin (b)		Network Improvement (c)		Additional New Services (c)		Subs.		Traffic
	(a) (Erl)	(a)x1.5	(b)	(a)x1.5	(b)x1.2	(c)x1.3	(c)x1.3	(1985)	(1990)	1990	
1. Outgoing Circuits											
From KG to PG	4.03	6.05	7.25	9.43	119,381	131,610	10.34				
From KG to IP	2.00	3.00	3.60	4.68	95,860	105,288	5.12				
From KG to KN	2.40	3.60	4.32	5.62	75,736	83,178	6.16				
From KG to KL	155.60	233.40	280.08	364.10	352,238	386,407	398.03				
From KG to MC	2.60	3.90	4.68	6.08	64,864	71,596	6.68				
From KG to JB	4.10	6.15	7.38	9.59	112,337	123,187	10.49				
From KG to KK	14.50	21.75	26.10	33.93	68,790	75,807	37.23				
No. of KG Subs.					69,392	75,807					
2. Incoming Circuits											
To KG from PG	3.10	4.65	5.58	7.25	119,381	131,610	7.95				
To KG from IP	1.40	2.10	2.52	3.28	95,860	105,288	3.59				
To KG from KN	4.46	6.69	8.03	10.44	75,736	83,178	11.43				
To KG from KL	115.70	173.55	208.26	270.74	352,238	386,407	295.97				
To KG from MC	1.40	2.10	2.52	3.28	64,864	71,596	3.60				
To KG from JB	2.70	4.05	4.86	6.32	112,337	123,187	6.91				
To KG from KK	28.29	42.44	50.92	66.20	68,790	75,807	72.64				
No. of KG Subs.					69,392	75,807					

Table III-9 (2/2) Results of Traffic Forecasting up to 2015 A.D. Between Kuching (KG) and Each Zone Centre Area (In Case of 2% GDP Growth)

	Subs. (1995)	Traffic 1995	Subs. (2000)	Traffic 2000	Subs. (2005)	Traffic 2005	Subs. (2010)	Traffic 2010	Subs. (2015)	Traffic 2015
1. Outgoing Circuits										
From KG to PG	144,773	11.37	161,843	12.71	180,871	14.20	202,092	15.87	228,759	17.97
From KG to IP	115,818	5.64	129,475	6.30	144,697	7.04	161,674	7.87	183,008	8.91
From KG to KN	91,496	6.77	102,285	7.57	114,310	8.46	127,722	9.45	144,576	10.70
From KG to KL	425,052	437.84	475,172	489.47	531,036	547.01	593,343	611.20	671,638	691.84
From KG to MC	78,756	7.35	88,043	8.21	98,394	9.18	109,938	10.25	124,445	11.61
From KG to JB	135,507	11.54	151,485	12.90	169,295	14.42	189,158	16.11	214,119	18.24
From KG to KK	83,389	40.95	93,222	45.78	104,181	51.16	116,405	57.17	131,765	64.71
No. of KG Subs.	83,389		93,222		104,181		116,405		131,765	
2. Incoming Circuits										
To KG from PG	144,773	8.74	161,843	9.77	180,871	10.92	202,092	12.20	228,759	13.81
To KG from IP	115,818	3.95	129,475	4.42	144,697	4.94	161,674	5.51	183,008	6.24
To KG from KN	91,496	12.58	102,285	14.06	114,310	15.71	127,722	17.56	144,576	19.87
To KG from KL	425,052	325.57	475,172	363.96	531,036	406.75	593,343	454.48	671,638	514.45
To KG from MC	78,756	3.96	88,043	4.43	98,394	4.95	109,938	5.53	124,445	6.26
To KG from JB	135,507	7.61	151,485	8.50	169,295	9.50	189,158	10.62	214,119	12.02
To KG from KK	83,389	79.90	93,222	89.32	104,181	99.82	116,405	111.54	131,765	126.25
No. of KG Subs.	83,389		93,222		104,181		116,405		131,765	

Table III-10 (1/2) Results of Traffic Forecasting up to 2015 A.D. Between Kuching (KG) and Each Zone Centre Area (In Case of 4% GDP Growth)

Routes	Highest Values by the Current Measurements		Safety Margin (b)	Network Improvement (c)		Additional New Services		Subs. (1985)	Subs. (1990)	Traffic 1990
	(a) (Erl)	(a)x1.5		(b)x1.2	(c)x1.3					
1. Outgoing Circuits										
From KG to PG	4.03	6.05	7.25	9.43	119,381	149,158	11.71			
From KG to IP	2.00	3.00	3.60	4.68	95,860	119,326	5.81			
From KG to KN	2.40	3.60	4.32	5.62	75,736	94,268	6.98			
From KG to KL	155.60	233.40	280.08	364.10	352,238	437,928	451.10			
From KG to MC	2.60	3.90	4.68	6.08	64,864	81,142	7.57			
From KG to JB	4.10	6.15	7.38	9.59	112,337	139,612	11.89			
From KG to KK	14.50	21.75	26.10	33.93	68,790	85,915	42.19			
No. of KG Subs.					69,392	85,915				
2. Incoming Circuits										
To KG from PG	3.10	4.65	5.58	7.25	119,381	149,158	9.01			
To KG from IP	1.40	2.10	2.52	3.28	95,860	119,326	4.07			
To KG from KN	4.46	6.69	8.03	10.44	75,736	94,268	12.96			
To KG from KL	115.70	173.55	208.26	270.74	352,238	437,928	335.44			
To KG from MC	1.40	2.10	2.52	3.28	64,864	81,142	4.08			
To KG from JB	2.70	4.05	4.86	6.32	112,337	139,612	7.84			
To KG from KK	28.29	42.44	50.92	66.20	68,790	85,915	82.32			
No. of KG Subs.					69,392	85,915				

Table III-10 (2/2) Results of Traffic Forecasting up to 2015 A.D. Between Kuching (KG) and Each Zone Centre Area (In Case of 4% GDP Growth)

	Subs. (1995)	Traffic 1995	Subs. (2000)	Traffic 2000	Subs. (2005)	Traffic 2005	Subs. (2010)	Traffic 2010	Subs. (2015)	Traffic 2015
1. Outgoing Circuits										
From KG to PG	188,204	14.78	240,155	18.86	306,089	24.04	392,469	30.82	506,321	39.76
From KG to IP	150,563	7.33	192,124	9.35	244,871	11.92	313,975	15.28	405,057	19.71
From KG to KN	118,945	8.80	151,778	11.23	193,448	14.32	248,041	18.35	319,995	23.68
From KG to KL	552,568	569.20	705,094	726.31	898,677	925.72	1,152,290	1,186.96	1,486,558	1,531.29
From KG to MC	102,383	9.55	130,644	12.18	166,512	15.53	213,503	19.91	275,438	25.69
From KG to JB	176,159	15.00	224,785	19.14	286,499	24.40	367,351	31.29	473,916	40.36
From KG to KK	108,406	53.24	138,329	67.93	176,307	86.58	226,062	111.02	291,641	143.23
No. of KG Subs.	108,406		138,329		176,307		226,062		291,641	
2. Incoming Circuits										
To KG from PG	188,204	11.36	240,155	14.50	306,089	18.48	392,469	23.70	506,321	30.57
To KG from IP	150,563	5.14	192,124	6.55	244,871	8.35	313,975	10.71	405,057	13.82
To KG from KN	118,945	16.35	151,778	20.86	193,448	26.59	248,041	34.10	319,995	43.99
To KG from KL	552,568	423.25	705,094	540.07	898,677	688.35	1,152,290	882.61	1,486,558	1,138.65
To KG from MC	102,383	5.15	130,644	6.57	166,512	8.38	213,503	10.74	275,438	13.86
To KG from JB	176,159	9.89	224,785	12.62	286,499	16.08	367,351	20.62	473,916	26.60
To KG from KK	108,406	103.87	138,329	132.54	176,307	168.93	226,062	216.61	291,641	279.44
No. of KG Subs.	108,406		138,329		176,307		226,062		291,641	

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Table III-11 (1/2) Results of Traffic Forecasting up to 2015 A.D. Between Kuching (KG) and Each Zone Centre Area (In Case of 6% GDP Growth)

Routes	Highest Values by the Current Measurements (a) (Er1)	Safety Margin (b) (a)x1.5	Network Improvement (c) Factor (b)x1.2	Additional New Services (c)x1.3	Subs. (1985)	Subs. (1990)	Traffic 1990
1. Outgoing Circuits							
From KG to PG	4.03	6.05	7.25	9.43	119,381	171,093	13.44
From KG to IP	2.00	3.00	3.60	4.68	95,860	136,874	6.66
From KG to KN	2.40	3.60	4.32	5.62	75,736	108,131	8.00
From KG to KL	155.60	233.40	280.08	364.10	352,238	502,329	517.45
From KG to MC	2.60	3.90	4.68	6.08	64,864	93,075	8.68
From KG to JB	4.10	6.15	7.38	9.59	112,337	160,143	13.64
From KG to KK	14.50	21.75	26.10	33.93	68,790	98,550	48.40
No. of KG Subs.					69,392	98,550	
2. Incoming Circuits							
To KG from PG	3.10	4.65	5.58	7.25	119,381	171,093	10.33
To KG from IP	1.40	2.10	2.52	3.28	95,860	136,874	4.67
To KG from KN	4.46	6.69	8.03	10.44	75,736	108,131	14.86
To KG from KL	115.70	173.55	208.26	270.74	352,238	502,329	384.77
To KG from MC	1.40	2.10	2.52	3.28	64,864	93,075	4.68
To KG from JB	2.70	4.05	4.86	6.32	112,337	160,143	8.99
To KG from KK	28.29	42.44	50.92	66.20	68,790	98,550	94.43
No. of KG-Subs.					69,392	98,550	

Table III-11 (2/2) Results of Traffic Forecasting up to 2015 A.D. Between Kuching (KG) and Each Zone Centre Area (In Case of 6% GDP Growth)

	Subs. (1995)	Traffic 1995	Subs. (2000)	Traffic 2000	Subs. (2005)	Traffic 2005	Subs. (2010)	Traffic 2010	Subs. (2015)	Traffic 2015
1. Outgoing Circuits										
From KG to PG	246,113	19.33	355,011	27.88	514,786	40.43	749,792	58.89	1,101,095	86.48
From KG to IP	196,891	9.58	284,009	13.82	411,829	20.04	599,834	29.19	880,876	42.87
From KG to KN	155,544	11.51	224,367	16.60	325,345	24.08	473,869	35.07	695,892	51.50
From KG to KL	722,589	744.33	1,042,312	1,073.67	1,511,411	1,556.89	2,201,389	2,267.62	3,232,815	3,330.09
From KG to MC	133,886	12.49	193,126	18.01	280,043	26.12	407,887	38.04	598,996	55.87
From KG to JB	230,362	19.62	332,290	28.30	481,839	41.04	701,805	59.77	1,030,625	87.78
From KG to KK	141,761	69.62	204,486	100.42	296,517	145.62	431,880	212.10	634,231	311.47
No. of KG Subs.	141,761		204,486		296,517		431,880		634,231	
2. Incoming Circuits										
To KG from PG	246,113	14.86	355,011	21.44	514,786	31.08	749,792	454.27	1,101,095	66.49
To KG from IP	196,891	6.72	284,009	9.69	411,829	14.05	599,834	20.46	880,876	30.05
To KG from KN	155,544	21.38	224,367	30.84	325,345	44.72	473,869	65.14	695,892	95.66
To KG from KL	722,589	553.47	1,042,312	798.37	1,511,411	1,157.68	2,201,389	1,686.18	3,232,815	2,476.21
To KG from MC	133,886	6.74	193,126	9.72	280,043	14.09	407,887	20.52	598,996	30.14
To KG from JB	230,362	12.93	332,290	18.65	481,839	27.04	701,805	39.39	1,030,625	57.85
To KG from KK	141,761	135.83	204,486	195.93	296,517	284.12	431,880	413.82	634,231	607.70
No. of KG Subs.	141,761		204,486		296,517		431,880		634,231	

Table III-12 (1/2) Results of Traffic Forecasting up to 2015 A.D. Between Kota Kinabalu (KK) and Each Zone Centre Area (In Case of 2% GDP Growth)

Routes	Highest Values by the Current Measurements (a) (Erl)	Safety Margin (b) (a)x1.5	Network Improvement (c) Factor (b)x1.2	Additional New Services (c)x1.3	Estimated Traffic Values in 1990	Estimated No. of Circuits in 1990	Estimated Traffic Values in 1995	Estimated Traffic Circuits in 1995
1. Outgoing Circuits								
From KK to PG	5.61	8.42	10.10	13.13	14.39	23	15.83	25
From KK to IP	4.07	6.11	7.33	9.52	10.42	18	11.47	20
From KK to KN	5.05	7.58	9.09	11.82	12.95	22	14.24	23
From KK to KL	58.09	87.14	104.56	135.93	148.60	168	163.46	184
From KK to MC	2.31	3.47	4.16	5.41	5.94	13	6.54	13
From KK to JB	5.60	8.40	10.08	13.10	14.33	23	15.77	25
From KK to KG	28.29	42.44	50.92	66.20	72.64	88	79.90	95
Total (except KG)					206.63	267	227.31	290
2. Incoming Circuits								
To KK from PG	2.29	3.44	4.12	5.36	5.88	12	6.46	13
To KK from IP	2.98	4.47	5.36	6.97	7.63	15	8.39	16
To KK from KN	2.51	3.77	4.52	5.87	6.43	13	7.07	14
To KK from KL	59.10	88.65	106.38	138.29	151.18	171	166.30	187
To KK from MC	0.80	1.20	1.44	1.87	2.05	7	2.26	7
To KK from JB	4.58	6.87	8.24	10.72	11.73	20	12.90	22
To KK from KG	14.50	21.75	26.10	33.93	37.23	50	40.95	54
Total (except KG)					184.90	238	203.38	259
3. Grand Total (1 + 2)								
					391.53	505	430.69	549

Table III-12 (2/2) Results of Traffic Forecasting up to 2015 A.D. Between Kota Kinabalu (KK) and Each Zone Centre Area (In Case of 2% GDP Growth)

Routes	Estimated Traffic Values in 2000	Estimated No. of Circuits in 2000	Estimated Traffic Values in 2005	Estimated No. of Circuits in 2005	Estimated Traffic Values in 2010	Estimated No. of Circuits in 2010	Estimated Traffic Values in 2015	Estimated No. of Circuits in 2015
1. Outgoing Circuits								
From KK to PG	17.70	27	19.78	30	22.10	33	25.02	36
From KK to IP	12.82	21	14.33	23	16.01	25	18.12	28
From KK to KN	15.92	25	17.79	27	19.88	30	22.50	33
From KK to KL	182.73	204	204.22	255	228.18	285	258.29	323
From KK to MC	7.31	14	8.17	16	9.12	17	10.33	18
From KK to JB	17.62	27	19.70	30	22.01	32	24.91	36
From KK to KG	89.32	106	99.82	117	111.54	129	126.25	145
Total (except KG)	254.10	318	283.99	381	317.30	422	359.17	474
2. Incoming Circuits								
To KK from PG	7.22	14	8.07	15	9.02	17	10.21	18
To KK from IP	9.38	17	10.49	19	11.72	20	13.26	22
To KK from KN	7.91	15	8.84	16	9.87	18	11.17	19
To KK from KL	185.91	207	207.76	260	232.14	290	262.77	328
To KK from MC	2.53	8	2.82	8	3.15	9	3.57	9
To KK from JB	14.42	23	16.12	25	18.01	28	20.39	31
To KK from KG	45.78	59	51.16	65	57.17	72	64.71	80
Total (except KG)	227.37	284	254.10	343	283.91	382	321.37	427
3. Grand Total (1 + 2)	481.47	602	538.09	724	601.21	804	680.54	901

Table III-13 (1/2) Results of Traffic Forecasting up to 2015 A.D. Between Kota Kinabalu (KK) and Each Zone Centre Area (In Case of 4% GDP Growth)

Routes	Highest Values by the Current Measurements (a) (Exl)	Safety Margin (b) (a)x1.5	Network Improvement (c) Factor (b)x1.2	Additional New Services (c)x1.3	Estimated Traffic Values in 1990	Estimated No. of Circuits in 1990	Estimated Traffic Values in 1995	Estimated Traffic Circuits in 1995
1. Outgoing Circuits								
From KK to PG	5.61	8.42	10.10	13.13	16.31	26	20.58	31
From KK to IP	4.07	6.11	7.33	9.52	11.81	20	14.91	24
From KK to KN	5.05	7.58	9.09	11.82	14.67	24	18.51	28
From KK to KL	58.09	87.14	104.56	135.93	168.41	189	212.50	266
From KK to MC	2.31	3.47	4.16	5.41	6.73	14	8.50	16
From KK to JB	5.60	8.40	10.08	13.10	16.24	26	20.49	31
From KK to KG	28.29	42.44	50.92	66.20	82.32	99	103.87	121
Total (except KG)					234.17	299	295.49	396
2. Incoming Circuits								
To KK from PG	2.29	3.44	4.12	5.36	6.66	14	8.40	16
To KK from IP	2.98	4.47	5.36	6.97	8.65	16	10.91	19
To KK from KN	2.51	3.77	4.52	5.87	7.29	14	9.19	17
To KK from KL	59.10	88.65	106.38	138.29	171.34	192	216.19	270
To KK from MC	0.80	1.20	1.44	1.87	2.33	7	2.94	8
To KK from JB	4.58	6.87	8.24	10.72	13.29	22	16.77	26
To KK from KG	14.50	21.75	26.10	33.93	42.19	55	53.24	67
Total (except KG)					209.56	265	264.40	356
3. Grand Total (1 + 2)								
					443.73	564	559.89	752

Table III-13 (2/2) Results of Traffic Forecasting up to 2015 A.D. Between Kota Kinabalu (KK) and Each Zone Centre Area (In Case of 4% GDP Growth)

Routes	Estimated Traffic Values in 2000	Estimated No. of Circuits in 2000	Estimated Traffic Values in 2005	Estimated No. of Circuits in 2005	Estimated Traffic Values in 2010	Estimated No. of Circuits in 2010	Estimated Traffic Values in 2015	Estimated No. of Circuits in 2015
1. Outgoing Circuits								
From KK to PG	26.26	37	33.47	46	42.92	56	55.37	70
From KK to IP	19.02	29	24.24	35	31.08	43	40.10	53
From KK to KN	23.62	34	30.11	42	38.60	51	49.80	64
From KK to KL	271.15	339	345.60	432	443.13	554	571.68	715
From KK to MC	10.84	19	13.82	23	17.72	27	22.86	33
From KK to JB	26.15	37	33.33	45	42.74	56	55.14	69
From KK to KG	132.54	151	168.93	189	216.61	271	279.44	349
Total (except KG)	377.04	495	480.57	623	616.19	787	794.95	1,004
2. Incoming Circuits								
To KK from PG	10.72	19	13.66	22	17.52	27	22.60	33
To KK from IP	13.93	30	17.75	27	22.76	33	29.36	41
To KK from KN	11.73	20	14.95	24	19.17	29	24.73	36
To KK from KL	275.86	345	351.60	440	450.82	564	581.60	727
To KK from MC	3.75	9	4.78	11	6.12	13	7.90	15
To KK from JB	21.40	32	27.28	39	34.97	47	45.12	58
To KK from KG	67.93	83	86.58	103	111.02	129	143.23	163
Total (except KG)	337.39	455	430.02	563	551.36	713	711.31	910
3. Grand Total (1 + 2)	714.43	950	910.59	1,186	1,167.55	1,500	1,506.26	1,914

Table III-14 (1/2) Results of Traffic Forecasting up to 2015 A.D. Between Kota Kinabalu (KK) and Each Zone Centre Area (In Case of 6% GDP Growth)

Routes	Highest Values by the Current Measurements (a) (Erl)	Safety Margin (b) (a)x1.5	Network Improvement (c) Factor (b)x1.2	Additional New Services (c)x1.3	Estimated Traffic Values in 1990	Estimated No. of Circuits in 1990	Estimated Traffic Values in 1995	Estimated Traffic Circuits in 1995
1. Outgoing Circuits								
From KK to PG	5.61	8.42	10.10	13.13	18.71	29	26.91	38
From KK to IP	4.07	6.11	7.33	9.52	13.55	22	19.49	29
From KK to KN	5.05	7.58	9.09	11.82	16.83	26	24.21	35
From KK to KL	58.09	87.14	104.56	135.93	193.18	214	277.88	348
From KK to MC	2.31	3.47	4.16	5.41	7.72	15	11.11	19
From KK to JB	5.60	8.40	10.08	13.10	18.63	28	26.80	38
From KK to KG	28.29	42.44	50.92	66.20	94.43	111	135.83	155
Total (except KG)					268.62	334	386.40	507
2. Incoming Circuits								
To KK from PG	2.29	3.44	4.12	5.36	7.64	15	10.99	19
To KK from IP	2.98	4.47	5.36	6.97	9.92	18	14.27	23
To KK from KN	2.51	3.77	4.52	5.87	8.36	16	12.02	20
To KK from KL	59.10	88.65	106.38	138.29	196.53	218	282.71	353
To KK from MC	0.80	1.20	1.44	1.87	2.67	8	3.84	10
To KK from JB	4.58	6.87	8.24	10.72	15.25	24	21.93	32
To KK from KG	14.50	21.75	26.10	33.93	48.40	62	69.62	85
Total (except KG)					240.37	299	345.76	457
3. Grand Total (1 + 2)								
					508.99	633	732.16	964

Table III-14 (2/2) Results of Traffic Forecasting up to 2015 A.D. Between Kota Kinabalu (KK) and Each Zone Centre Area (In Case of 6% GDP Growth)

Routes	Estimated Traffic Values in 2000	Estimated No. of Circuits in 2000	Estimated Traffic Values in 2005	Estimated No. of Circuits in 2005	Estimated Traffic Values in 2010	Estimated No. of Circuits in 2010	Estimated Traffic Values in 2015	Estimated No. of Circuits in 2015
1. Outgoing Circuits								
From KK to PG	38.82	51	56.29	71	81.99	98	120.41	139
From KK to IP	28.12	39	40.77	54	59.38	74	87.21	104
From KK to KN	34.92	47	50.64	65	73.75	89	108.31	126
From KK to KL	400.84	501	581.24	727	846.58	1,058	1,243.23	1,554
From KK to MC	16.03	25	23.24	34	33.85	46	49.71	63
From KK to JB	38.66	51	56.06	70	81.65	98	119.90	138
From KK to KG	195.93	217	284.12	355	413.82	517	607.70	760
Total (except KG)	557.39	714	808.24	1,021	1,177.20	1,463	1,728.77	2,124
2. Incoming Circuits								
To KK from PG	15.85	25	22.98	34	33.47	46	49.15	63
To KK from IP	20.59	31	29.85	41	43.48	57	63.85	79
To KK from KN	17.34	27	25.15	36	36.63	49	53.79	68
To KK from KL	407.79	510	591.33	739	861.27	1,077	1,264.81	1,581
To KK from MC	5.54	12	8.03	15	11.70	20	17.18	27
To KK from JB	31.64	43	45.87	59	66.81	82	98.12	115
To KK from KG	100.42	118	145.62	165	212.10	265	311.47	389
Total (except KG)	498.75	648	723.21	924	1,053.36	1,331	1,546.90	1,933
3. Grand Total (1 + 2)								
	1,056.14	1,362	1,531.45	1,945	2,230.56	2,794	3,275.67	4,057

Table III-15 (1/2) Results of Traffic Forecasting up to 2015 A.D. Between Kuching (KG) and Each Zone Centre Area (In Case of 2% GDP Growth)

Routes	Highest Values by the Current Measurements (a) (Erl)	Safety Margin (b) (a)x1.5	Network Improvement (c) Factor (b)x1.2	Additional New Services (c)x1.3	Estimated Traffic Values in 1990	Estimated No. of Circuits in 1990	Estimated Traffic Values in 1995	Estimated Traffic Circuits in 1995
1. Outgoing Circuits								
From KG to PG	4.03	6.05	7.25	9.43	10.34	18	11.37	20
From KG to IP	2.00	3.00	3.60	4.68	5.12	11	5.64	12
From KG to KN	2.40	3.60	4.32	5.62	6.16	13	6.77	14
From KG to KL	155.60	233.40	280.08	364.10	398.03	498	437.84	547
From KG to MC	2.60	3.90	4.68	6.08	6.68	14	7.35	14
From KG to JB	4.10	6.15	7.38	9.59	10.49	19	11.54	20
From KG to KK	14.50	21.75	26.10	33.93	37.23	50	40.95	54
Total (except KK)					436.82	573	480.51	627
2. Incoming Circuits								
To KG from PG	3.10	4.65	5.58	7.25	7.95	15	8.74	16
To KG from IP	1.40	2.10	2.52	3.28	3.59	9	3.95	10
To KG from KN	4.46	6.69	8.03	10.44	11.43	20	12.58	21
To KG from KL	115.70	173.55	208.26	270.74	295.97	370	325.57	407
To KG from MC	1.40	2.10	2.52	3.28	3.60	9	3.96	10
To KG from JB	2.70	4.05	4.86	6.32	6.91	14	7.61	15
To KG from KK	28.29	42.44	50.92	66.20	72.64	88	79.90	96
Total (except KK)					329.45	437	362.41	479
3. Grand Total (1 + 2)								
					766.27	1,010	842.92	1,106

Table III-15 (2/2) Results of Traffic Forecasting up to 2015 A.D. Between Kuching (KG) and Each Zone Centre Area (In Case of 2% GDP Growth)

Routes	Estimated Traffic Values in 2000	Estimated No. of Circuits in 2000	Estimated Traffic Values in 2005	Estimated No. of Circuits in 2005	Estimated Traffic Values in 2010	Estimated No. of Circuits in 2010	Estimated Traffic Values in 2015	Estimated No. of Circuits in 2015
1. Outgoing Circuits								
From KG to PG	12.71	21	14.20	23	15.87	25	17.97	28
From KG to IP	6.30	13	7.04	14	7.87	15	8.91	17
From KG to KN	7.57	15	8.46	16	9.45	17	10.70	19
From KG to KL	489.47	612	547.01	684	611.20	764	691.84	865
From KG to MC	8.21	16	9.18	17	10.25	18	11.61	20
From KG to JB	12.90	22	14.42	23	16.11	25	18.24	28
From KG to KK	45.78	59	51.16	65	57.17	72	64.71	80
Total (except KK)	537.16	699	600.31	777	670.75	864	759.27	977
2. Incoming Circuits								
To KG from PG	9.77	18	10.92	19	12.20	21	13.81	23
To KG from IP	4.42	10	4.94	11	5.51	12	6.24	13
To KG from KN	14.06	23	15.71	25	17.56	27	19.87	30
To KG from KL	363.96	455	406.75	508	454.48	568	514.45	643
To KG from MC	4.43	10	4.95	11	5.53	12	6.26	13
To KG from JB	8.50	16	9.50	17	10.62	19	12.02	20
To KG from KK	89.32	106	99.82	117	111.54	131	126.25	145
Total (except KK)	405.14	532	452.77	591	505.90	659	572.65	742
3. Grand Total (1 + 2)								
	942.30	1,231	1,053.08	1,368	1,176.65	1,523	1,331.92	1,719

Table III-16 (1/2) Results of Traffic Forecasting up to 2015 A.D. Between Kuching (KG) and Each Zone Centre Area (In Case of 4% GDP Growth)

Routes	Highest Values by the Current Measurements (a) (Erl)	Safety Margin (b) (a)x1.5	Network Improvement (c) Factor (b)x1.2	Additional New Services (c)x1.3	Estimated Traffic Values in 1990	Estimated No. of Circuits in 1990	Estimated Traffic Values in 1995	Estimated Traffic Circuits in 1995
1. Outgoing Circuits								
From KG to PG	4.03	6.05	7.25	9.43	11.71	20	14.78	24
From KG to IP	2.00	3.00	3.60	4.68	5.81	12	7.33	14
From KG to KN	2.40	3.60	4.32	5.62	6.98	14	8.80	16
From KG to KL	155.60	233.40	280.08	364.10	451.10	564	569.20	712
From KG to MC	2.60	3.90	4.68	6.08	7.57	15	9.55	17
From KG to JB	4.10	6.15	7.38	9.59	11.89	20	15.00	24
From KG to KK	14.50	21.75	26.10	33.93	42.19	55	53.24	67
Total (except KK)					495.06	645	624.66	807
2. Incoming Circuits								
To KG from PG	3.10	4.65	5.58	7.25	9.01	17	11.36	20
To KG from IP	1.40	2.10	2.52	3.28	4.07	10	5.14	11
To KG from KN	4.46	6.69	8.03	10.44	12.96	22	16.35	26
To KG from KL	115.70	173.55	208.26	270.74	335.44	419	423.25	529
To KG from MC	1.40	2.10	2.52	3.28	4.08	10	5.15	11
To KG from JB	2.70	4.05	4.86	6.32	7.84	15	9.89	18
To KG from KK	28.29	42.44	50.92	66.20	82.32	99	103.87	121
Total (except KK)					373.40	493	471.14	615
3. Grand Total (1 + 2)								
					868.46	1,138	1,095.80	1,422

Table III-16 (2/2) Results of Traffic Forecasting up to 2015 A.D. Between Kuching (KG) and Each Zone Centre Area (In Case of 4% GDP Growth)

Routes	Estimated Traffic Values in 2000	Estimated No. of Circuits in 2000	Estimated Traffic Values in 2005	Estimated No. of Circuits in 2005	Estimated Traffic Values in 2010	Estimated No. of Circuits in 2010	Estimated Traffic Values in 2015	Estimated No. of Circuits in 2015
1. Outgoing Circuits								
From KG to PG	18.86	29	24.04	35	30.82	43	39.76	53
From KG to IP	9.35	17	11.92	20	15.28	24	19.71	30
From KG to KN	11.23	19	14.32	23	18.35	28	23.68	34
From KG to KL	726.31	908	925.72	1,158	1,186.96	1,484	1,531.29	1,914
From KG to MC	12.18	21	15.53	25	19.91	30	25.69	37
From KG to JB	19.14	29	24.40	35	31.29	43	40.36	53
From KG to KK	67.93	83	86.58	103	111.02	129	143.23	163
Total (except KK)	797.07	1,023	1,015.93	1,296	1,302.61	1,652	1,680.49	2,121
2. Incoming Circuits								
To KG from PG	14.50	24	18.48	28	23.70	34	30.57	42
To KG from IP	6.55	13	8.35	16	10.71	19	13.82	23
To KG from KN	20.86	31	26.59	38	34.10	46	43.99	57
To KG from KL	540.07	675	688.35	860	882.61	1,103	1,138.65	1,423
To KG from MC	6.57	13	8.38	16	10.74	19	13.86	23
To KG from JB	12.62	21	16.08	25	20.62	31	26.60	38
To KG from KK	132.54	151	168.93	189	216.61	271	279.44	349
Total (except KK)	601.17	777	766.23	983	982.48	1,252	1,267.49	1,606
3. Grand Total (1 + 2)								
	1,398.24	1,800	1,782.16	2,279	2,285.09	2,904	2,947.98	3,727

Table III-17 (1/2) Results of Traffic Forecasting up to 2015 A.D. Between Kuching (KG) and Each Zone Centre Area (In Case of 6% GDP Growth)

Routes	Highest Values by the Current Measurements (a) (Erl)	Safety Margin (b) (a)x1.5	Network Improvement (c) Factor (b)x1.2	Additional New Services (c)x1.3	Estimated Traffic Values in 1990	Estimated No. of Circuits in 1990	Estimated Traffic Values in 1995	Estimated Traffic Circuits in 1995
1. Outgoing Circuits								
From KG to PG	4.03	6.05	7.25	9.43	13.44	22	19.33	29
From KG to IP	2.00	3.00	3.60	4.68	6.66	14	9.58	17
From KG to KN	2.40	3.60	4.32	5.62	8.00	15	11.51	20
From KG to KL	155.60	233.40	280.08	364.10	517.45	647	744.33	930
From KG to MC	2.60	3.90	4.68	6.08	8.68	16	12.49	21
From KG to JB	4.10	6.15	7.38	9.59	13.64	22	19.62	30
From KG to KK	14.50	21.75	26.10	33.93	48.40	62	68.62	84
Total (except KK)					567.87	736	816.86	1,047
2. Incoming Circuits								
To KG from PG	3.10	4.65	5.58	7.25	10.33	18	14.86	24
To KG from IP	1.40	2.10	2.52	3.28	4.67	11	6.72	14
To KG from KN	4.46	6.69	8.03	10.44	14.86	24	21.38	32
To KG from KL	115.70	173.55	208.26	270.74	384.77	481	553.47	692
To KG from MC	1.40	2.10	2.52	3.28	4.68	11	6.74	14
To KG from JB	2.70	4.05	4.86	6.32	8.99	17	12.93	22
To KG from KK	28.29	42.44	50.92	66.20	94.43	111	135.83	155
Total (except KK)					428.30	562	616.10	798
3. Grand Total (1 + 2)								
					996.17	1,298	1,432.96	1,845

Table III-17 (2/2) Results of Traffic Forecasting up to 2015 A.D. Between Kuching (KG) and Each Zone Centre Area (In Case of 6% GDP Growth)

Routes	Estimated Traffic Values in 2000	Estimated No. of Circuits in 2000	Estimated Traffic Values in 2005	Estimated No. of Circuits in 2005	Estimated Traffic Values in 2010	Estimated No. of Circuits in 2010	Estimated Traffic Values in 2015	Estimated No. of Circuits in 2015
1. Outgoing Circuits								
From KG to PG	27.88	39	40.43	53	58.89	73	86.48	103
From KG to IP	13.82	23	20.04	30	29.19	41	42.87	56
From KG to KN	16.60	26	24.08	35	35.07	47	51.50	65
From KG to KL	1,073.67	1,342	1,556.89	1,946	2,267.62	2,835	3,330.09	4,163
From KG to MC	18.01	28	26.12	37	38.04	51	55.87	70
From KG to JB	28.30	40	41.04	54	59.77	74	87.78	104
From KG to KK	100.42	118	145.62	165	212.10	265	311.47	389
Total (except KK)	1,178.28	1,498	1,708.60	2,155	2,488.58	3,121	3,654.59	4,561
2. Incoming Circuits								
To KG from PG	21.44	32	31.08	43	45.27	59	66.49	82
To KG from IP	9.69	18	14.05	23	20.46	31	30.05	42
To KG from KN	30.84	43	44.72	58	65.14	80	95.66	113
To KG from KL	798.37	998	1,157.68	1,447	1,686.18	2,108	2,476.21	3,095
To KG from MC	9.72	18	14.09	23	20.52	31	30.14	42
To KG from JB	18.65	28	27.04	38	39.39	52	57.85	72
To KG from KK	195.93	217	284.12	355	413.82	517	607.70	760
Total (except KK)	888.71	1,137	1,288.66	1,632	1,876.96	2,361	2,756.40	3,446
3. Grand Total (1 + 2)								
	2,066.99	2,635	2,997.26	3,787	4,365.54	5,482	6,410.99	8,007

6. CONCLUSION

6. Conclusion

The telephone demand forecast up to 2015 A.D. has been made according to the constant annual GDP growth rates (2%, 4% or 6%). But it is difficult to forecast the other non-telephone demand for telex, telegram, telefax and data communication (MAYPAC), etc. up to the 2015 A.D. Accordingly, we have estimated the number of trunk circuits between Peninsular Malaysia and Sabah/Sarawak by adding a margin of 30% for the non-telephone demand to the basic traffic value.

As for the GDP growth rate in Malaysia, 4% is considered to be reasonable for the long-term forecasting, as compared with the past experiences of 20 upper middle-income countries (including Malaysia) and 19 industrial market economies from 1965 to 1984 inclusive.

To conclude, the total number of the trunk circuits estimated at 4% GDP growth rate every 5 years is expected in the Malaysian telecommunications network. But to design economically the new system the total number of 3,200 circuits as of 2003 A.D. is allocated the project.

The more data are available, the more accurate results can be obtained. However, our study was requested to estimate the number of the trunk circuits between Peninsular Malaysia and Sabah/Sarawak by the very long-term forecast. Since this forecast has not been made for the short-term provisioning purpose, the results of our study should be reviewed according to the economic outlook, etc. of the nation as well as in the framework of the JTM's master plan from time to time.

ANNEX III-1

Table 1 Past Demand Growth 1980 - 1985 in Malaysia

State	1980				1981				1982				1983				1984				1985			
	D	B	R	B/D(%)	D	B	R	B/D(%)	D	B	R	B/D(%)	D	B	R	B/D(%)	D	B	R	B/D(%)	D	B	R	B/D(%)
Johor Sub-total JB	54,131	22,055	32,076	40.7	68,629	23,909	44,720	34.8	85,903	26,443	59,460	30.8	100,800	27,464	73,336	27.2	120,546	29,702	90,844	24.6	133,735	30,662	103,073	22.9
Melaka	15,269	5,675	9,594	37.2	17,924	5,854	12,070	32.7	20,448	6,643	13,805	32.5	24,187	7,089	17,098	29.3	28,118	7,999	20,119	28.4	31,647	8,460	23,187	26.7
N. Sembilan	17,541	6,493	11,048	37.0	20,952	7,038	13,914	33.6	25,955	8,522	17,433	32.8	31,277	9,061	22,216	29.0	41,739	10,460	31,279	25.1	45,572	10,781	34,791	23.7
Sub-total MC	32,810	12,168	20,642	37.1	38,876	12,892	25,984	33.2	46,403	15,165	31,238	32.7	55,464	16,150	39,314	29.1	69,857	18,459	51,398	26.4	77,219	19,241	57,978	24.9
Selangor	98,353	30,246	68,107	30.8	120,206	36,456	83,750	30.3	139,020	41,263	97,757	29.7	153,883	44,109	109,774	28.7	174,125	48,618	125,507	27.9	188,825	47,880	140,945	25.4
W. Persekutuan	106,878	50,772	56,106	47.5	125,991	58,664	67,327	46.6	152,880	69,047	83,833	45.2	177,126	79,093	98,033	44.7	196,719	84,068	112,651	42.7	220,754	95,512	125,242	43.3
Sub-total KL	205,231	81,018	124,213	39.5	246,197	95,120	151,077	38.6	291,900	110,310	181,590	37.8	331,009	123,202	207,807	37.2	370,844	132,686	238,158	35.8	409,579	143,392	266,187	35.0
Kedah	16,097	6,559	9,538	40.7	21,221	7,545	13,676	35.6	25,499	8,594	16,905	33.7	30,105	9,388	20,717	31.2	36,129	10,989	25,140	30.4	41,395	11,173	30,222	27.0
Perlis	2,347	1,092	1,255	46.5	3,079	1,258	1,821	40.9	3,537	1,370	2,167	38.7	4,497	1,562	2,935	34.7	5,667	1,829	3,838	32.3	7,319	2,121	5,198	29.0
P. Pinang	50,638	19,330	31,308	38.2	60,569	21,590	38,979	35.6	70,400	23,153	47,247	32.9	81,919	25,700	56,219	31.4	93,549	26,879	66,670	28.7	102,945	29,709	73,236	28.9
Sub-total PG	69,082	26,981	42,101	39.1	84,869	30,393	54,476	35.8	99,436	33,117	66,319	33.3	116,521	36,650	79,871	31.5	135,345	39,697	95,648	29.3	151,659	43,003	108,656	28.4
Perak Sub-total IP	51,775	18,295	33,480	35.3	64,803	20,933	43,870	32.3	79,247	23,477	55,770	29.6	92,312	24,890	67,422	27.0	107,660	28,516	79,144	26.5	114,383	28,730	85,653	25.1
Kelantan	11,142	3,860	7,282	34.6	13,639	4,911	8,728	36.0	17,131	5,659	11,472	33.0	21,939	6,171	15,768	28.1	26,430	6,567	19,863	24.8	29,286	6,804	22,482	23.2
Pahang	16,042	7,409	8,633	46.2	20,265	8,288	11,977	40.9	24,470	8,563	15,907	35.0	29,890	9,402	20,488	31.5	35,452	10,120	25,332	28.5	40,226	10,737	29,489	26.7
Terengganu	5,284	2,614	2,670	49.5	6,869	2,879	3,990	41.9	11,598	4,418	7,180	38.1	15,273	5,326	9,947	34.9	18,495	6,074	12,421	32.8	20,650	6,022	14,628	29.2
Sub-total KN	32,468	13,883	18,585	42.8	40,773	16,078	24,695	39.4	53,199	18,640	34,559	35.0	67,102	20,899	46,203	31.1	80,377	22,761	57,616	28.3	90,162	23,563	66,599	26.1
Sabah Sub-total KK	38,620	17,767	20,853	46.0	43,414	18,003	25,411	41.5	58,735	22,928	35,807	39.0	68,769	27,624	41,145	40.2	79,130	30,202	48,928	38.2	82,609	30,862	51,747	37.4
Sarawak Sub-total KG	45,122	18,518	26,604	41.0	51,059	20,200	30,859	39.6	60,372	22,981	37,391	38.1	67,951	25,071	42,880	36.9	75,912	27,857	48,055	36.7	81,893	29,201	52,692	35.7
Total	529,239	210,685	318,554	39.8	638,620	237,528	401,092	37.2	775,195	273,061	502,134	35.2	899,928	301,950	597,978	33.6	1,039,671	329,880	709,791	31.7	1,141,239	348,654	792,585	30.6

D: Demand B: Business R: Residential

Note: Prepared by JTM.

Table 2 Telex Demand Forecast 1986 - 1990

State	Capacity 1.1.86	Demand 1.1.86	Dec. 86	Dec. 87	Dec. 88	Dec. 89	Dec. 90
P. Pinang Kedah/Perlis Perak	1,200 300 500	1,018 217 476	1,068 235 507	1,153 254 547	1,247 275 592	1,323 292 628	1,410 310 670
Utara	2,000	1,711	1,810	1,954	2,114	2,243	2,390
Selangor Wilayah P.	2,026 5,489	1,946 4,068	2,069 4,396	2,234 4,746	2,416 5,134	2,563 5,447	2,731 5,804
Tengah	7,515	6,014	6,465	6,980	7,550	8,010	8,535
Kelantan Terengganu Pahang	120 230 200	100 213 212	123 265 258	133 286 279	143 310 302	153 328 320	163 350 341
Timur	550	525	646	698	755	801	854
N. Sembilan Melaka Johor	135 500 800	157 186 742	174 198 792	188 214 855	204 231 924	217 245 980	231 261 1,044
Selatan	1,435	1,085	1,164	1,257	1,359	1,442	1,536
Semenanjung	11,500	9,335	10,085	10,889	11,778	12,496	13,315
Sabah Sarawak	2,500 2,020	1,466 1,170	1,552 1,293	1,675 1,396	1,812 1,510	1,922 1,602	2,048 1,707
Malaysia	16,020	11,971	12,930	13,960	15,100	16,020	17,070

Source: JTM

ANNEX III-2

Table 1 Summary of Traffic Survey at Kuala Lumpur

Name of Exchanges	Cutover Date	Type & Capacity	Working Circuits or Subs.	Period Measured or Observed	Total Traffic Carried (erlangs)			Name of Counterparts
					Outgoing	Incoming	Intra-office	
Zone Centre		ARM	O/G 1,246 I/C 996	May 30, '86 10-11 a.m.	273.90	237.20	-	Miss Goh Sook Ha
Tandem (KLT)		NEAX Max. 30 K ccts	O/G 11,553 I/C 7,368	May 30, '86 10-11 a.m.	3,716.20	3,655.82	-	Mr. Samuel Sellathurai
Local Exchange (KLC)		NEAX	O/G 2,500 I/C 2,103 12,232 Subs.	May 30, '86 10-11 a.m.	814.07	797.02	115.36	Mr. Mohd Shah
Local Exchange (PV2)	Dec. 12, '82	NEAX	O/G 2,518 I/C 2,583 7,000 Subs.	May 31, '86 10-11 a.m.	1,156.60	1,147.92	N.A.	Mr. Adam B. Karno Mr. Lim Pak Hoong

Table 2 Summary of Traffic Survey at Kota Kinabalu

Name of Exchanges	Cutover Date	Type & Capacity	Working Circuits or Subs.	Period Measured or Observed	Total Traffic Carried (erlangs)			Name of Counterparts
					Outgoing	Incoming	Intra-office	
Zone Centre	1976	ARF 201/4 2,000	O/G 702 I/C 686 Total 1,388	May 26, '86 10-11 a.m.	190.17	263.36	-	Mr. David
Tandem and Group Centre/Local Centre (XB2)		NEAX 15,000 L + 5,000 T	O/G 1,272 I/C 1,233 12,031 Subs.	9:00-10:00 May 26, '86 10:00-11:00 11:00-12:00 14:00-15:00	700.00	476.39	187.61	Mr. Passin
Telex Data	Dec. 29, '85 Not yet operated	AXB20 1,000 AXB30	40 Subs. + 92 ccts	May 26, '86	N.A.	N.A.	-	Mr. Kamal

Table 3 Summary of Traffic Survey at Kuching

Name of Exchanges	Cutover Date	Type & Capacity	Working Circuits or Subs.	Period Measured or Observed	Total Traffic Carried (erlangs)			Name of Counterparts
					Outgoing	Incoming	Intra-office	
Zone Centre	Oct. 29, '77	ARM	O/G 706 I/C 463	June 6, '86 10-11 a.m.	225.10	182.60	-	Network O&M Centre Mr. Lim Ping Mr. Poh Jeng Seng Mr. Dong Jun Kong Mr. Lim Ah Lek
Tandem and Group Centre	Feb. 5, '77	KG11 ARF KG22 AXE	O/G 1,070 I/C 1,317	June 6, '86 10-11 a.m.	255.30	342.40	-	Network O&M Centre Mr. Lim Ping Mr. Poh Jeng Seng Mr. Dong Jun Kong Mr. Lim Ah Lek
Local (KCH3)	Dec. 18, '83	AXE 20 Klines	8,325 Subs. O/G 251	14-15 p.m.	213.00	152.30	64.50	Network O&M Centre Mr. Lim Ping Mr. Poh Jeng Seng Mr. Dong Jun Kong Mr. Lim Ah Lek
Stampin (S1M)	Feb. 20, '83	NEAX 5 Klines	I/C 291		N.A.	N.A.	N.A.	Network O&M Centre Mr. Lim Ping Mr. Poh Jeng Seng Mr. Dong Jun Kong Mr. Lim Ah Lek
Telex	Oct. '76	TWK12 400	158 trunks KCH + BTU + Others	N.A.				Mr. Charles Lee
AOM	'84	768 Kbytes						Mr. Fam Shin Fong

Table 4 Summary of Traffic Survey at Kuantan

Name of Exchanges	Cutover Date	Type & Capacity	Working Circuits or Subs.	Period Measured or Observed	Total Traffic Carried (erlangs)			Name of Counterparts	
					Outgoing	Incoming	Intra-office		
ITE2	Feb. 16, '84	NEAX-61			N.A.	N.A.	-		
Zone Centre	Feb. 16, '84	NEAX-61	O/G	899	9:00-10:00 May 23, '86	94.43	97.56	-	Mr. Abdul Wahab Ayub
			I/C	854	10:00-11:00 May 23, '86	108.23	111.41	-	
			O/G	899	9:00-10:00 May 24, '86	194.68	192.21	-	Mr. Abdul Wahab Ayub
Group Centre	1974	ARF	O/G	184	10:00-11:00 May 24, '86	41.90	N.A.	-	Mr. S.V. Sivam Mr. Chan
			I/C						
Local Centre	1983	NEAX-61 15,000		4,500	10:00-11:00 May 24, '86	216.66	173.32	53.02	
Telex	Apr. 13, '86	AXB 20 1,000	KUA	124	May 24, '86	N.A.	N.A.	N.A.	Ms. Hayati
			Others	24					
			Total	148					
Local Centre	1979	ARF 10,000	KLA	90					
			KLB	138					
			KBC	45					
				7,800					

Table 5 Summary of Traffic Survey at Johor Baru

Name of Exchanges	Cutover Date	Type & Capacity	Working Circuits or Subs.	Period Measured or Observed	Total Traffic Carried (erlangs)		Name of Counterparts
					Outgoing	Incoming Intra-office	
Zone Centre	End '75	ARM 2,200	O/G 785 I/C 714	Jun. 3, '86 10:00-11:00	242.74	185.16	Mr. Khoo Swee Seng
Group Centre	Sept. '83	NEAX	O/G 2,181 I/C 2,503	Jun. 3, '86 10:00-11:00	1,202.99	1,106.71	-
Local Centre	Beg. '76	APF 10 Klines	O/G 437 I/C 441 7,593 Subs.	Jun. 3, '86 10:00-11:00	219.26	229.86	64.00 Mr. Lee Soon Huat
Telex	Mar. 16, '86	AXB 20 1 Kline	400 Subs.	N.A.			Mr. Mesran Bin Tahir
Telex		TWK	300 Subs.	N.A.			
MAYPAK	Apr. '85	9.6 Kbytes	5 Subs.				Mr. Wong Yok Sang

Table 6 Summary of Traffic Survey at Malacca

Name of Exchanges	Cutover Date	Type & Capacity	Working Circuits or Subs.	Period Measured or Observed	Total Traffic Carried (erlangs)			Name of Counterparts
					Outgoing	Incoming	Intra-office	
Zone Centre	1977	ARM	O/G 972 I/C 1,093	Jun. 2, '86 9-10-11 a.m.	292.39	323.51	-	Mr. Low Ah Heng
Local Switch	Apr. 27, '86	AXE 20 Klines	12,200 Subs. O/G 764 I/C 761	Jun. 5, '86 10:30-11:30	361.40	334.30	194.60	Mr. Yosof Hussein
GSC	Apr. 27, '86	8 Kccts	O/G 375 I/C 439	Jun. 5, '86 10:30-11:30	125.70	127.70	-	Mr. Yosof Hussein

Table 7 Summary of Traffic Survey at Ipoh

Name of Exchanges	Cutover Date	Type & Capacity	Working Circuits or Subs.	Period Measured or Observed	Total Traffic Carried (erlangs)		Name of Counterparts
					Outgoing	Incoming Intra-office	
Zone Centre	July 15, '74	ARM 2,200 ccts	O/G 883 I/C 853	Jun. 13, '86 10-11 a.m.	240.34	283.60	Mr. Liew Chong Wai
Group Centre & Tandem	Oct. 13, '84	AXE 6 Kccts	O/G 1,722 I/C 1,836	Jun. 13, '86 10-11 a.m.	762.90	817.10	Mr. Abd Aziz Bakar Mr. Harudin B. Mat Rod
Local Ipoh 4 (IP-4)		NEAX	O/G 596 I/C 854	Jun. 13, '86 10-11 a.m.	414.20	350.06	214.75
Telex	Mar. '84	AXB Concentrator 1 Kline	96 ccts 433 Subs.	N.A.			Miss Hemalatha Arumugam

Table 8 Summary of Traffic Survey at Penang

Name of Exchanges	Cutover Date	Type & Capacity	Working Circuits or Subs.	Period Measured or Observed	Total Traffic Carried (erlangs)			Name of Counterparts
					Outgoing	Incoming	Intra-office	
Zone Centre	Dec. '72	ARM	O/G 566 I/C 567	Jun. 11, '86 11-12 a.m.	217.78	213.27	-	Mr. Chew Poh Hoo Mr. Lim Lye San Mr. Haridas A/L Villanayer Mr. Tan Lee Peng Wah
Local Switch & Tandem/GC	Sept. '77	ESK 20 Klines	Bus. 3,891 Res. 9,918 Total 13,809	N.A.				Mr. Teh Huan Chu
Local (KOMTAR IC)	Jul. '85	AXE 20 Klines	O/G 432 I/C 443 Bus. 6,922 Res. 3,376 JTM 18 Total 10,316 (86/6)	11-12 a.m.	377.90	400.90	66.58	Mr. Muhamed B. Che Embi Miss Susan A/P Alexander
Local (GELUGOR U2)	Mar. 4, '84	NEAX 10 Klines	O/G 149 I/C 125 Res. 3,842 Bus. 235 CCB 74 JTM 29 Total 4,180	10-11 a.m.	90.70	68.40	8.66	Mr. Sbabaruddin Ismail
Telex		Concentrator	819 Subs.	N.A.				Miss Ooi Chooi Yee

ANNEX III-3

Table 1 Results of Traffic Measurement for Kota Kinabalu Tandem/U2

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
ALTT		0.00	172.00	227	KB10
SPTE		0.00	59.75	100	INMO
ESEO		0.02	37.02	82	PPGO
KB3I		0.77	16.63	52	PPTO
KB1I	186	95.55	0.25		KB30
INMI	123	51.80	0.00		JB1I
PPGI	75	34.33	0.00		MBA2
PPTI	25	8.25	0.00		MBO0
MBAI		0.00	2.00		MBO1
MBDI		1.77	0.41		MBO2
KTIC		0.00	2.22		MBO3
KOIC		0.00	0.13		MBO4
JB1I	4	0.86	0.00		MBO5
KNIC	5	0.00	0.00		MBO6
LBNI	50	9.86	0.00		MBO7
LHDJ	30	6.16	0.25		MBO8
SKNI	75	17.86	2.55		MBO9
BFTI	25	6.11	2.33		MBOA
KGUI	26	10.61	1.86	10	KOSO
KDTL	27	7.69	0.91	5	JBTO
RNUI	13	5.13	0.80	5	KNOG
TWUI	30	12.61	14.00	50	LBNO
BSBI		0.00	2.00	28	LHDO
SBIC	14	0.88	14.86	65	SKNO
KG1I	15	3.00	3.77	24	BFTO
LGIC	5	0.27	8.69	25	KGUO
MRIC	12	0.75	12.91	23	KOTO
KGZI	10	1.88	5.05	11	RNUO
SEZI		0.00	12.19	46	TWUO
PGZI	3	0.33	0.00		BSBO
IPZI	7	0.44	1.22	10	SBOG
MCZI	6	0.02	2.77	15	KGTO
JBZI	3	0.22	0.16	4	LGOG
KT4I	7	0.00	3.83	12	MROG
PJTI	2	0.00	2.11	10	KGZO
KLZI	0	0.00	0.00		SEZO
BTUI	20	0.88	1.94	4	PGZO
KNZI	15	1.44	2.16	4	IPZO
MTXI	36	4.11	0.47	5	MCZO
KBZI	116	21.86	0.69	3	JBZO
KDSI	12	1.30	0.00	7	KT4O
TSTI		0.00	6.58	22	PJTO
KINI	12	2.33	7.69	11	KLZO
MGTI	70	4.86	0.00		KTOG
KBDI	30	4.75	0.00		KOOG
TRNI	22	12.55	1.05	20	BTUO
TPLI	39	6.25	4.41	35	MTXO
IM2I	29	6.05	36.52	106	KBZO
PPRI	34	7.94	3.02		TSTO
			1.36	15	KNZO
			1.50		ISDO
			2.33	12	KINO
			28.58	82	MGTO
			6.66	30	KBDO
			18.38	30	TRNO
			5.86	36	TPLO
			4.94	25	IM2O
			13.02	12	PPRO
			0.00		TBNO
Total	1,213	351.49	529.83	1,263	Total

Table 2 Traffic Distribution in Kota Kinabalu Tandem/U2

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
o Outgoing												
Traffic (erl)	21.33	0.77	2.47	2.46	2.44	2.24	13.90	480.34	-	0.52	3.36	529.83
Working (cct)	40	5	4	20	4	8	71	1,111	-	-	-	1,263
Traffic Distribution (%)	4.03	0.15	0.47	0.46	0.46	0.42	2.62	90.66	-	0.10	0.63	100.00

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
o Incoming												
Traffic (erl)	3.29	0.08	0.63	1.45	0.48	1.30	8.18	333.58	-	1.56	0.94	351.49
Working (cct)	9	6	7	20	3	7	76	1,085	-	-	-	1,213
Traffic Distribution (%)	0.94	0.02	0.18	0.41	0.14	0.37	2.33	94.90	-	0.44	0.27	100.00

Table 3 Results of Traffic Measurement for Kota Kinabalu Zone Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
KKU1	102	31.47	22.40	50	KKU1
KKU2	116	55.45	5.81	116	KKU2
INM			7.40	30	INM
PPG			1.94	12	PPG
PTN			2.42	8	PTN
TRN			0.62	6	TRN
RNU	8	3.64	0.66	6	RNU
KBD			0.25	5	KBD
KDT	11	1.19	0.41	19	KDT
BFT	24	14.48	5.67	16	BFT
LBN	40	15.12	5.63	35	LBN
KGU	17	9.68	6.40	17	KGU
SKN	40	15.25	20.38	50	SKN
TWU	21	18.72	13.04	21	TWU
LHD	17	5.40	4.96	14	LHD
KGZ	15	2.49	3.70	15	KGZ
KGT	25	0.69	5.57	25	KGT
MRU1	12	0.94	3.35	12	MRU1
MRU2	7	0.93	0.69	4	MRU2
LG	4	0.53	1.00	5	LG
BSB	16	2.51	5.15	15	BSB
MTX1	3	1.01	1.02	3	MTX1
MTX2	2	0.24		2	MTX2
MTX3	3	1.17	0.10	3	MTX3
MTX4	20	6.82	5.02	20	MTX4
MTX5	2	0.74	0.08	2	MTX5
SE	30	11.34	17.47	30	SE
KLZ	15	7.66	5.44	36	KLZ
KLT4	38	24.61	25.61	40	KLT4
PJT2	16	6.37	4.69	16	PJT2
PGZ	6	1.57	2.61	6	PGZ
IPZ	4	0.92	0.86	4	IPZ
IPT2	8	1.43	0.74	6	IPT2
MCZ	2	0.70	1.54	2	MCZ
JBGSC	8	0.97	1.88	8	JBGSC
JBZ	4	0.53	1.38	4	JBZ
KNGSC	2	0.06	0.32	2	KNGSC
KNZ	18		1.24	14	KNZ
KNITE2	30	18.74	2.72	23	KNITE2
Total	686	263.37	190.17	702	Total

Table 4 Traffic Distribution in Kota Kinabalu Zone Centre

o Outgoing												
	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	36.76	1.54	1.60	1.56	2.61	3.36	14.39		2.72	17.47	108.16	190.17
Working (cct)	95	2	10	16	8	15	63		23	30	440	702
Traffic Distribution (%)	19.33	0.81	0.84	0.82	1.37	1.76	7.57	0	1.43	9.19	56.88	100.00

o Incoming												
	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	39.65	0.70	2.35	0.06	1.81	2.67	6.32		18.74	11.34	179.73	263.37
Working (cct)	72	2	12	20	8	15	65		30	30	432	686
Traffic Distribution (%)	15.05	0.27	0.89	0.02	0.69	1.01	2.40	0	7.12	4.31	68.24	100.00

Table 5 Total Traffic Distribution in Kota Kinabalu Zone Centre Combined with Tandem Centre

o	Outgoing	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
	Traffic (erl)	58.09	2.31	4.07	4.02	5.05	5.60	28.29	588.50	-	3.24	20.83	720.00
	Working (cct)	135	7	14	36	12	23	134	1,551	-	23	30	1,965
	Traffic Distribution (%)	8.07	0.32	0.57	0.56	0.70	0.78	3.93	81.74	-	0.45	2.90	100.00

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o	Incoming	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
	Traffic (erl)	42.94	0.78	2.98	1.51	2.29	3.97	14.50	513.31	-	20.30	12.28	614.86
	Working (cct)	81	8	19	40	11	22	141	1,517	-	30	30	1,899
	Traffic Distribution (%)	6.98	0.13	0.48	0.25	0.37	0.65	2.36	83.48	-	3.30	2.00	100.00

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Table 6 Results of Traffic Measurement for Kuching Zone Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
SAN	25	7.7	9.2	28	SAN
KLZ	18	0.4	7.7	25	SAN-3
SBI	20	8.5	20.9	40	KLZ
KBUZ	15	1.8			
MRT1	23	11.0	5.5	20	SBI
BTU1	18	5.9	2.0	15	KBUZ
LGI	13	1.0	11.5	18	MRT1
BSB	12	4.9	5.2	18	BTU1
ITE2	18	8.3	1.5	13	LGI
IPZ	4	0.2	2.9	14	BSB
IPT2	5	1.1	3.3	18	ITE2
PJT2	21	14.3	0.6	4	IPZ2
TBZ	7	0.6	0.9	9	IPT2
JBZ	8	1.9	9.7	18	PJT2
MCZ	6	1.2	0.6	10	JBZ
KNZ	21	2.3	3.5	8	JBZ
KNT1	4	0.0	2.6	6	JBZ
PGZ	6	2.9	2.0	18	MCZ
SEZ	30	15.2	0.4	3	KNZ
KGT1	10	0.0	2.5	6	KNT1
			19.7	30	PGZ
KGT2	60	34.1	35.5	158	SEZ
KG2	32	15.3			KGT1
KBUT1	10	0.9	17.4	40	KGT2
MR2	14	8.0	2.7	10	KBUT1
KLT4	33	25.9	5.8	10	MR2
AFA	2	0.0	19.0	23	KLT4
			0.3	39	AFA
SB2	28	9.2	0.1	5	MTX-1
			0.1	5	MTX-2
			0.0	3	MTX-3
			0.0	3	MTX-4
			0.1	4	MTX-5
			0.0	4	MTX-6
			0.3	6	MTX-7
			0.1	6	MTX-8
			6.8	20	MTX-9
			4.8	17	MTX-10
			19.9	32	SB2
Total	463	182.6	225.1	706	Total

Table 7 Traffic Distribution in Kuching Zone Centre

o Outgoing

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	49.7	2.6	1.5	2.4	2.6	4.1	131.6	7.6	-	3.3	19.7	225.1
Working (cct)	86	6	13	21	11	21	458	42	-	18	30	706
Traffic Distribution (%)	22.1	1.2	0.7	1.1	1.2	1.8	58.5	3.4	-	1.5	8.5	100.00

o Incoming

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	40.6	1.2	1.3	2.3	2.9	2.5	100.7	7.6	-	8.3	15.2	182.6
Working (cct)	72	6	9	25	6	15	245	37	-	18	30	463
Traffic Distribution (%)	22.2	0.7	0.7	1.3	1.6	1.4	55.1	4.2	-	4.5	8.3	100.00

Table 8 Results of Traffic Measurement for Kuching Tandem Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
KG2	152	49.2	0.6	25	KBUZ
SNR1Z	40	12.2	2.5	15	KBUT
KBUZ	25	6.1	12.2	35	SB1
KBUT	15	3.2	0.6	23	LG1
SB1	35	13.3	1.7	28	BTU1
LG1	25	1.1	5.9	33	MRT1
BTU1	30	6.2	1.0	10	MR2
MRT1	36	4.6	5.6	18	BAU
MR2	10	3.6	2.6	8	LDU
BAU	27	6.1	1.6	28	SNR1Z
LDU	14	3.7	100.3	210	KG1
KGZ	60	15.0	0.8	4	BKW
KG1	267	97.2	1.0	4	MT
BKW	10	0.8	0.9	6	SMN
MT	4	1.5	0.7	2	SJN
SMN	8	1.8	1.1	6	SNN
TBU	4	1.2	1.1	4	NNK
SJN	8	5.1	0.0	100	PRJ1
SNN	6	0.9	0.0	92	STM1
NNK	8	2.8	100.5	278	KGT2
104	2	0.1	0.0	60	PPN2
101	6	1.2	10.9	46	BSA
102	2	0.5	3.7	35	KGMTX
103	3	2.1			
112	10	0.1			
PRJ	60	0.0			
STM	60	0.0			
KGT2	258	90.6			
PPN2	50	0.0			
CCB	10	0.5			
100	6	1.4			
999	3	0.1			
BSA	28	4.9			
KGMTX	35	5.3			
Total	1,317	342.4	255.3	1,070	Total

Table 9 Traffic Distribution in Kuching Tandem Centre

o Outgoing

	KL	MC	IP	KN	PG	JB	KG	KK	ITEL	ITE2	SE	Total
Traffic (erl)	-	-	-	-	-	-	252.2	3.1	-	-	-	255.3
Working (cct)	-	-	-	-	-	-	1,030	40	-	-	-	1,070
Traffic Distribution (%)	-	-	-	-	-	-	98.8	1.2	-	-	-	100.00

o Incoming

	KL	MC	IP	KN	PG	JB	KG	KK	ITEL	ITE2	SE	Total
Traffic (erl)	3.3	0.1	0.1	0.2	0.2	0.2	326.5	9.9	-	0.7	1.2	342.4
Working (cct)	-	-	-	-	-	-	1,277	40	-	-	-	1,317
Traffic Distribution (%)	1.0	0.0	0.0	0.1	0.1	0.1	95.4	2.9	-	0.2	0.4	100.20

Table 10 Total Traffic Distribution in Kuching Zone Centre Combined with Tandem Centre

o Outgoing

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	49.7	2.6	1.5	2.4	2.6	4.1	383.8	10.7	-	3.3	19.7	480.4
Working (cct)	86	6	13	21	11	21	1,488	82	-	18	30	1,776
Traffic Distribution (%)	10.4	0.5	0.3	0.5	0.5	0.9	79.9	2.2	-	0.7	4.1	100.00

o Incoming

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	43.9	1.3	1.4	2.5	3.1	2.7	427.2	17.5	-	9.0	16.4	525.0
Working (cct)	72	6	9	25	6	15	1,522	77	-	18	30	1,780
Traffic Distribution (%)	8.4	0.2	0.3	0.5	0.6	0.5	81.4	3.3	-	1.7	3.1	100.00

Table 11 Results of Traffic Measurement for
Kuantan Zone Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
PGT	11	3.97	9.72	32	KT4
SJT	15	6.97	0.80	13	KGT
PGZ	16	7.25	5.11	25	PJT
IPT	16	2.02	0.75	40	KLZ
IPZ	30	5.36	2.27	30	ISC
KT4	16	0.00	7.00	18	SEZ
KGT	23	2.30	1.25	21	KGZ
PJT	18	2.02	0.00	18	KBZ
KLZ	30	4.36	1.69	15	PGZ
MCT	13	4.86	5.86	30	IPZ
MCZ	18	6.83	12.72	26	MCZ
JBT	18	10.25	11.00	25	JBZ
JBZ	25	9.30	3.80	30	RB
ISC	30	5.38	5.58	48	BE
KGZ	18	1.63	5.33	27	KI
KBZ	14	1.11	12.52	40	MT
SEZ	18	6.91	9.50	43	PKN
RB	30	3.02	14.36	40	TG
BE	42	5.41	30.83	42	KO
KI	18	4.80	29.08	90	KNG
MT	44	16.66	11.86	150	KN2
PKN	43	3.83	2.00	8	PGT
TG	41	11.05	0.00	-	IPT
KO	50	13.75	7.97	14	MCT
KBT	15	2.72	1.58	15	KBT
KNG	80	29.16	10.25	18	JBT
KN2	150	35.55	3.94	15	SJT
SJA	3	0.19	0.02	3	SJA
PGI	3	0.16	0.41	3	PGI
KBM	3	0.00	0.02	2	KBM
KGM	3	0.00	0.00	3	KGM
			0.63	15	PBR
Total	854	206.82	207.85	899	Total

Table 12 Traffic Distribution in Kuantan Zone Centre

o Outgoing

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	15.58	20.69	5.86	130.15	3.69	21.25	2.05	1.58	-	-	7.00	207.85
Working (cct)	97	40	30	581	23	43	34	33	-	-	18	899
Traffic Distribution (%)	7.50	9.95	2.82	62.61	1.78	10.22	0.99	0.76	-	-	3.37	100.00

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o Incoming

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	6.38	11.69	7.38	138.23	11.22	19.55	1.63	3.83	-	-	6.91	206.82
Working (cct)	64	31	46	578	27	43	18	29	-	-	18	854
Traffic Distribution (%)	3.08	5.65	3.57	66.84	5.43	9.45	0.79	1.85	-	-	3.34	100.00

Table 13 Results of Traffic Measurement for
Kuantan Group Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
KLT4	60	47.64	25.07	32	KLZ
KLGT	24	4.08	46.92	73	KLT4
PJT	33	18.74	3.38	24	KLGT
KG	3	0.34	18.50	24	PJT
KBU	7	1.22	2.41	4	KG
MT	25	12.40	0.96	7	KBU
TG	25	20.18	12.84	20	MT
KO	22	20.41	17.50	22	TG
RB	17	1.71	15.44	20	KO
IPT2	11	2.36	2.07	12	RB
			2.35	10	IPT2
Total	227	129.08	147.44	248	Total

Table 14 Traffic Distribution in Kuantan Group Centre

o Outgoing

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	93.87	-	2.35	47.85	-	-	2.41	0.96	-	-	-	147.44
Working (cct)	153	-	10	74	-	-	4	7	-	-	-	248
Traffic Distribution (%)	63.68	-	1.59	32.45	-	-	1.63	0.65	-	-	-	100.00

o Incoming

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	70.46	-	2.36	54.70	-	-	0.34	1.22	-	-	-	129.08
Working (cct)	117	-	11	89	-	-	3	7	-	-	-	227
Traffic Distribution (%)	54.58	-	1.83	42.38	-	-	0.26	0.95	-	-	-	100.00

Table 15 Total Traffic Distribution in Kuantan Zone Centre Combined with Group Centre

o Outgoing

	KL	MC	IP	KN	PG	JB	KG	KK	ITEL	ITE2	SE	Total
Traffic (erl)	109.45	20.69	8.21	178.00	3.69	21.25	4.46	2.54	-	-	7.00	355.29
Working (cct)	250	40	40	655	23	43	38	40	-	-	18	1,147
Traffic Distribution (%)	30.81	5.82	2.31	50.10	1.04	5.98	1.26	0.71	-	-	1.97	100.00

o Incoming

	KL	MC	IP	KN	PG	JB	KG	KK	ITEL	ITE2	SE	Total
Traffic (erl)	76.84	11.69	9.74	192.93	11.22	19.55	1.97	5.05	-	-	6.91	335.90
Working (cct)	181	31	57	667	27	43	21	36	-	-	18	1,081
Traffic Distribution (%)	22.87	3.48	2.90	57.44	3.34	5.82	0.59	1.50	-	-	2.06	100.00

Table 16 Results of Traffic Measurement for
Kuala Lumpur Zone Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
SEZ	56	17.5	28.5	64	SEZ
TM	12	1.9	1.4	12	TM
KLT4	99	20.8	12.7	126	KLT4
KLGT	47	18.6	31.0	44	KLGT
PJT2	87	47.2	7.5	58	PJT2
AS	9	5.2	2.0	10	AS
BE	14	0.3	0.5	12	BE
TG	28	1.3	1.8	17	TG
KO	16	2.0	2.1	31	KO
K1	10	0.9	0.0	10	K1
MT	15	2.0	2.4	20	MT
PD	10	2.9	1.2	16	PD
RB	10	0.5	0.8	10	RB
SN	32	12.3	5.6	29	SN
JBT	20	1.4	0.6	20	JBT
PGT	20	13.9	10.5	38	PGT
IPZ	32	9.4	17.6	40	IPZ
JBZ	32	1.3	2.5	30	JBZ
KNZ	40	0.5	4.3	30	KNZ
MCZ	48	3.2	5.4	40	MCZ
PGZ	40	5.5	5.1	32	PGZ
BN2	32	7.5	4.9	28	BN2
KBUX4	3	0.5	0.0	3	KBUX4
KGX5	3	0.2	0.0	3	KGX5
PGIX3	10	1.0	0.3	10	PGIX3
SJAX2	10	1.0	0.1	10	SJAX2
SBJX1	26	5.1	3.4	26	SBJX1
KBUZ	39	6.5	22.0	26	KBUZ
KGZ	40	24.7	1.8	18	KGZ
KKB	20	7.8	6.4	19	KKB
KJ2	33	14.1	9.6	48	KJ2
KS	17	10.1	7.9	18	KS
KNGSC	32	4.6	8.6	39	RJC
IPT2	35	3.7	0.1	13	SDG
RG1	3	0.2	3.8	15	SAL
RG2	3	0.0	1.9	15	SBJ
KLT3	30	4.5	0.0	10	SBS
KGZAFB	2	0.0	4.9	18	SWY
BAG	3	0.0	8.6	28	TAR
			7.3	47	BIN
			1.5	24	DM1
			1.1	20	DM2
			5.6	45	KLC
			0.5	8	KRT
			1.1	10	KPU1
			1.1	10	KPU2
			0.5	8	MDH1
			0.3	6	MDH2
			1.1	10	TNP
Total	1,018	260.1	247.9	1,224	Total

Table 17 Traffic Distribution in Kuala Lumpur Zone Centre

o Outgoing												
	KL	MC	IP	KN	PG	JB	KG	KK	ITEL	ITE2	SE	Total
Traffic (erl)	132.8	13.0	17.6	11.1	18.0	3.1	1.8	22.0	-	-	28.5	247.9
Working (cct)	715	95	40	110	100	50	21	29	-	-	64	1,224
Traffic Distribution (%)	53.5	5.2	7.1	4.5	7.3	1.3	0.7	8.9	-	-	11.5	100.00

o Incoming												
	KL	MC	IP	KN	PG	JB	KG	KK	ITEL	ITE2	SE	Total
Traffic (erl)	138.7	18.9	13.1	10.7	26.6	2.7	24.9	7.0	-	-	17.5	260.1
Working (cct)	422	100	67	145	89	52	45	42	-	-	56	1,018
Traffic Distribution (%)	53.4	7.3	5.0	4.1	10.2	1.0	9.6	2.7	-	-	6.7	100.00

Table 18 (1/3) Results of Traffic Measurement for Kuala Lumpur Tandem Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
ASX	13	9.61	12.50	14	ASX
SFX	20	6.75	8.50	18	SPX
PGT	90	81.22	93.16	97	PGT
PGZ	35	21.52	30.86	43	PGZ
TPX	20	16.91	9.88	15	TPX
IPT	97	79.80	87.91	100	IPT
KKX	12	3.00	6.08	12	KKX
SWX	12	6.66	10.16	14	SWX
			8.22	10	THX
THX	10	2.47	9.52	22	TAX
TAX	25	18.91	28.58	81	IPZ
IPZ	44	16.27	10.94	14	KSX
KSX	20	14.05	35.44	45	PKG
PKG	45	43.75			
			75.22	137	KGT
KGT	135	98.75	63.13	80	KJX
KJX	96	61.44	13.44	20	BNX
BNX	28	14.25	6.75	13	RB2
RB2	18	5.77	8.08	18	BEX
BEX	35	9.13	13.75	23	MTX
MTX	39	16.83	43.83	60	KNX
KNX	73	40.63	15.50	49	TGX
TGX	53	18.38	27.75	61	KOX
KOX	61	17.94	1.00	16	KNZ
KNZ	32	13.25	63.30	85	SNX
SNX	104	72.69	12.44	17	PDX
PDX	17	12.22	10.36	14	KPX
KPX	15	8.33	3.22	14	TNX
TNX	17	5.72	6.11	20	MU3
MU3	24	9.50	7.66	20	MU4
MU4	21	6.11	9.27	66	MCZ
MCZ	70	29.52	10.97	18	SGT
SGT	24	10.38	15.41	40	BFX
BFX	62	11.75	2.86	44	PTN
PTN	52	2.00	9.83	38	KUX
KUX	43	10.02	73.47	120	JBT
JBT	115	77.47	1.97	9	KTG
KTG	15	1.83	2.05	31	JBZ
JBZ	24	2.88	24.27	33	KGZ
KGZ	33	19.88	24.86	38	KBZ
KBZ	40	27.02	136.36	165	SEZ
SEZ	165	133.33	20.77	99	KLZ
KLZ	62	8.00			
			48.22	62	ISD
GTK	48	9.80			
MD1	60	25.50			
SE2	57	34.58	32.58	60	SE2
BA2	60	45.83	2.83	79	SE3
BA3	55	33.72	24.16	51	MD1
BR1	90	42.22	51.16	85	BA2
DJ1	10	2.00	29.61	48	BA3
DJ2	8	1.36	12.33	48	GTK
BGI	22	18.11	43.58	80	BR1
RG1	30	20.94	2.27	26	DJ1
SE3	48	2.77	2.50	25	DJ2
KLC	355	199.94	4.94	20	RG3
RG3	20	4.66	17.41	20	RG1
			0.44	30	DJ3
Total	2,779	1,507.37	1,327.41	2,467	Total

Table 18 (2/3) Results of Traffic Measurement for Kuala Lumpur Tandem Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
ML2	40	16.97	198.16	288	KLC
SBS	30	9.13			
SGB	10	2.63	4.25	30	DJ4
SLB	30	5.72	12.16	30	ML2
DM1	75	49.52	0.38	10	SBS
BIN	337	240.47	3.08	10	SGB
KRT	78	50.13	3.80	27	SLB
TAR	164	152.50	58.11	93	DM1
SP2	10	0.33	22.50	50	DM2
SDG	18	13.91	226.61	338	BIN
BG1		4.38	39.19	105	KRT
RG2	30	7.52	262.02	300	TAR
DM2	51	35.08	11.55	15	SDG
SP1	5	1.16	0.13	9	SP2
KIP	10	2.72	1.75	9	SP1
KKB	24	8.25	8.36		BG1
TMX	12	4.19	7.61	20	RG2
MCT	35	33.55	3.52	7	KIP
ISD	75	64.52	7.83	15	KKB
P2T	40	10.75	4.58	10	TMX
BR2	47	38.11	15.38	40	P2T
ML1	56	20.55	16.27	19	BG1
KKM	1	0.00	28.55	50	BR2
GOX	27	13.25	20.52	36	ML1
MD2	44	18.97	22.02	42	MD2
KE1	49	8.11	11.05	25	GOX
BIND	25	18.30	7.69		KE1
PEX	21	2.63	1.05	30	SBSB
SJA	4	2.05	3.63	15	PEX
CRS	101	13.16	0.25	15	KE2
MWT	84	15.50	0.63	4	SJA
PK1	51	31.50	13.38	86	CRS
PK2	66	46.72	15.30	81	MWT
BRK	60	5.75	33.52	57	PK1
TAG	47	8.47	37.38	66	PK2
PGI	5	1.38	10.22	55	BRK
KGX	2	0.00	6.13	40	TAG
KBX	2	1.11	0.41	5	PGI
SJT	76	17.41	0.08	2	KGX
SBSE	25	0.02	0.05	2	KBX
SDGE	48	1.08	14.69	80	SJT
BG2		0.94	15.80	25	SBSV
			1.38	42	SDGV
			1.55		BG2
			0.00	30	KEX
MD1-C	60	26.80	41.05	81	MD1-G
SE2-C	43	35.50	55.11	78	SE2-G
BA2-C	41	27.11	70.27	110	BA2-G
BA3-C	60	36.63	43.13	69	BA3-G
KP3-C	30	4.97	9.05	10	SGB-G
BR1-C	24	13.41	8.86	16	DJ1-G
BR2-C	24	19.38	7.02	18	DJ2-G
DJ1-C	10	2.80	10.80	54	SE3-G
DJ2-C	15	3.91	8.11	30	DJ3-G
SGB-C	10	6.83	13.19	30	DJ4-G
DJ3-C	30	6.94	50.47	200	KLC-G
DJ4-C	30	13.19	3.44	10	SP1-C
KJ1-C	55	12.72	0.69	10	SP2-G
Total	2,347	1,188.63	1,473.71	2,929	Total

Table 18 (3/3) Results of Traffic Measurement for Kuala Lumpur Tandem Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
K3T-C	144	21.83	39.02	50	ML2-G
PIT-C	99	83.55	76.00		KEX-G
SAL-C	54	45.47	16.50	90	K3T-G
SLB-C	13	4.25	121.47	162	PIT-G
TNP-C	150	35.36	15.63	33	SLB-G
DM2-C	23	10.72			
DM1-C	40	21.61			
BIN-C	78	18.94			
KRT-C	43	20.36			
TAR-C	108	43.91			
KLC-C	105	22.41	47.77	60	MCT
SE3-C	20	3.33			
SP1-C	10	2.75	2.77	50	SBS-G
ML2-C	63	37.36	12.08	15	SDG-G
SBJ-C	6	5.86			
KP1-C	19	17.08	76.66	120	ML1-G
KP2-C	15	13.86	41.05	58	GOX-G
PJC-C	35	33.19	51.55	121	MD2-G
SNY-C	49	46.02	26.11	92	KE1-G
SP2-C	10	0.58	3.16	15	KE2-G
SAG-C	11	2.33			
SDG-C	20	14.41	27.80	180	CRS-G
SBS-C	35	7.36	52.25	180	MWT-G
TD1-C	72	55.52	49.72	51	PK1-G
KLZ-C	64	4.80	65.19	81	PK2-G
			18.02	135	BRK-G
ML1-C	87	54.30	25.08	71	TAG-G
GOX-C	45	29.27	37.05	40	SBSF
MD2-C	80	26.63	15.25	90	SDGF
KE1-C	30	18.11			
KE2-C	15	2.88			
CRS-C	114	12.13			
MWT-C	87	20.05			
PK1-C	54	29.05			
PK2-C	54	19.63			
BRK-C	65	7.47			
TAG-C	41	11.19			
KP3M	27	4.13			
SBJM	30	29.22			
SBSL	30	0.00			
SDGL	60	1.52			
Total	2,105	838.44	820.13	1,694	Total

Table 19 Traffic Distribution in Kuala Lumpur Tandem Centre

o Outgoing

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	2,591.00	160.13	160.35	80.56	160.34	159.81	99.57	24.91	48.22	-	136.36	3,621.25
Working (cct)	5,283	296	254	152	256	410	172	40	62	-	165	7,090
Traffic Distribution (%)	71.55	4.42	4.43	2.22	4.43	4.41	2.75	0.69	1.33	-	3.77	100.00

o Incoming

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	2,486.00	177.64	144.02	90.96	138.56	152.65	118.63	28.13	64.52	-	133.33	3,534.44
Working (cct)	5,341	303	220	228	238	449	170	42	75	-	165	7,231
Traffic Distribution (%)	70.33	5.03	4.07	2.57	3.92	4.32	3.36	0.80	1.83	-	3.77	100.00

Table 20 (1/2) Results of Traffic Measurement for Petaling Jaya Tandem Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
SBS		0.00			SBS
TNP	120	45.25	0.00		TNP
SDG		0.00	33.63	120	SDG
KIN		0.00	0.00		KIN
SBJ	90	63.11	0.00		SBJ
TDI	120	58.19	52.77	60	TDI
PJ1	10	0.00	45.16	90	PJ1
PJC	214	147.33	0.00	30	PJC
KP2	30	18.13	128.86	210	KP2
KP1	46	31.77	9.77	28	KP1
SAL	100	61.47	23.50	47	SAL
SWY	136	89.13	41.13	80	SWY
KIH	15	3.13	96.47	164	KIH
AS	24	1.52	4.50	10	AS
PGT	48	35.80	10.50	23	PGT
SJT	32	7.97	41.52	48	SJT
IPT	52	30.66	7.36	28	IPT
IPZ	29	6.66	14.94	22	IPZ
KLK	144	54.47	36.19	54	KLK
KJ	57	27.97	14.63	34	KJ
BN	25	9.33	55.83	132	BN
RB	10	3.80	28.13	57	RB
BE	23	2.02	11.69	23	BE
MT	11	5.47	2.80	9	MT
KN	30	12.97	5.55	11	KN
KNZ	25	7.11	5.88	13	KNZ
TG	12	9.83	18.61	33	TG
KO	24	14.47	10.00	12	KO
SN	39	25.33	15.44	18	SN
MCT	30	21.22	10.08	18	MCT
MU3	12	2.16	22.30	35	MU3
MCZ	35	2.63	20.25	24	MCZ
BP	12	4.58	17.41	37	BP
KU	16	3.25	6.61	19	KU
JBT	44	32.66	0.00		JBT
JBZ	18	3.11	3.88	20	JBZ
SEZ	72	47.16	29.27	45	SEZ
KGZ	18	12.02	2.55	18	KGZ
KBZ	16	4.41	14.33	21	KBZ
KLZ	58	3.13	11.72	16	KLZ
PGZ	20	9.22	56.13	72	PGZ
ISC1		0.00	7.69	87	ISC1
SJ2	30	0.00	0.44	2	SJ2
KH2	12	2.13	0.00	30	KH2
SJM	26	15.77	1.61	10	SJM
TD4	32	30.72	12.91	26	TD4
MU4	12	1.11	29.41	30	MU4
TIN	14	6.86	6.30	12	TIN
ISC2		0.00	2.72	12	ISC2
PD	6	2.80	7.47	10	PD
MC2		0.00	8.69	19	MC2
KBT	22	9.58	0.00		KBT
SGT	12	4.30	0.00	50	SGT
KS	23	6.36	0.00		KS
SPG		0.00	3.11	12	SPG
KJ2	50	0.00	10.47	51	KJ2
KAP	12	3.38	18.52	20	KAP
SJ1		0.00	10.38	38	SJ1
Total	2,068	1,001.45	1,029.11	2,090	Total

Table 20 (2/2) Results of Traffic Measurement for Petaling Jaya Tandem Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
ITE	30	18.61	30.19	60	PKG
KPD	10	6.77	0.00		SP2
KL4	40	11.83	0.00	10	RG
PKG	70	39.27	7.35	12	TIN
			3.83	6	SWN
SP2		0.00	4.50	15	TPG
RG	14	0.00	1.38	6	KK
SWN	6	2.69	8.13	70	KPC
TPG	17	4.80	15.86	55	KJA
KK	6	2.33	7.22	9	BGI
KPC	57	9.33	6.00	21	SAG
KJA	60	19.50	0.00		SDP
BGI	12	7.94	0.00	40	LTS
SAG	23	4.08			
SDP		0.00			
LTS	40	0.00			
Total	385	127.15	84.46	304	Total

Table 21 Traffic Distribution in Petaling Jaya Tandem Centre

o Outgoing

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	688.05	72.09	68.08	68.36	74.32	49.78	14.33	12.16	10.47	-	56.13	1,113.77
Working (cct)	1,626	132	127	114	121	112	21	18	51	-	72	2,394
Traffic Distribution (%)	61.78	6.47	6.11	6.14	6.67	4.47	1.29	1.09	0.94	-	5.04	100.00

o Incoming

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	766.11	58.63	54.00	55.67	54.51	47.90	12.02	13.99	18.61	-	47.16	1,128.60
Working (cct)	1,664	146	124	135	124	102	18	38	30	-	72	2,453
Traffic Distribution (%)	67.89	5.19	4.78	4.93	4.83	4.24	1.07	1.24	1.65	-	4.18	100.00

Table 22 Total Traffic Distribution in Kuala Lumpur Zone Centre Combined with Tandem Centre

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
o Outgoing												
Traffic (erl)	3,411.9	245.2	246.0	160.0	252.7	212.7	115.7	59.1	58.7	-	221.0	4,983.0
Working (cct)	7,624	523	421	376	477	572	214	87	113	-	301	10,708
Traffic Distribution (%)	68.5	4.9	4.9	3.2	5.1	4.3	2.3	1.2	1.2	-	4.4	100.00

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
o Incoming												
Traffic (erl)	3,390.8	255.2	211.1	157.3	219.7	203.3	155.6	49.1	83.1	-	198.0	4,923.2
Working (cct)	7,427	549	411	508	451	603	233	122	105	-	293	10,702
Traffic Distribution (%)	68.8	5.2	4.3	3.2	4.5	4.1	3.2	1.0	1.7	-	4.0	100.00

Table 23 Results of Traffic Measurement for Penang Zone Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
KLZ	32	6.61	4.44	40	KLZ
SEZ	17	4.39	11.04	16	SEZ
IPZ	23	17.00	15.61	23	IPZ
KLT4	43	14.86	18.69	35	KLT4
KO	10	4.02	16.85	24	SP
AS	37	22.69	21.82	40	SJAT
PJT2	22	12.78	30.75	35	AS
SJAT	28	17.77	4.53	20	PJT2
MTX1	3	0.78	1.84	3	MTX1
MTX4	2	0.00	0.00	2	MTX4
PB	18	14.38	0.00	2	MTX5
MTX5	2	1.05	0.32	4	ITE2
KM	18	8.35	3.61	11	MTX2
SP	24	10.24	0.14	5	MTX3
KLGT	6	4.01	2.12	6	TG
IPT2	13	3.39	6.57	34	BW3
KNZ	15	2.32	0.08	6	KLGT
KGZ	6	2.98	0.39	10	LEVEL2
ITE2	12	9.67	0.12	5	LEVEL21
KBU	9	5.61	0.17	5	LEVEL23
JUNK-MB	25	1.58	0.03	5	LEVEL24
HY	28	6.31	0.02	5	LEVEL25
KZ	21	14.37	0.30	5	LEVEL26
MCZ	12	6.00	0.64	5	LEVEL27
PGT	90	9.30	2.78	23	HY
PH-B/W	9	4.20	18.27	20	KZ
MTX2	11	2.53	2.29	6	KQZ
MTX3	5	0.37	1.87	9	KBU
TG	6	2.70	7.06	12	MCZ
JBT	10	2.12	11.80	18	PB
JBZ	10	0.89	1.66	10	GLR1
			10.14	18	KM
			1.18	7	TJB1
			3.57	16	KNZ
			0.47	10	BYB
			1.07	9	PH-BW
			0.03	10	BY
			0.34	3	BI
			2.50	4	JBT
			0.03	7	BF
			10.84	30	PGT
			1.80	8	JBZ
Total	567	213.27	217.78	566	Total

Table 24 Traffic Distribution in Penang Zone Centre

o Outgoing

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	29.58	7.06	15.61	3.57	142.00	4.44	2.29	1.87	-	0.32	11.04	217.78
Working (cct)	104	12	23	16	355	17	8	11	-	4	16	566
Traffic Distribution (%)	13.58	3.24	7.17	1.64	65.20	2.04	1.05	0.86	-	0.15	5.07	100.00

o Incoming

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	39.04	6.00	20.39	2.32	118.44	3.38	4.03	5.61	-	9.67	4.39	213.27
Working (cct)	106	12	36	15	325	25	8	11	-	12	17	567
Traffic Distribution (%)	18.31	2.81	9.56	1.09	55.54	1.58	1.89	2.63	-	4.53	2.06	100.00

Table 25 Results of Traffic Measurement for Penang Tandem Centre

Exchange	INCOMING		OUTGOING		Exchange
	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	
IPZ	20	9.9	10.6	30	IPZ
PGZ	30	27.3	50.2	90	PGZ
IPT2	30	26.2	23.9	28	IPT2
SP	62	43.5	28.9	52	SP
BM	90	60.3	46.3	69	BM
TJBU1	79	29.9	71.3	100	TJBU1
BYB	110	71.7	22.8	25	BYB
BF	37	17.2	18.3	35	BF
BI	24	19.2	18.3	19	BI
GLUU1	181	111.7	132.6	180	GLUU1
GLUU2	54	34.8	44.5	65	GLUU2
AI	108	97.3	153.7	166	AI
Total	825	549.0	621.4	859	Total

Table 26 Results of Traffic Measurement for
Johor Baru Zone Centre

Exchange	INCOMING		OUTGOING		Exchange
	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	
SEZ	44	12.64	0.00	15	TAMOB
SET	54	22.91	7.98	25	KNZ
KLZ	30	1.73	2.24	20	MOB2
KLT4	31	1.21	0.20	2	SAMTX
ITE2	16	2.00	0.00	2	SKMTX
PJT	18	2.23	0.21	3	NOMTX
PGZ	8	2.63	3.44	20	SOMTX
PGT	12	1.78	1.29	6	CEMTX
IPZ	12	1.03	3.60	10	PAR
IPT	12	2.38	1.09	3	KBUT
KLAT	6	0.56	0.51	7	KGZ
MCZ	16	5.26	0.27	4	KBUZ
KTIN	40	10.62	1.22	9	PEN
BP	40	14.64	0.67	12	ITE2
KLA	31	6.43			
MER	18	6.93	13.14	42	SEZ
PON	50	4.54	37.31	43	SET
PEN	14	1.80	22.21	32	KLZ
KNZ	25	10.47	5.31	24	KLT4
MOB3	4	2.86	3.94	18	PJT
SAT	25	8.13	2.11	10	PGZ
KCA1	8	6.30	2.29	12	PGT
MOB4	4	1.12	9.68	18	IPZ
KBUT	4	0.56	0.96	9	KLAT
JB3	112	32.95	1.17	12	MCZ
KGZ	10	0.25	10.96	40	KTIN
KBUZ	4	1.20	19.45	40	BP
SOMTX	20	6.44	10.44	35	KLA
NOMTX	3	0.36	4.70	14	MER
SAMTX	2	0.79	14.83	44	PON
SKMTX	2	0.00	0.90	6	KUL
CEMTX	6	1.36	0.65	4	MOB3
SR	15	6.17	8.56	30	JBU2
PAR	18	4.88	10.71	60	PEL
			8.16	32	SMT
			28.55	108	JBU3
			3.86	10	SR
			0.13	4	MOB4
Total	714	185.16	242.74	785	Total

Table 27 Traffic Distribution in Johor Baru Zone Centre

o	Outgoing	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
	Traffic (erl)	32.75	1.95	9.68	7.98	4.61	132.58	0.51	1.56	-	0.67	50.45	242.74
	Working (cct)	80	20	18	25	25	502	9	9	-	12	85	785
	Traffic Distribution (%)	13.49	0.80	3.99	3.29	1.90	54.62	0.21	0.64	-	0.28	20.78	100.00

o	Incoming	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
	Traffic (erl)	6.53	9.24	3.41	10.47	4.77	110.39	0.25	2.55	-	2.00	35.55	185.16
	Working (cct)	85	24	24	25	23	397	12	10	-	16	98	714
	Traffic Distribution (%)	3.53	4.99	1.84	5.65	2.58	59.61	0.14	1.38	-	1.08	19.20	100.00

Table 28 Results of Traffic Measurement for
Johor Baru Group Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
PGT	15	4.33	7.25	15	PGT
PGZ	4	2.69	3.77	10	PGZ
IPT	26	4.36	5.41	22	IPT
IPZ	6	3.86	0.00	4	IPZ
MCG	25	12.30	10.91	26	MCG
KLG	24	6.08	10.33	21	KLG
PJT	45	33.86	39.27	44	PJT
KLZ	20	0.91	2.83	8	KLZ
SN	12	2.44	4.55	8	SN
MR3	8	5.38	4.72	8	MR3
MR4	8	4.52	4.94	7	MR4
MCZ	34	3.44	8.30	36	MCZ
SEZ	104	91.33	132.69	140	SEZ
ISC	16	4.38	1.05	16	ISC
KNZ	18	9.55	9.94	18	KNZ
KGZ	8	0.88	0.88	8	KGZ
KBZ	8	1.38	0.97	8	KBZ
BP	45	18.94	22.63	45	BP
PTN	66	12.75	13.41	60	PTN
KUI	45	10.41	14.47	45	KU
KTG	39	16.30	13.05	36	KTG
ME	14	3.36	6.02	12	ME
SGT	25	8.66	7.94	20	SGT
JRZ	108	12.66	46.80	112	JBZ
JR2	218	123.38	142.30	192	JB
PGI	315	246.86	234.44	315	PGI
PDN	32	8.19	21.58	28	PDN
TP1	45	20.91	29.41	45	TP1
TP3	45	41.08	52.55	60	TP3
SC	98	52.80	67.08	96	SC
MTX	20	6.44	0.00	-	SC1
KU2	24	9.08	6.16	20	MTX
TI	90	18.47	23.50	80	TI
SNI	87	16.61	11.86	74	SNI
MBD	124	22.58	0.00	30	T2L
T2L	30	0.00	78.02	100	PGD
PND	15	13.13	5.69	28	TPL
KUL	102	35.41	4.05	6	GH
TPL	16	19.58	4.72	20	ABN
GH	6	5.02	1.47	25	TGA
ABN	35	8.36	1.75	4	KBT
TGA	30	2.63	9.16	45	TMP
SCD	75	3.33	0.69	15	PND
KBT	5	0.97	41.88	93	KUL
PGD	125	72.02	85.33	115	KT4
TPP	16	5.83	7.61	24	KU2
TMP	45	14.16	1.11	10	KJ
SC1		0.00	0.50	6	BN
KT4	120	81.08	0.00	-	SC2
KJ	11	1.75	0.00	3	ATR1
BN	6	0.08	0.00	3	ATR2
SC2	45	2.19	0.00	3	ATR3
Total	2,503	1,106.71	1,202.99	2,181	Total

Table 29 Traffic Distribution in Johor Baru Group Centre

o Outgoing												
	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	144.07	19.58	7.28	11.48	11.91	862.12	0.98	3.02	-	0.13	142.42	1,202.99
Working (cct)	200	62	26	18	25	1,690	8	12	-	-	140	2,181
Traffic Distribution (%)	11.98	1.63	0.61	0.95	0.99	71.66	0.08	0.25	-	0.01	11.84	100.00

o Incoming												
	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	122.38	16.37	8.45	10.27	7.35	844.57	0.90	2.52	-	0.14	93.76	1,106.71
Working (cct)	209	59	32	18	19	2,041	8	13	-	-	104	2,503
Traffic Distribution (%)	11.07	1.48	0.76	0.93	0.66	76.31	0.08	0.23	-	0.01	8.47	100.00

Table 30 Total Traffic Distribution in Johor Baru Zone Centre Combined with Group Centre

o Outgoing												
	KL	MC	IP	KN	PG	JB	KG	KK	ITEL	ITE2	SE	Total
Traffic (erl)	176.82	21.53	16.96	19.46	16.52	994.70	1.49	4.58	-	0.80	192.87	1,445.73
Working (cct)	280	82	44	43	50	2,192	17	21	-	12	225	2,966
Traffic Distribution (%)	12.23	1.49	1.17	1.35	1.14	68.80	0.10	0.32	-	0.06	13.34	100.00
o Incoming												
	KL	MC	IP	KN	PG	JB	KG	KK	ITEL	ITE2	SE	Total
Traffic (erl)	128.91	25.61	11.86	20.74	12.12	954.96	1.15	5.07	-	2.14	129.31	1,291.87
Working (cct)	294	83	56	43	42	2,438	20	23	-	16	202	3,217
Traffic Distribution (%)	9.98	1.98	0.92	1.61	0.94	73.91	0.09	0.39	-	0.17	10.01	100.00

Table 31 Results of Traffic Measurement for
Melaka Zone Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
IPZ	18	5.55	3.96	18	DT
JBZ	30	1.74	0.35	15	AN
KLZ	40	4.82	4.42	40	101
PGZ	12	5.06	0.35	6	102
SEZ	49	21.16	3.79	6	103
KGZ	6	1.74	1.17	10	104/105
KBZ	2	1.39	2.16	6	100
KNZ	30	12.99	0.97	20	112
JBT	36	9.46	0.00	10	999
IPT2	22	3.84	4.84	30	CCB
PGT	17	2.62	47.06	62	MCG1
PJT2	37	24.21	6.42	54	MCG2
KLT4	66	29.72	0.48	30	MCG3
KLGT	20	3.26	23.16	50	M6Z
KU	7	3.97	4.24	18	JBZ
SGT	18	6.95	6.55	18	IPZ
BP	10	4.98	5.49	12	PGZ
KBX	2	0.04	10.59	49	SEZ
PD	23	7.18	2.73	48	KLZ
SN	61	16.35	1.04	6	KGZ
TN	41	9.51	0.63	2	KBZ
KP	40	11.98	2.88	18	KNZ
MUR3	36	15.12	4.31	24	JBT
MUR4	36	9.08	4.82	12	IPT2
ME2	16	4.05	5.78	15	PGT
PG1X	20	0.44	5.50	35	PJT2
SBJX	6	3.78	36.36	70	KLT4
SJAX	3	0.46	1.32	18	KLGT
KGX	2	0.02	4.25	5	KU
DT	22	6.45	0.68	12	ITE2
AN	25	4.97	4.58	17	SGT
SCB	90	10.48	16.02	23	PD
MC2	86	1.35	23.66	52	SN
MCG(mi)	136	78.91	14.47	36	TN
MCG(mg)	30	-	3.88	40	KP
			14.92	54	MUR3
			0.01	3	SJAX
			1.80	20	PG1X
			11.46	30	MUR4
			2.54	10	BP
			0.00	2	KBX
			0.02	2	KGX
			2.75	6	SBJX
Total	1,095	323.63	292.41	1,014	Total

Table 32 Traffic Distribution in Melaka Zone Centre

o	Outgoing	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
	Traffic (erl)	48.66	183.54	11.37	2.88	13.08	19.92	1.06	0.63	-	0.68	10.59	292.41
	Working (cct)	177	592	30	18	50	74	8	4	-	12	49	1,014
	Traffic Distribution (%)	16.64	62.77	3.89	0.98	4.48	6.81	0.36	0.22	-	0.23	3.62	100.00

o Incoming

o	Incoming	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
	Traffic (erl)	65.79	175.43	9.39	12.99	8.58	27.10	1.76	1.43	-	-	21.16	323.63
	Working (cct)	169	642	40	30	52	101	8	4	-	-	49	1,095
	Traffic Distribution (%)	20.33	54.21	2.90	4.01	2.65	8.38	0.54	0.44	-	-	6.54	100.00

Table 33 Results of Traffic Measurement for Melaka Group Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
IPT2	6	2.8	2.6	6	IPT2
ISC2	14	3.2	0.5	6	ISC2
KNZ	14	5.4	4.3	15	KNZ
TN	44	9.8	7.3	38	TN
SN3	41	5.6	6.4	49	SN3
SNG	24	9.9	4.4	24	SNG
KP	28	2.0	2.7	30	KP
PD	20	2.0	1.8	32	PD
MUR3	29	10.4	7.2	35	MUR3
MUR4	29	5.3	9.5	35	MUR4
BP1	19	4.4	4.8	15	BP1
KU	10	3.5	-	10	KU
JBT	26	12.2	-	25	JBT
SGT	24	4.1	-	22	SGT
KLT4	60	23.2	33.8	35	KLT4
PJT2	24	20.5	23.9	30	PJT2
KLGT	12	5.1	3.5	10	KLGT
KJ2	15	2.2	1.4	15	KJ2
MCZ	116	52.6	68.5	136	MCZ
AK	120	32.3	29.7	120	AK
TGB	60	20.0	21.1	60	TGB
AG	85	21.7	19.9	75	AG
JN	64	19.3	17.8	52	JN
MJ	65	16.5	18.0	76	MJ
ML	31	11.5	13.5	25	ML
MC2	220	161.6	177.3	220	MC2
ITE2	8	-	-	6	ITE2
KBUT	6	-	-	6	KBUT
Total	1,214	467.1	479.9	1,208	Total

Table 34 Traffic Distribution in Melaka Group Centre

o Outgoing

	KL	MC	IP	KN	PG	JB	KG	KK	ITEL	ITE2	SE	Total
Traffic (erl)	73.9	379.5	5.3	5.0	3.0	9.5	0.3	0.2	-	0.7	2.5	479.9
Working (cct)	90	1,007	6	15	-	72	-	6	-	12	-	1,208
Traffic Distribution (%)	15.4	79.1	1.1	1.0	0.6	2.0	0.1	0.0	-	0.2	0.5	100.00

o Incoming

	KL	MC	IP	KN	PG	JB	KG	KK	ITEL	ITE2	SE	Total
Traffic (erl)	61.8	356.4	4.3	7.5	1.4	28.6	0.3	0.2	-	3.2	3.4	467.1
Working (cct)	111	976	6	14	-	79	-	6	-	22	-	1,214
Traffic Distribution (%)	13.3	76.3	0.9	1.6	0.3	6.1	0.1	0.0	-	0.7	0.7	100.00

Table 35 Total Traffic Distribution in Melaka Zone Centre Combined with Group Centre

o Outgoing													
	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total	
Traffic (erl)	122.6	563.0	16.7	7.9	16.1	29.4	1.4	0.8	-	1.4	13.1	772.4	
Working (cct)	267	1,599	36	33	50	146	8	10	-	24	49	2,222	
Traffic Distribution (%)	15.9	72.8	2.2	1.0	2.1	3.8	0.2	0.1	-	0.2	1.7	100.00	
o Incoming													
	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total	
Traffic (erl)	127.6	531.8	13.7	20.5	10.0	55.7	2.1	1.6	-	3.2	24.6	790.8	
Working (cct)	280	1,618	46	44	52	180	8	10	-	22	49	2,309	
Traffic Distribution (%)	16.1	67.2	1.7	2.6	1.3	7.1	0.3	0.2	-	0.4	3.1	100.00	

Table 36 Results of Traffic Measurement for Ipoh Zone Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
JBZ	18	10.18	0.86	12	JBZ
SJAMTX	21	3.92	1.03	21	SJAMTX
PGT	30	9.36	4.39	20	PGT
MW	12	6.01	1.21	6	BG
BR	18	4.60	4.08	12	MW
101L	40	4.50	3.97	16	BR
101R	40	13.14	17.15	40	101
110L	7	0.00	1.14	7	110
110R	7	1.02	11.43	32	KLZ
KLZ	40	14.78	5.32	16	SEZ
SEZ	16	6.40	14.31	23	PGZ
PGZ	23	15.31	3.33	18	MCZ
MCZ	18	5.33	1.87	4	KO
KO	6	3.52	13.33	44	KLT4
KLT4	81	24.49	5.63	28	PJT2
PJT2	25	16.39	31.99	59	TIN
KK	38	15.77	8.02	31	KK
TIN	49	22.74	21.45	66	TP
TP	49	15.80	10.88	42	TH
TH	48	19.22	7.63	18	CH
CH	24	7.23	14.05	30	SW
SW	42	17.36	10.02	26	KRI
KRI	29	11.89	9.04	37	IP4
JBT	4	0.00	4.67	24	51P3
ITE2	15	2.45	11.21	72	IPT2
TM	18	5.77	4.59	43	TSK1
KNZ	30	7.25	0.00	12	OPR
KGZ	4	0.83	1.95	6	JBT
KBUZ	4	1.18	5.35	16	TM
KR2	10	4.02	5.40	30	KNZ
TG	8	2.52	0.45	10	ITE2
KBT	4	1.18	0.18	4	KGZ
IPT2	60	7.62	0.47	4	KBUZ
SBJMTX	3	1.53	1.06	24	TSK2
KLGT2	6	0.09	0.20	7	KBT
PG1MTX	3	0.06	2.19	8	KR2
KGMTX	2	0.12	0.47	3	SBJ (MTX)
KBMTX	1	0.02	0.00	6	KLGT2
			0.00	3	PG1 (MTX)
			0.02	2	KG (MTX)
			0.00	1	KB (MTX)
Total	853	283.60	240.34	883	Total

Table 37 Traffic Distribution in Ipoh Zone Centre

o Outgoing												
	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	30.86	3.33	171.57	5.40	19.73	2.81	0.20	0.67	-	0.45	5.32	240.34
Working (cct)	107	18	599	30	67	18	6	12	-	10	16	883
Traffic Distribution (%)	12.84	1.39	71.39	2.25	8.21	1.17	0.08	0.28	-	0.19	2.21	100.00
o Incoming												
	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	57.19	5.33	162.82	7.25	28.65	10.18	0.95	2.38	-	2.45	6.40	283.60
Working (cct)	149	18	511	30	77	22	6	9	-	15	16	853
Traffic Distribution (%)	20.17	1.88	57.41	2.56	10.10	3.59	0.33	0.84	-	0.86	2.26	100.00

Table 38 Results of Traffic Measurement for Ipoh Tandem Centre

INCOMING			OUTGOING		
Exchange	Working (cct)	Traffic (erl)	Traffic (erl)	Working (cct)	Exchange
TP	56	29.5	37.4	52	PJT2
CR	36	14.2	8.7	20	PR
GG	34	11.0	9.6	24	SEZ
IPT1	120	21.0	2.1	12	SP
IPZ	72	8.9	15.6	28	SW
IP3	148	77.6	19.3	44	TIN
PAA	8	3.9	11.1	30	CR
PUL	26	10.1	11.4	32	GG
SSA	66	20.2	18.9	110	IPT1
TJ	11	9.3	7.7	60	IPZ
TSK1	130	29.9	102.1	114	IP3
TT	15	5.6	5.0	6	PAA
TSKZA	72	24.8	9.1	19	PUL
BGA	69	24.7	17.8	60	SSA
PB	10	2.2	5.6	6	TJ
TH	27	8.6	38.3	104	TSK1
KO1	10	0.6	5.1	15	TT
IP4A	30	12.9	21.0	96	TSK2A
SJAT	15	8.8	22.6	44	BGA
MNG	14	2.7	26.9	50	TP
JPGA	24	2.8	8.8	33	TH
PPP1A	1	0.0	0.2	5	IP4A
TO	19	2.9	5.0	14	SJAT
MW	12	1.2	2.9	10	MNG
TM	6	1.3	4.0	16	JPGA
PA	10	6.9	0.0	1	PPP1A
IP4	165	143.0	3.9	17	TO
AS	15	1.7	3.0	12	MW
BV	30	6.2	1.0	6	TM
CH	8	4.0	143.0	165	IP4
ITE2	21	5.2	2.3	16	AS
JBT	22	4.0	4.0	6	PA
KBUZ	6	1.0	5.6	24	BV
KGZ	9	1.0	3.7	8	CH
BN2	6	0.6	1.8	27	ITE2
KK	30	17.3	4.9	26	JBT
KLGT	28	5.2	2.4	12	JBZ
KLT4	100	78.8	1.1	8	KBUZ
KN2	10	1.1	0.5	5	KGZ
KR1	26	9.6	14.6	22	KK
KR2	14	4.8	4.5	16	KLGT
MC3	8	3.2	77.1	97	KLT4
PGT1	28	21.0	1.3	35	KLZ
PJT2	54	41.4	2.7	16	KNZ
PR	23	7.8	2.0	11	KN2
SEZ	24	9.6	0.8	10	KO2
SP	12	3.0	10.2	26	KR1
SW	37	18.6	2.6	13	KR2
TIN	53	28.9	2.5	12	MC3
KJ2	6	2.3	5.2	22	MCZ
PPP2A	25	4.4	3.2	7	PB
TSK2	17	0.0	25.6	30	PGT1
PI	18	7.0	5.6	13	PGZ
			1.0	6	KJ2
			0.4	6	BN2
			4.6	16	PPP2A
			0.0	15	TSK2
			5.6	12	PI
Total	1,836	772.3	762.9	1,722	Total

Table 39 Traffic Distribution in Ipoh Tandem Centre

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
o Outgoing												
Traffic (erl)	120.3	7.7	573.7	4.7	36.2	7.3	0.5	1.1	-	1.8	9.6	762.9
Working (cct)	200	34	1,302	27	57	38	5	8	-	27	24	1,722
Traffic Distribution (%)	15.8	1.0	75.2	0.6	4.7	1.0	0.1	0.1	-	0.2	1.3	100.00

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
o Incoming												
Traffic (erl)	125.4	3.2	636.8	1.1	29.8	4.0	1.0	1.0	-	5.2	9.6	817.1
Working (cct)	182	8	1,511	10	43	22	9	6	-	21	24	1,836
Traffic Distribution (%)	15.4	0.4	77.9	0.1	3.7	0.5	0.1	0.1	-	0.6	1.2	100.00

Table 40 Total Traffic Distribution in Ipoh Zone Centre Combined with Tandem Centre

o Outgoing

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	151.2	11.0	745.3	10.1	55.9	10.1	0.7	1.8	-	2.3	14.9	1,003.3
Working (cct)	307	52	1,901	57	124	56	11	20	-	37	40	2,605
Traffic Distribution (%)	15.1	1.1	74.2	1.0	5.6	1.0	0.1	0.2	-	0.2	1.5	100.00

o Incoming

	KL	MC	IP	KN	PG	JB	KG	KK	ITE1	ITE2	SE	Total
Traffic (erl)	182.6	8.5	799.6	8.4	58.5	14.2	2.0	3.4	-	7.7	16.0	1,100.9
Working (cct)	331	26	2,022	40	120	44	15	15	-	36	40	2,689
Traffic Distribution (%)	16.6	0.8	72.5	0.8	5.3	1.3	0.2	0.3	-	0.7	1.5	100.00

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