

11 - 2 Results of Marketing Research (21/79)

Table 2-(2) State of Usage of Cellular Mobile Services

	<u>Portion of Calls 'FROM' by Type</u>		
	local calls	long distance calls	international calls
1. Agr. + Min.	87.50 %	6.25 %	6.25 %
2. Manufacturing	74.43 %	19.11 %	6.46 %
3. Utilities	100.00 %	0.00 %	0.00 %
4. Construction	95.83 %	3.50 %	0.67 %
5. Wholesale	62.44 %	30.89 %	6.67 %
6. Retail	80.00 %	17.50 %	2.50 %
7. Rest. + Hotel	75.00 %	15.00 %	10.00 %
8. Transport	63.89 %	12.22 %	23.89 %
9. Finan. + Real est.	80.90 %	11.43 %	7.67 %
10. Private Ser. + Gov.	78.09 %	10.73 %	12.30 %

Table 2-(2) State of Usage of Cellular Mobile Services

<u>In Agriculture and Minings Sector</u>		
	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	3	2
(c) To wholesales stores	4	3
(d) To retail stores that sale your products	5	5
(e) To banks, finance organizations	2	4
(f) To Government organizations	6	6
(g) Others	7	7

<u>In Manufacturing Sector</u>		
	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	4	3
(c) To wholesales stores	3	2
(d) To retail stores that sale your products	5	5
(e) To banks, finance organizations	2	4
(f) To Government organizations	6	6
(g) Others	7	7

11 - 2 Results of Marketing Research (22/79)

In Utilities Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	2	2
(c) To wholesales stores	3	3
(d) To retail stores that sale your products	6	6
(e) To banks, finance organizations	4	4
(f) To Government organizations	5	5
(g) Others	7	7

In Construction Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	2	2
(c) To wholesales stores	3	3
(d) To retail stores that sale your products	5	5
(e) To banks, finance organizations	4	4
(f) To Government organizations	6	6
(g) Others	7	7

In Wholesale Trade Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	3	2
(c) To wholesales stores	2	3
(d) To retail stores that sale your products	5	5
(e) To banks, finance organizations	4	4
(f) To Government organizations	6	6
(g) Others	7	7

In Retail Trade Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	4	4
(c) To wholesales stores	2	3
(d) To retail stores that sale your products	5	2
(e) To banks, finance organizations	3	5
(f) To Government organizations	6	6
(g) Others	7	7

11 - 2 Results of Marketing Research (23/79)

In Restuarant and Hotel Sector

	To	From
(a) To your headquarters, other offices, firms	1	2
(b) For procurement of parts, materials, goods, etc.	2	1
(c) To wholesales stores	3	3
(d) To retail stores that sale your products	5	5
(e) To banks, finance organizations	4	4
(f) To Government organizations	6	6
(g) Others	7	7

In Transport and Communication Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	3	3
(c) To wholesales stores	5	5
(d) To retail stores that sale your products	6	6
(e) To banks, finance organizations	2	2
(f) To Government organizations	4	4
(g) Others	7	7

In Finance and Real Estate Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	6	5
(c) To wholesales stores	5	7
(d) To retail stores that sale your products	7	6
(e) To banks, finance organizations	2	2
(f) To Government organizations	3	3
(g) Others	4	4

In Private and Government Services Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	4	5
(c) To wholesales stores	3	4
(d) To retail stores that sale your products	6	6
(e) To banks, finance organizations	5	2
(f) To Government organizations	2	3
(g) Others	7	7

## 11 - 2 Results of Marketing Research (24/79)

Table 2-(2)-3A

	Main purpose of Domestic calls		
	First	Second	Third
1. Agr.+ Min.	2	2	4
2. Manufacturing	5	4	6
3. Utilities	NA	NA	NA
4. Construction	2,4	4	88
5. Wholesale	2	5,6	6,88
6. Retail	2,4,88	2,88	1
7. Rest.+ Hotel	2	6	88
8. Transport	2	NA	NA
9. Finan.+ Real est.	2	2	2
10. Private Ser.+ Gov.	2,4,5	2,7	1

	Main purpose of International calls		
	First	Second	Third
1. Agr.+ Min.	10	-	-
2. Manufacturing	2	2	2
3. Utilities	NA	NA	NA
4. Construction	4	4	88
5. Wholesale	5	5	5
6. Retail	NA	NA	NA
7. Rest.+ Hotel	2,88	NA	NA
8. Transport	2,4	2,4	NA
9. Finan.+ Real est.	2	2	2
10. Private Ser.+ Gov.	5,6	5	5

Table 2-(2)-3B Regarding the five main purposes of Domestic calls

Purpose	Times/day	Location
02	21	Bangkok, Chiang Mai, Chon Buri
04	17	Bangkok, Chiang Mai, Chon Buri, Phuket
10	06	Bangkok, Phuket, Nakorn Ratchasima
11	06	Bangkok, Monthaburi
05	07	Bangkok

Regarding the five main purposes of International calls

Purpose	Times/day	Location
02	4	Japan, Singapore, U.S.A.
05	5	Japan, Singapore, U.S.A., Hong Kong
04	4	Hong Kong, South Korea, Singapore
03	5	Japan
88	2	Hongkong

11 - 2 Results of Marketing Research (25/79)

Table 2-(3) State of Usage of Facsimile Communication

	<u>Portion of Calls 'TO' by Type</u>		
	local calls	long distance calls	international calls
1. Agr.+ Min.	35.50 %	26.17 %	38.33 %
2. Manufacturing	58.15 %	21.73 %	20.12 %
3. Utilities	10.00 %	85.00 %	5.00 %
4. Construction	72.50 %	13.17 %	14.33 %
5. Wholesale	48.27 %	25.53 %	26.20 %
6. Retail	75.00 %	11.33 %	13.67 %
7. Rest.+ Hotel	45.00 %	16.25 %	38.75 %
8. Transport	44.50 %	12.00 %	43.50 %
9. Finan.+ Real est.	59.25 %	17.25 %	23.50 %
10.Private Ser.+ Gov.	56.80 %	18.87 %	24.33 %

Table 2-(3) State of Usage of Facsimile Communication

	<u>Portion of Calls 'FROM' by Type</u>		
	local calls	long distance calls	international calls
1. Agr.+ Min.	48.00 %	20.33 %	31.67 %
2. Manufacturing	61.14 %	20.69 %	18.17 %
3. Utilities	10.00 %	85.00 %	5.00 %
4. Construction	73.45 %	18.64 %	7.91 %
5. Wholesale	47.80 %	24.00 %	28.20 %
6. Retail	65.83 %	12.00 %	22.17 %
7. Rest.+ Hotel	52.50 %	16.25 %	31.25 %
8. Transport	40.40 %	24.30 %	35.30 %
9. Finan.+ Real est.	58.33 %	19.00 %	22.67 %
10.Private Ser.+ Gov.	50.67 %	23.00 %	26.33 %

Agriculture and Minings Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	2	2
(c) To wholesales stores	5	5
(d) To retail stores that sale your products	6	6
(e) To banks, finance organizations	3	3
(f) To Government organizations	4	4
(g) Others	7	7

11 - 2 Results of Marketing Research (26/79)

In Manufacturing Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	3	2
(c) To wholesales stores	2	3
(d) To retail stores that sale your products	4	4
(e) To banks, finance organizations	5	5
(f) To Government organizations	6	6
(g) Others	7	7

In Utilities Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	2	2
(c) To wholesales stores	5	5
(d) To retail stores that sale your products	3	3
(e) To banks, finance organizations	6	6
(f) To Government organizations	4	4
(g) Others	7	7

In Construction Sector

	To	From
(a) To your headquarters, other offices, firms	2	1
(b) For procurement of parts, materials, goods, etc.	1	2
(c) To wholesales stores	3	3
(d) To retail stores that sale your products	5	4
(e) To banks, finance organizations	4	5
(f) To Government organizations	6	6
(g) Others	7	7

In Wholesale Trade Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	2	2
(c) To wholesales stores	3	3
(d) To retail stores that sale your products	4	4
(e) To banks, finance organizations	5	5
(f) To Government organizations	6	6
(g) Others	7	7

11 - 2 Results of Marketing Research (27/79)

In Retail Trade Sector

	To	From
(a) To your headquarters, other offices, firms	1	2
(b) For procurement of parts, materials, goods, etc.	2	1
(c) To wholesales stores	3	5
(d) To retail stores that sale your products	5	3
(e) To banks, finance organizations	4	4
(f) To Government organizations	6	6
(g) Others	7	7

In Restuarant and Hotel Sector

	To	From
(a) To your headquarters, other offices, firms	1	2
(b) For procurement of parts, materials, goods, etc.	2	1
(c) To wholesales stores	4	4
(d) To retail stores that sale your products	5	5
(e) To banks, finance organizations	3	3
(f) To Government organizations	6	6
(g) Others	7	7

In Trasport and Communication Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	2	2
(c) To wholesales stores	3	3
(d) To retail stores that sale your products	5	6
(e) To banks, finance organizations	4	4
(f) To Government organizations	6	5
(g) Others	7	7

In Finance and Real Estate Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	4	3
(c) To wholesales stores	5	5
(d) To retail stores that sale your products	6	6
(e) To banks, finance organizations	2	2
(f) To Government organizations	3	4
(g) Others	7	7

## 11 - 2 Results of Marketing Research (28/79)

### In Private and Government Service Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	2	2
(c) To wholesales stores	4	4
(d) To retail stores that sale your products	6	5
(e) To banks, finance organizations	5	6
(f) To Government organizations	3	3
(g) Others	7	7

Table 2-(3)-3A

	Main purpose of Domestic calls		
	First	Second	Third
1. Agr.+ Min.	5	2,6,9	1,7,88
2. Manufacturing	2	5	2
3. Utilities	4,88	6	4
4. Construction	2,4	88	88
5. Wholesale	2,3,7	5	2
6. Retail	5	2,5	2,9
7. Rest.+ Hotel	2	5,7,11	4,6
8. Transport	10	3,4,6,88	4,88
9. Finan.+ Real est.	2	5	4
10. Private Ser.+ Gov.	5	5	7

	Main purpose of International calls		
	First	Second	Third
1. Agr.+ Min.	2	2,5,7	1,2
2. Manufacturing	2	5	2,5
3. Utilities	1,5	1	1
4. Construction	2	2,88	2,88
5. Wholesale	5	4,5	2
6. Retail	5,88	5	5
7. Rest.+ Hotel	2,3	2,5,7	4,5,7
8. Transport	2	2,4,6,7	10
9. Finan.+ Real est.	2	1,2,6,7	3
10. Private Ser.+ Gov.	4,6	4,6,7	7



## 11 - 2 Results of Marketing Research (29/79)

Table 2-(3)-3B                      Regarding the five main purposes of Domestic calls

Purpose	Times/day	Location
02	35	Bangkok, Chiang Mai, Songkhla
05	25	Bangkok, Udon Thani, Ayutthaya
04	48	Bangkok, Phatum Thani, Chon Buri, Rayong
07	22	Bangkok, Nakorn Ratchasima, Chiang Mai
06	10	Bangkok, Songkhla

Regarding the five main purposes of International calls

Purpose	Times/day	Location
02	13	Japan, Hong Kong, U.S.A.
05	10	Japan, Singapore, Europe
04	10	Hong Kong, Japan, Singapore
07	11	Hong Kong, Germany, Japan
05	10	Singapore, Hong Kong, U.S.A., U.K., Japan

Table 2-(4) Stage of Usage of Leased Circuit Services

	<u>Method that Companies Apply</u>	
	a point to a point	a point to multi point
1. Agr. + Min.	100.00 %	00.00 %
2. Manufacturing	80.00 %	20.00 %
3. Utilities	100.00 %	00.00 %
4. Construction	NA	NA
5. Wholesale	100.00 %	00.00 %
6. Retail	100.00 %	00.00 %
7. Rest. + Hotel	50.00 %	50.00 %
8. Transport	50.00 %	50.00 %
9. Finan. + Real est.	34.60 %	66.40 %
10. Private Ser. + Gov.	60.00 %	40.00 %

## 11 - 2 Results of Marketing Research (30/79)

Table 2-(4) Stage of Usage of Leased Circuit Services

<u>Portion of Purpose In percentage</u>		
Domestic		
	Voice grade	Data transmission
1. Agr. + Min.	20.00 %	80.00 %
2. Manufacturing	45.80 %	54.20 %
3. Utilities	100.00 %	00.00 %
4. Construction	NA	NA
5. Wholesale	17.14 %	82.86 %
6. Retail	26.67 %	73.33 %
7. Rest. + Hotel	46.67 %	53.33 %
8. Transport	28.57 %	72.43 %
9. Finan. + Real est.	12.95 %	87.05 %
10. Private Ser. + Gov.	36.67 %	67.33 %

Table 2-(4) Stage of Usage of Leased Circuit Services

<u>Portion of Purpose In percentage</u>		
International		
	Voice grade	Data transmission
1. Agr. + Min.	20.00 %	80.00 %
2. Manufacturing	45.80 %	54.27 %
3. Utilities	NONE	NONE
4. Construction	NA	NA
5. Wholesale	0.00 %	100.00 %
6. Retail	26.70 %	73.00 %
7. Rest. + Hotel	46.67 %	53.33 %
8. Transport	28.57 %	71.43 %
9. Finan. + Real est.	24.73 %	75.27 %
10. Private Ser. + Gov.	36.67 %	63.33 %

### In Agriculture and Minings

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	2	2
(c) To wholesales stores	3	4
(d) To retail stores that sale your products	5	3
(e) To banks, finance organizations	4	5
(f) To Government organizations	6	6
(g) Others	7	7

11 - 2 Results of Marketing Research (31/79)

In Manufacturing Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	2	2
(c) To wholesales stores	3	3
(d) To retail stores that sale your products	4	4
(e) To banks, finance organizations	5	5
(f) To Government organizations	6	6
(g) Others	7	7

In Utilities Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	-*	-
(c) To wholesales stores	-	-
(d) To retail stores that sale your products	-	-
(e) To banks, finance organizations	-	-
(f) To Government organizations	-	-
(g) Others	-	-

\* Use only one purpose

In Construction Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	4	4
(c) To wholesales stores	6	6
(d) To retail stores that sale your products	7	7
(e) To banks, finance organizations	2	3
(f) To Government organizations	3	2
(g) Others	5	5

In Wholesale Trade Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	2	3
(c) To wholesales stores	3	2
(d) To retail stores that sale your products	4	5
(e) To banks, finance organizations	5	4
(f) To Government organizations	6	6
(g) Others	7	7

## 11 - 2 Results of Marketing Research (32,79)

### In Retail Trade Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	3	4
(c) To wholesales stores	4	5
(d) To retail stores that sale your products	5	3
(e) To banks, finance organizations	2	2
(f) To Government organizations	6	6
(g) Others	7	7

### In Resturant and Hotel Sector

	To	From
(a) To your headquarters, other offices, firms	2	2
(b) For procurement of parts, materials, goods, etc.	3	3
(c) To wholesales stores	4	4
(d) To retail stores that sale your products	5	5
(e) To banks, finance organizations	1	1
(f) To Government organizations	6	6
(g) Others	7	7

### In Transport and Communication Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	5	4
(c) To wholesales stores	2	2
(d) To retail stores that sale your products	6	6
(e) To banks, finance organizations	4	4
(f) To Government organizations	3	3
(g) Others	7	7

### In Finance and Real Estate Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	4	5
(c) To wholesales stores	5	6
(d) To retail stores that sale your products	6	4
(e) To banks, finance organizations	2	2
(f) To Government organizations	3	3
(g) Others	7	7

11 - 2 Results of Marketing Research (33/79)

In Private and Government Service Sector

	To	From
(a) To your headquarters, other offices, firms	1	1
(b) For procurement of parts, materials, goods, etc.	5	3
(c) To wholesales stores	2	2
(d) To retail stores that sale your products	7	7
(e) To banks, finance organizations	4	4
(f) To Government organizations	3	5
(g) Others	6	6

Table 2-(4)-3A

Main purpose of Domestic calls

	First	Second	Third
1. Agr. + Min.	NA	NA	NA
2. Manufacturing	7	2,11,88	5,10
3. Utilities	NA	NA	NA
4. Construction	NA	NA	NA
5. Wholesale	6	-	-
6. Retail	NA	NA	NA
7. Rest. + Hotel	5,6	NA	NA
8. Transport	88	88	NA
9. Finan. + Real est.	1	4,1,2	2
10. Private Ser. + Gov.	6,88	6	-

Main purpose of International calls

	First	Second	Third
1. Agr. + Min.	NA	NA	NA
2. Manufacturing	2,4,5	2	2
3. Utilities	NA	NA	NA
4. Construction	NA	NA	NA
5. Wholesale	5,7	7	88
6. Retail	NA	NA	NA
7. Rest. + Hotel	NA	NA	NA
8. Transport	10	NA	NA
9. Finan. + Real est.	1,7	7	4,6
10. Private Ser. + Gov.	6,7,88	-	-

11 - 2 Results of Marketing Research (34/79)

Table 2-(4)-3B

Regarding the five main purposes of Domestic calls

Purpose	Times/day	Location
02	118	Bangkok, Songkhla
01	2500	Bangkok, Chon Buri
06	310	Bangkok
04	6	Songkhla, Chiang Mai, Bangkok
07	6	Bangkok, Rayong, Songkhla

Regarding the five main purposes of International calls

Purpose	Times/day	Location
07	7	U.S.A., Singapore, Hong Kong
02	11	Japan, Germany, Europe
06	34	U.K., Singapore, Japan
04	166	U.K., U.S.A., Hong Kong
11	5	Japan

## 11 - 2 Results of Marketing Research (35/79)

### 3. Usage of Telecommunication Services as Part of the Strategy of Company's Management

Table 3-(1)-(2)-(3) Average Expenditure on Correspondence, Mail and Courier Services  
(Ref. question 3 (1), (2) and (3) )

	Expenditure for correspondence ( baht per month )	Portion correspondence expenditure to total expenditure	Portion telecommunication expenditure to total expenditure
1. Agr.+ Min.	23,000.00	2.50 %	1.50 %
2. Manufacturing	68,660.89	12.63 %	9.11 %
3. Utilities	600,000.00	NA	NA
4. Construction	40,530.00	10.93 %	10.50 %
5. Wholesale	157,316.11	13.01 %	8.00 %
6. Retail	24,437.50	13.21 %	8.90 %
7. Rest.+ Hotel	77,000.00	NA	NA
8. Transport + Telecom.	111,305.90	19.66 %	16.50 %
9. Finan.+ Real est.	217,495.00	13.00 %	10.08 %
10. Private Ser.+ Gov.	16,928.57	7.98 %	3.30 %

Table 3-(4) Effectiveness of the telecommunication Service in Enhancing Business Performance.

	Development of new business chances	Enhancement competition	Increases of sales	Cost saving	Other
1. Agr.+ Min.	25.00 %	26.67 %	21.67 %	11.25 %	0.00 %
2. Manufacturing	25.39 %	34.22 %	33.82 %	26.78 %	5.24 %
3. Utilities	NA	NA	NA	NA	NA
4. Construction	29.43 %	35.00 %	26.80 %	12.80 %	4.30 %
5. Wholesale	28.44 %	57.30 %	54.00 %	39.00 %	5.00 %
6. Retail	28.44 %	29.29 %	27.00 %	11.43 %	5.86 %
7. Rest.+ Hotel	10.00 %	37.14 %	34.29 %	22.14 %	3.57 %
8. Transport	32.20 %	49.50 %	49.40 %	33.30 %	0.00 %
9. Finan.+ Real est.	38.70 %	49.40 %	36.10 %	31.55 %	6.43 %
10. Private Ser.+ Gov.	38.00 %	48.00 %	36.00 %	31.50 %	35.40 %

Table 4-(1) Frequency that Companies Contract Employee Working Outside

	(times/day)
1. Agr.+ Min.	6.75
2. Manufacturing	24.34
3. Utilities	2.00
4. Construction	14.50
5. Wholesale	15.00
6. Retail	15.38
7. Rest.+ Hotel	18.33
8. Transport	24.45
9. Finan.+ Real est.	30.25
10. Private Ser.+ Gov.	25.88

11 - 2 Results of Marketing Research (36/79)

Table 4-(2) Means and Ways of Contact Between Companies and Employee Working Outside  
As Shown by Ranking of Frequencies

	By public telephones	Paging services	Call company's answering machine	Cellular mobile telephone	Others
1. Agr.+ Min.	2	1	-	3	-
2. Manufacturing	1	2	4	3	5
3. Utilities	-	1	-	-	1
4. Construction	4	1	2	2	5
5. Wholesale	3	1	2	-	4
6. Retail	2	1	4	3	-
7. Rest.+ Hotel	1	2	-	-	3
8. Transport	2	1	5	3	4
9. Finan.+ Real est.	3	1	5	2	4
10. Private Ser.+ Gov.	1	1	5	2	5

Note: \* This way is hardly used

Table 5-(1) Telecommunication Management

	familiar with 'Telecom Management'	not familiar with 'Telecom Management'
1. Agr.+ Min.	28.60 %	71.40 %
2. Manufacturing	24.10 %	75.90 %
3. Utilities	100.00 %	0.00 %
4. Construction	28.60 %	71.40 %
5. Wholesale	18.20 %	81.80 %
6. Retail	16.67 %	83.33 %
7. Rest.+ Hotel	42.86 %	57.14 %
8. Transport	38.50 %	61.50 %
9. Finan.+ Real est.	42.60 %	57.40 %
10. Private Ser.+ Gov.	00.00 %	100.00 %

Table 5-(2) Attitude Whether Companies Need to Have a Telecom. Manager

	Yes	No
1. Agr.+ Min.	14.3 %	85.7 %
2. Manufacturing	32.2 %	67.8 %
3. Utilities	100.0 %	0.0 %
4. Construction	28.6 %	71.4 %
5. Wholesale	54.5 %	45.5 %
6. Retail	16.7 %	83.3 %
7. Rest.+ Hotel	66.7 %	33.3 %
8. Transport	53.8 %	46.2 %
9. Finan.+ Real est.	60.0 %	40.0 %
10. Private Ser.+ Gov.	22.2 %	77.8 %



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Table 5-(3) Fields that Telecom. Manager Can be Most Effective

	Selecting hardware	Engineering system efficiency	Minimizing expenditure	Selecting suitable services	Others
1. Agr.+ Min.	25.0 %	37.5 %	25.0 %	12.5 %	-
2. Manufacturing	5.6 %	38.9 %	22.2 %	31.5 %	1.8 %
3. Utilities	20.0 %	40.0 %	20.0 %	20.0 %	-
4. Construction	10.0 %	25.0 %	25.0 %	40.0 %	-
5. Wholesale	5.6 %	38.9 %	33.3 %	16.7 %	5.5 %
6. Retail	33.3 %	16.7 %	16.7 %	16.7 %	16.7 %
7. Rest.+ Hotel	18.2 %	36.4 %	9.0 %	18.2 %	-
8. Transport	0 %	54.5 %	27.3 %	18.2 %	-
9. Finan.+ Real est.	12.5 %	41.3 %	20.0 %	23.7 %	2.5 %
10. Private Ser.+ Gov.	6.7 %	40.0 %	33.0 %	20.0 %	0 %

Table 5-(4) Proportion that There is a Telecom. Manager in Companies

	Yes	No
1. Agr.+ Min.	0.0 %	100.0 %
2. Manufacturing	5.2 %	93.1 %
3. Utilities	100.0 %	0.0 %
4. Construction	14.3 %	85.7 %
5. Wholesale	16.3 %	83.3 %
6. Retail	0.0 %	100.0 %
7. Rest.+ Hotel	25.0 %	75.0 %
8. Transport	23.1 %	76.9 %
9. Finan.+ Real est.	14.5 %	85.5 %
10. Private Ser.+ Gov.	10.0 %	90.0 %

Table 6-(1),(2) Distribution of Work Accomplished and Rank of Objectives As Functioned by Computer

	Portion of work carried out by computer	Objectives			
		Typing	Calculating	Data processing	non - voice communication
1. Agr.+ Min.	52.0 %	2	1	3	4
2. Manufacturing	46.7 %	3	1	2	4
3. Utilities	NA %	2	3	1	4
4. Construction	54.1 %	1	2	3	4
5. Wholesale	54.7 %	1	2	3	4
6. Retail	47.5 %	2	1	3	4
7. Rest.+ Hotel	68.3 %	1	2	3	4
8. Transport	61.5 %	2	1	3	4
9. Finan.+ Real est.	70.6 %	1	2	3	4
10. Private Ser.+ Gov.	40.5 %	1	3	2	4

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Table 7-(1) Opinion Concerning Improving of Telecommunication Services

	Satisfaction	Moderate Satisfaction	Disatisfaction
1. Agr.+ Min.	0.0 %	57.1 %	42.9 %
2. Manufacturing	31.7 %	41.7 %	26.7 %
3. Utilities	0.0 %	0.0 %	100.0 %
4. Construction	50.0 %	28.6 %	21.4 %
5. Wholesale	21.7 %	52.2 %	26.1 %
6. Retail	25.0 %	50.0 %	25.0 %
7. Rest.+ Hotel	0.0 %	75.0 %	25.0 %
8. Transport	0.0 %	75.0 %	25.0 %
9. Finan.+ Real est.	19.6 %	42.9 %	37.5 %
10. Private Ser.+ Gov.	0.0 %	60.0 %	40.0 %

Table 7-(2) Priority of Services that Need Improvement as Seen by Companies which are 'Satisfy'

	SECTOR				
	Manufacturing	Construction	Wholesale	Retail	Finance
1. Telephones can be used at office anytime	1	1	1	8	2
2. Shorten of time between application and beginning of services	4	6	6	2	5
3. Call party with one dialing attempt	8	3	3	1	1
4. More public telephone	7	8	8	6	8
5. Improvement of sound quality	2	2	2	4	4
6. Data error did not occur frequently	6	4	4	7	7
7. Non-working time reduced to be shorter	5	5	5	3	3
8. Down-time has decreased	3	7	7	5	6
9. Others	9	9	9	9	9

Note: These are sectors which satisfy with the services.

Table 7-(3) Priority of Services that Need Improvement as Seen by Companies which are 'Moderate Satisfy' and 'Dissatisfy'

	SECTOR				
	Agr.+ Min.	Manufacturing	Utilities	Construction	Wholesale
1. Not enough telephones in office	1	3	7	5	3
2. Long duration from application to beginning of services	7	1	1	2	5
3. Call party with many dialing attempt	2	2	6	3	1
4. Not enough public telephone	3	5	2	4	4
5. Too much noise and sub-standard sound quality	4	4	8	1	2
6. Data errors occur frequently	5	7	5	7	6
7. Non-working time not yet improved	6	6	3	8	7
8. Down-time has not yet decreased	8	8	4	6	8
9. Others	9	9	9	9	9

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Table 7-(3) Priority of Services that Need Improvement as Seen by Companies which are 'Moderate Satisfy' and 'Dissatisfy'

	SECTOR				
	Retail	Rest.+ Hotel	Transport	finance	Private serv.
1. Not enough telephones in office	4	2	2	1	1
2. Long duration from application to beginning of services	5	4	7	2	2
3. Call party with many dialing attempt	1	1	1	3	3
4. Not enough public telephone	2	6	2	7	7
5. Too much noise and sub-standard sound quality	7	5	8	4	4
6. Data errors occur frequently	6	7	6	6	6
7. Non-working time not yet improved	3	3	4	5	5
8. Down-time has not yet decreased	8	9	5	8	8
9. Others	9	8	9	9	9

Table 7-(4a) Companies's Opinions with Respect to Local Charge

	expensive	resonable	cheap
1. Agr.+ Min.	12.5 %	87.5 %	0.0 %
2. Manufacturing	6.8 %	76.3 %	16.9 %
3. Utilities	0.0 %	100.0 %	0.0 %
4. Construction	21.4 %	78.6 %	0.0 %
5. Wholesale	4.8 %	66.6 %	28.6 %
6. Retail	9.1 %	72.7 %	18.2 %
7. Rest.+ Hotel	0.0 %	42.9 %	57.1 %
8. Transport	6.7 %	73.3 %	20.0 %
9. Finan.+ Real est.	7.1 %	76.8 %	16.1 %
10. Private Ser.+ Gov.	8.8 %	75.4 %	15.8 %

Table 7-(4b) Companies's Opinions with Respect to Long Distance Charge

	expensive	resonable	cheap
1. Agr.+ Min.	0.0 %	62.5 %	37.5 %
2. Manufacturing	0.0 %	54.2 %	45.8 %
3. Utilities	0.0 %	66.7 %	33.3 %
4. Construction	21.4 %	28.6 %	50.0 %
5. Wholesale	0.0 %	57.1 %	42.9 %
6. Retail	0.0 %	45.5 %	54.5 %
7. Rest.+ Hotel	0.0 %	71.4 %	28.6 %
8. Transport	0.0 %	53.3 %	46.7 %
9. Finan.+ Real est.	1.8 %	56.1 %	42.1 %
10. Private Ser.+ Gov.	0.0 %	70.0 %	30.0 %

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Table 7-(4c) Companies's Opinions with Respect to Monthly Charge

	expensive	resonable	cheap
1. Agr. + Min.	0.0 %	75.0 %	25.0 %
2. Manufacturing	6.8 %	76.3 %	16.9 %
3. Utilities	0.0 %	66.7 %	33.3 %
4. Construction	14.3 %	64.3 %	21.4 %
5. Wholesale	6.3 %	62.5 %	31.3 %
6. Retail	9.1 %	54.5 %	36.4 %
7. Rest. + Hotel	0.0 %	57.1 %	42.9 %
8. Transport	0.0 %	73.3 %	26.7 %
9. Finan. + Real est.	7.1 %	58.9 %	33.9 %
10. Private Ser. + Gov.	10.0 %	80.0 %	10.0 %

Table 7-(4d) Companies's Opinions with Respect to Installation Fee

	expensive	resonable	cheap
1. Agr. + Min.	0.0 %	42.9 %	57.1 %
2. Manufacturing	3.4 %	49.2 %	47.5 %
3. Utilities	0.0 %	100.0 %	0.0 %
4. Construction	7.1 %	57.1 %	35.7 %
5. Wholesale	0.0 %	71.4 %	28.6 %
6. Retail	0.0 %	54.5 %	54.5 %
7. Rest. + Hotel	0.0 %	14.3 %	85.7 %
8. Transport	0.0 %	81.2 %	18.2 %
9. Finan. + Real est.	3.6 %	57.1 %	39.3 %
10. Private Ser. + Gov.	0.0 %	60.0 %	40.0 %

Table 7-(4e) Companies's Opinions with Respect to Local Call Area Size

	small	resonable	big
1. Agr. + Min.	37.5 %	62.5 %	0.0 %
2. Manufacturing	44.2 %	53.8 %	2.0 %
3. Utilities	50.0 %	50.0 %	0.0 %
4. Construction	57.1 %	42.9 %	0.0 %
5. Wholesale	31.5 %	63.0 %	0.0 %
6. Retail	34.6 %	63.6 %	0.0 %
7. Rest. + Hotel	33.3 %	50.0 %	16.7 %
8. Transport	30.8 %	79.2 %	0.0 %
9. Finan. + Real est.	55.8 %	42.3 %	1.9 %
10. Private Ser. + Gov.	20.0 %	70.0 %	10.0 %

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Table 7-(4f) Companies's Opinions with Respect to Billing

	accurate	often incorrect
1. Agr.+ Min.	57.1 %	42.9 %
2. Manufacturing	68.5 %	31.5 %
3. Utilities	100.0 %	0.0 %
4. Construction	71.4 %	28.6 %
5. Wholesale	62.5 %	37.5 %
6. Retail	54.5 %	45.5 %
7. Rest.+ Hotel	16.7 %	83.3 %
8. Transport	53.3 %	46.7 %
9. Finan.+ Real est.	65.2 %	34.8 %
10. Private Ser.+ Govt.	75.0 %	25.0 %

Table 7-(4g) Companies's Opinions with Respect to Place for Payment

	convenience	inconvenience
1. Agr.+ Min.	87.5 %	12.5 %
2. Manufacturing	84.5 %	15.5 %
3. Utilities	100.0 %	0.0 %
4. Construction	84.6 %	15.4 %
5. Wholesale	80.0 %	20.0 %
6. Retail	75.0 %	25.0 %
7. Rest.+ Hotel	81.8 %	18.2 %
8. Transport	80.0 %	20.0 %
9. Finan.+ Real est.	80.3 %	19.7 %
10. Private Ser.+ Govt.	100.0 %	0.0 %

Table 7-(4h) Companies's Opinions with Respect to Price of Telephone Sets

	expensive	resonable	cheap
1. Agr.+ Min.	0.0 %	62.5 %	37.5 %
2. Manufacturing	5.4 %	58.9 %	35.7 %
3. Utilities	33.3 %	33.3 %	33.3 %
4. Construction	14.2 %	42.9 %	42.9 %
5. Wholesale	5.0 %	80.0 %	15.0 %
6. Retail	8.3 %	50.0 %	37.5 %
7. Rest.+ Hotel	12.5 %	50.0 %	37.5 %
8. Transport	8.3 %	58.3 %	33.3 %
9. Finan.+ Real est.	3.6 %	60.0 %	36.4 %
10. Private Ser.+ Govt.	33.3 %	33.3 %	33.3 %

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Table 7-(4j) Companies's Opinions with Respect to Price of Facsimile Sets

	expensive	resonable	cheap
1. Agr.+ Min.	0.0 %	57.1 %	42.9 %
2. Manufacturing	5.3 %	46.4 %	48.3 %
3. Utilities	0.0 %	66.7 %	33.3 %
4. Construction	0.0 %	42.9 %	57.1 %
5. Wholesale	0.0 %	80.0 %	20.0 %
6. Retail	16.7 %	33.3 %	50.0 %
7. Rest.+ Hotel	0.0 %	14.3 %	85.7 %
8. Transport	0.0 %	57.1 %	42.9 %
9. Finan.+ Real est.	3.6 %	45.5 %	50.9 %
10. Private Ser.+ Gov.	0.0 %	44.4 %	55.6 %

Table 7-(4k) Companies's Opinions with Respect to Price of P(A)BX

	expensive	resonable	cheap
1. Agr.+ Min.	0.0 %	40.0 %	60.0 %
2. Manufacturing	8.9 %	33.3 %	57.8 %
3. Utilities	0.0 %	66.7 %	33.3 %
4. Construction	0.0 %	36.4 %	63.6 %
5. Wholesale	5.9 %	52.9 %	41.2 %
6. Retail	0.0 %	0.0 %	100.0 %
7. Rest.+ Hotel	0.0 %	0.0 %	100.0 %
8. Transport	0.0 %	58.3 %	41.7 %
9. Finan.+ Real est.	7.9 %	29.4 %	37.3 %
10. Private Ser.+ Gov.	0.0 %	33.3 %	66.6 %

Table 7-(5) Companies's Opinion with Respect to TOT's Services

	Satisfaction	Moderate Satisfaction	Disatisfaction
1. Agr.+ Min.	12.5 %	37.5 %	50.0 %
2. Manufacturing	21.0 %	63.2 %	15.8 %
3. Utilities	33.3 %	0.0 %	66.7 %
4. Construction	7.7 %	92.3 %	0.0 %
5. Wholesale	18.2 %	63.6 %	18.2 %
6. Retail	0.0 %	83.3 %	16.7 %
7. Rest.+ Hotel	14.2 %	42.9 %	42.9 %
8. Transport	7.1 %	78.6 %	14.3 %
9. Finan.+ Real est.	19.6 %	48.2 %	32.2 %
10. Private Ser.+ Gov.	10.0 %	60.0 %	30.0 %

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Table 7-(6) Ranking of Services Improvement by Companies that Express 'Satisfaction' with Services

	SECTOR				
	Agr.+ Min.	Manufacturing	Utilities	Construction	Wholesale
1. Kind and polite reception	7	1	1	3	1
2. Applications are accepted at one visit	6	4	2	1	6
3. Quick response for repair work	1	2	3	2	2
4. Complaints and questions are easily received	4	5	4	4	4
5. Positive attitude about information disclosure	2	6	-	5	3
6. Providing a consulting service	3	3	-	7	5
7. Providing one stop shopping	5	7	-	6	7
8. Others	-	8	-	8	8

Table 7-(6) Ranking of Services Improvement by Companies that Express 'Satisfaction' with Services

	SECTOR			
	Rest.+ Hotel	Transport	Finance	Private serv.
1. Kind and polite reception	5	6	1	1
2. Applications are accepted at one visit	4	1	5	4
3. Quick response for repair work	3	2	2	2
4. Complaints and questions are easily received	-	5	4	3
5. Positive attitude about information disclosure	2	3	6	-
6. Providing a consulting service	1	7	3	-
7. Providing one stop shopping	-	4	7	-
8. Others	-	-	8	-

Table 7-(7) Ranking of Services Improvement Needed by Companies that Express 'Moderate Satisfaction' and 'Dissatisfaction' with Services

	SECTOR				
	Agr.+ Min.	Manufacturing	Utilities	Construction	Wholesale
1. Unkind and impolite reception	1	3	4	4	2
2. Several request required in installation	4	1	2	3	1
3. Spontaneous response for repair work	6	2	1	1	2
4. Complaints and questions are not handled efficiency	3	3	3	2	7
5. Negative attitude about information disclosure	2	6	6	5	4
6. No consulting of telecom. service	5	5	5	6	6
7. Not providing one stop telecom. shopping	7	7	7	7	5
8. Others	-	8	8	8	8

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Table 7-(7) Ranking of Services Improvement Needed by Companies that Express 'Moderate Satisfaction' and 'Dissatisfaction' with Services

	SECTOR				
	Retail	Rest.+ Hotel	Transport	finance	Private serv.
1. Unkind and impolite reception	4	3	2	4	3
2. Several request required in installation	2	4	3	3	2
3. Spontaneous response for repair work	3	1	1	1	1
4. Complaints and questions are not handled efficiency	1	5	4	2	5
5. Negative attitude about information disclosure	6	7	5	6	6
6. No consulting of telecom. service	4	2	6	5	4
7. Not providing one stop telecom. shopping	7	6	7	7	7
8. Others	8	8	8	8	8

Table 8-(1) Companies's Demand for Telecom. Services: 'Discount Service 1'  
(Ref. question no. 8-1.)

	No interest	Interest
1. Agr.+ Min.	50.0 %	50.0 %
2. Manufacturing	72.4 %	27.6 %
3. Utilities	100.0 %	0.0 %
4. Construction	66.7 %	33.3 %
5. Wholesale	70.8 %	29.2 %
6. Retail	72.7 %	27.3 %
7. Rest.+ Hotel	71.4 %	28.6 %
8. Transport	64.3 %	35.7 %
9. Finan.+ Real est.	76.4 %	23.6 %
10. Private Ser.+ Gov.	73.3 %	26.7 %

Note: Discount service 1: Charging only for services selected by the customer  
(combination with monthly charge and call charge on the customer's need basis)

Table 8-(2) Companies's Demand for Telecom. Services: 'Discount Service 2'  
(Ref. question no. 8-2.)

	No interest	Interest
1. Agr.+ Min.	37.5 %	62.5 %
2. Manufacturing	40.7 %	59.3 %
3. Utilities	66.7 %	33.3 %
4. Construction	66.7 %	33.3 %
5. Wholesale	66.7 %	33.3 %
6. Retail	18.2 %	81.2 %
7. Rest.+ Hotel	57.1 %	42.9 %
8. Transport	64.3 %	35.7 %
9. Finan.+ Real est.	49.1 %	50.9 %
10. Private Ser.+ Gov.	80.0 %	20.0 %

Note: 'Discount Service 2': discount rate is raised according to call charge  
for large users



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Table 8-(3) Companies's Demand for Telecom. Services: ' Discount Service 3'  
(Ref. question no. 8-3.)

	No interest	Interest
1. Agr.+ Min.	75.0 %	25.0 %
2. Manufacturing	62.7 %	37.3 %
3. Utilities	66.7 %	33.3 %
4. Construction	91.7 %	8.3 %
5. Wholesale	66.7 %	33.3 %
6. Retail	54.5 %	45.5 %
7. Rest.+ Hotel	42.9 %	57.1 %
8. Transport	64.3 %	35.7 %
9. Finan.+ Real est.	63.6 %	36.4 %
10. Private Ser.+ Gov.	46.7 %	53.3 %

Note: 'Discount Service 3' is different tariff system either by day or night or according to specified area.

Table 8-(4) Companies's Demand for Telecom. Services: ' Discount Service 4'  
(Ref. question no. 8-4.)

	No interest	Interest
1. Agr.+ Min.	62.5 %	37.5 %
2. Manufacturing	55.9 %	44.1 %
3. Utilities	66.7 %	33.3 %
4. Construction	66.7 %	33.3 %
5. Wholesale	62.5 %	37.5 %
6. Retail	54.5 %	45.5 %
7. Rest.+ Hotel	71.4 %	28.6 %
8. Transport	57.1 %	42.9 %
9. Finan.+ Real est.	63.6 %	36.4 %
10. Private Ser.+ Gov.	53.3 %	46.7 %

Note: 'Discount Service 4' is lower rates for frequently called numbers

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Table 8-(5) Companies's Demand for Telecom. Services: 'Discount Service 5'  
(Ref. question no. 8-5.)

	No interest	Interest
1. Agr.+ Min.	87.5 %	12.5 %
2. Manufacturing	76.3 %	23.7 %
3. Utilities	100.0 %	0.0 %
4. Construction	58.3 %	41.7 %
5. Wholesale	79.2 %	20.8 %
6. Retail	63.6 %	36.4 %
7. Rest.+ Hotel	71.4 %	28.6 %
8. Transport	57.1 %	42.9 %
9. Finan.+ Real est.	74.5 %	25.5 %
10. Private Ser.+ Gov.	86.7 %	13.3 %

Note: 'Discount Services 5' is call any place in Thailand with fixed charge during specified time

Table 8-(6) Companies's Demand for Telecom. Services: 'Discount Service 6'  
(Ref. question no. 8-6.)

	No interest	Interest
1. Agr.+ Min.	87.5 %	12.5 %
2. Manufacturing	94.9 %	5.1 %
3. Utilities	66.7 %	33.3 %
4. Construction	100.0 %	0.0 %
5. Wholesale	87.5 %	12.5 %
6. Retail	90.9 %	9.1 %
7. Rest.+ Hotel	85.7 %	14.3 %
8. Transport	78.6 %	21.4 %
9. Finan.+ Real est.	67.3 %	32.7 %
10. Private Ser.+ Gov.	86.7 %	13.3 %

Note: 'Discount Services 6' is back up line being offered at lower charge in case of data transmission services through leased circuits.

Table 8-(7) Companies's Opinions on Introduction of Free Dial Service  
(Called Party Payment)

	No interest	Interest
1. Agr.+ Min.	85.7 %	14.3 %
2. Manufacturing	79.7 %	20.3 %
3. Utilities	66.7 %	33.3 %
4. Construction	83.3 %	16.7 %
5. Wholesale	87.5 %	12.5 %
6. Retail	63.6 %	36.4 %
7. Rest.+ Hotel	100.0 %	0.0 %
8. Transport	78.6 %	21.4 %
9. Finan.+ Real est.	85.5 %	14.5 %
10. Private Ser.+ Gov.	73.3 %	26.7 %

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Table 8-(8) Companies's Opinions on Facsimile Message Store and Forward Service

	No interest	Interest
1. Agr.+ Min.	62.5 %	37.5 %
2. Manufacturing	81.4 %	18.6 %
3. Utilities	100.0 %	0.0 %
4. Construction	83.3 %	16.7 %
5. Wholesale	75.0 %	25.0 %
6. Retail	72.7 %	27.3 %
7. Rest.+ Hotel	71.4 %	28.6 %
8. Transport	57.1 %	42.9 %
9. Finan.+ Real est.	65.5 %	34.5 %
10. Private Ser.+ Gov.	66.7 %	33.3 %

Table 8-(9) Companies's Opinions on 'Virtual Network Services'

	No interest	Interest
1. Agr.+ Min.	62.5 %	37.5 %
2. Manufacturing	78.0 %	22.0 %
3. Utilities	66.7 %	33.3 %
4. Construction	75.0 %	25.0 %
5. Wholesale	83.3 %	16.7 %
6. Retail	72.7 %	27.3 %
7. Rest.+ Hotel	71.9 %	28.4 %
8. Transport	92.9 %	7.1 %
9. Finan.+ Real est.	65.5 %	34.5 %
10. Private Ser.+ Gov.	93.3 %	6.7 %

Note: Ordinary telephone network can act similarly to leased circuit

Table 8-(10) Companies's Opinions on Introduction of Credit Card Call

	No interest	Interest
1. Agr.+ Min.	50.0 %	50.0 %
2. Manufacturing	69.5 %	30.5 %
3. Utilities	100.0 %	0.0 %
4. Construction	50.0 %	50.0 %
5. Wholesale	54.2 %	45.8 %
6. Retail	54.5 %	45.5 %
7. Rest.+ Hotel	71.4 %	28.6 %
8. Transport	57.1 %	42.9 %
9. Finan.+ Real est.	67.3 %	32.7 %
10. Private Ser.+ Gov.	80.0 %	20.0 %

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Table 8-(11) Companies's Opinions on 'Simple Resale'

	No interest	Interest
1. Agr.+ Min.	12.5 %	87.5 %
2. Manufacturing	61.0 %	39.0 %
3. Utilities	66.7 %	33.3 %
4. Construction	75.0 %	25.0 %
5. Wholesale	54.2 %	45.8 %
6. Retail	54.5 %	45.5 %
7. Rest.+ Hotel	57.1 %	42.9 %
8. Transport	42.9 %	57.1 %
9. Finan.+ Real est.	32.7 %	67.3 %
10. Private Ser.+ Gov.	80.0 %	20.0 %

Note: 'Simple Resale' is linking of telephone lines and leased circuits between head and branch office with lower cost

Table 8-(12) Companies's Opinions on 'Detail Charging List Services'

	No interest	Interest
1. Agr.+ Min.	37.5 %	62.5 %
2. Manufacturing	71.2 %	28.8 %
3. Utilities	100.0 %	0.0 %
4. Construction	66.7 %	33.3 %
5. Wholesale	70.8 %	29.2 %
6. Retail	72.7 %	27.3 %
7. Rest.+ Hotel	57.1 %	42.9 %
8. Transport	85.7 %	14.3 %
9. Finan.+ Real est.	67.3 %	32.7 %
10. Private Ser.+ Gov.	80.0 %	20.0 %

Note: receiving a detailed list of one's own phone calls, both local and long distance calls, special service calls, etc.

Table 8-(13) Companies's Opinions on Need of 'Consulting Services'

	No interest	Interest
1. Agr.+ Min.	50.0 %	50.0 %
2. Manufacturing	76.3 %	23.7 %
3. Utilities	100.0 %	0.0 %
4. Construction	41.7 %	58.3 %
5. Wholesale	70.8 %	29.2 %
6. Retail	54.5 %	45.5 %
7. Rest.+ Hotel	42.9 %	57.1 %
8. Transport	64.3 %	35.7 %
9. Finan.+ Real est.	58.2 %	41.8 %
10. Private Ser.+ Gov.	66.7 %	33.3 %

Note: Consulting services through detailed management reports of call charges for strategic management.

## 11 - 2 Results of Marketing Research (49/79)

Table 8-(14) Companies's Opinions on 'Voice Mail Services'

	No interest	Interest
1. Agr.+ Min.	62.5 %	37.5 %
2. Manufacturing	93.2 %	6.8 %
3. Utilities	100.0 %	0.0 %
4. Construction	91.7 %	8.3 %
5. Wholesale	91.7 %	8.3 %
6. Retail	90.9 %	9.1 %
7. Rest.+ Hotel	57.1 %	42.9 %
8. Transport	71.4 %	28.6 %
9. Finan.+ Real est.	70.9 %	29.1 %
10. Private Ser.+ Gov.	73.3 %	26.7 %

Note: message is stored into a switching system at a telephone office and can be accessed by registered, secretly allocated numbers anytime from any place.

Table 8-(15) Companies's Opinions on 'One Stop Shopping Services'

	No interest	Interest
1. Agr.+ Min.	75.0 %	25.0 %
2. Manufacturing	78.0 %	22.0 %
3. Utilities	100.0 %	0.0 %
4. Construction	75.0 %	25.0 %
5. Wholesale	83.3 %	16.7 %
6. Retail	72.7 %	27.3 %
7. Rest.+ Hotel	71.4 %	28.6 %
8. Transport	89.1 %	10.9 %
9. Finan.+ Real est.	86.7 %	13.3 %
10. Private Ser.+ Gov.	100.0 %	0.0 %

Table 8-(16) Companies's Opinions on 'Television Conference Service'

	No interest	Interest
1. Agr.+ Min.	62.5 %	37.5 %
2. Manufacturing	88.1 %	11.9 %
3. Utilities	100.0 %	0.0 %
4. Construction	83.3 %	16.7 %
5. Wholesale	83.3 %	16.7 %
6. Retail	72.7 %	27.3 %
7. Rest.+ Hotel	71.4 %	28.6 %
8. Transport	85.7 %	14.3 %
9. Finan.+ Real est.	80.0 %	20.0 %
10. Private Ser.+ Gov.	80.0 %	20.0 %

## 11 - 2 Results of Marketing Research (50/79)

Table 8-[17] Companies's opinions on ' Telephone Conference Service'

	No interest	Interest
1. Agr. + Min.	75.0 %	25.0 %
2. Manufacturing	89.8 %	10.2 %
3. Utilities	66.7 %	33.3 %
4. Construction	75.0 %	25.0 %
5. Wholesale	75.0 %	25.0 %
6. Retail	72.7 %	27.3 %
7. Rest. + Hotel	71.4 %	28.6 %
8. Transport	71.4 %	28.6 %
9. Finan. + Real est.	78.2 %	21.8 %
10. Private Ser. + Gov.	73.3 %	26.7 %

Table 8-[18] Companies's Opinions on Need of 'High Speed (more than 2 Mb/s) Leased Circuit'

	No interest	Interest
1. Agr. + Min.	75.0 %	25.0 %
2. Manufacturing	89.8 %	10.2 %
3. Utilities	33.3 %	66.7 %
4. Construction	100.0 %	0.0 %
5. Wholesale	79.2 %	20.8 %
6. Retail	90.9 %	9.1 %
7. Rest. + Hotel	71.4 %	28.6 %
8. Transport	92.9 %	7.1 %
9. Finan. + Real est.	80.0 %	20.0 %
10. Private Ser. + Gov.	93.3 %	6.7 %

Table 8-[19] Companies's Opinions on Need for Information Providing Services Through Telephone Call and Facsimile

	No interest	Interest
1. Agr. + Min.	50.0 %	50.0 %
2. Manufacturing	72.9 %	27.1 %
3. Utilities	33.3 %	66.7 %
4. Construction	50.0 %	50.0 %
5. Wholesale	87.5 %	12.5 %
6. Retail	66.6 %	33.4 %
7. Rest. + Hotel	28.6 %	71.4 %
8. Transport	85.7 %	14.3 %
9. Finan. + Real est.	67.3 %	32.7 %
10. Private Ser. + Gov.	93.3 %	6.7 %

11 - 2 Results of Marketing Research (51/79)

Table 8-(20) Companies's Opinions on Need for Business Agency to Collect Telephone Charge

	No interest	Interest
1. Agr.+ Min.	0.0 %	100.0 %
2. Manufacturing	89.8 %	10.2 %
3. Utilities	100.0 %	0.0 %
4. Construction	100.0 %	0.0 %
5. Wholesale	94.1 %	5.9 %
6. Retail	90.9 %	9.1 %
7. Rest.+ Hotel	100.0 %	0.0 %
8. Transport	100.0 %	0.0 %
9. Finan.+ Real est.	88.1 %	11.1 %
10.Private Ser.+ Gov.	93.3 %	6.7 %

Table 9-(1) Companies' opinions on 'ISDN Diagram-1'

	No Interest	Interest
1. Agr.+ Min.	0.0 %	100.0 %
2. Manufacturing	41.8 %	58.2 %
3. Utilities	0.0 %	100.0 %
4. Construction	46.2 %	53.8 %
5. Wholesale	52.4 %	47.6 %
6. Retail	50.0 %	50.0 %
7. Rest.+ Hotel	50.0 %	50.0 %
8. Transport	41.7 %	41.7 %
9. Finan.+ Real est.	54.5 %	45.4 %
10.Private Ser.+ Gov.	33.3 %	66.7 %
Total	44.2 %	55.8 %

Table 9-(2) Average Number of lines Express by Companies interest Diagram-1

	Year		
	1992-1996	1997-2001	2002-2006
1. Agr.+ Min.	2.33	0.0	0.0
2. Manufacturing	5.80	19.0	51.0
3. Utilities	2.00	0.0	0.0
4. Construction	1.50	3.0	5.0
5. Wholesale	0.00	0.0	5.0
6. Retail	10.50	0.0	0.0
7. Rest.+ Hotel	20.00	0.0	0.0
8. Transport	2.00	50.0	0.0
9. Finan.+ Real est.	11.60	75.0	102.5
10.Private Ser.+ Gov.	6.25	2.0	0.0
Total	6.5	29.67	52.83

11 - 2 Results of Marketing Research (52/79)

Average Number of lines Express by Company Interest Diagram-2  
Year

	after 2006	unknown
1. Agr.+ Min.	0.0	0.0
2. Manufacturing	101.0	NA
3. Utilities	0.0	0.0
4. Construction	0.0	5.0
5. Wholesale	5.0	NA
6. Retail	0.0	NA
7. Rest.+ Hotel	0.0	NA
8. Transport	0.0	NA
9. Finan.+ Real est.	0.0	19.0
10. Private Ser.+ Gov.	0.0	1.0
Total	69.0	12.6

Table II-(1)

Companies opinion on 'ISDN Diagram-3'

	No Interest	Interest
1. Agr.+ Min.	0.0 %	100.0 %
2. Manufacturing	50.0 %	50.0 %
3. Utilities	0.0 %	100.0 %
4. Construction	46.2 %	53.8 %
5. Wholesale	50.0 %	50.0 %
6. Retail	45.5 %	54.5 %
7. Rest.+ Hotel	100.0 %	0.0 %
8. Transport	33.3 %	66.7 %
9. Finan.+ Real est.	47.7 %	52.3 %
10. Private Ser.+ Gov.	63.2 %	36.8 %
Total	48.1 %	51.9 %

Table II-(2) Average Number of lines Express by Companies Interest Diagram-3

	Year		
	1992-1996	1997-2001	2002-2006
1. Agr.+ Min.	2.5	0.0	0.0
2. Manufacturing	8.5	26.0	51.0
3. Utilities	0.0	0.0	0.0
4. Construction	1.5	3.0	5.0
5. Wholesale	3.8	3.0	5.0
6. Retail	2.0	0.0	0.0
7. Rest.+ Hotel	0.0	0.0	0.0
8. Transport	67.0	26.0	0.0
9. Finan.+ Real est.	21.2	50.0	5.0
10. Private Ser.+ Gov.	0.0	0.0	1.0
Total	14.36	16.9	19.7



## 11 - 2 Results of Marketing Research (53/79)

Average Number of lines Express by Companies interest Diagram-3

	Year	
	after 2006	unknown
1. Agr. + Min.	0.0	1.0
2. Manufacturing	101.0	NA
3. Utilities	0.0	0.0
4. Construction	0.0	NA
5. Wholesale	5.0	NA
6. Retail	0.0	NA
7. Rest. + Hotel	0.0	NA
8. Transport	0.0	NA
9. Finan. + Real est.	0.0	22.5
10. Private Ser. + Gov.	0.0	NA
<b>Total</b>	<b>69</b>	<b>18.67</b>

Table 12-(1)

Companies' opinions on Diagram 4

	No Interest	Interest only G4 FAX	Interest only TV Telephone	Interest Both
1. Agr. + Min.	40.0 %	0.0 %	0.0 %	60.0 %
2. Manufacturing	53.6 %	8.9 %	14.3 %	23.2 %
3. Utilities	50.0 %	50.0 %	0.0 %	0.0 %
4. Construction	50.0 %	8.3 %	8.3 %	33.4 %
5. Wholesale	57.1 %	9.6 %	0.0 %	33.3 %
6. Retail	50.0 %	0.0 %	16.7 %	33.3 %
7. Rest. + Hotel	75.0 %	25.0 %	0.0 %	0.0 %
8. Transport	36.4 %	18.2 %	27.3 %	18.1 %
9. Finan. + Real est.	45.0 %	7.5 %	5.0 %	42.5 %
10. Private Ser. + Gov.	55.5 %	5.6 %	11.1 %	27.8 %
<b>Total</b>	<b>50.8 %</b>	<b>8.9 %</b>	<b>30.4 %</b>	<b>27.8 %</b>

Table 12-(2)

Average Number of lines Express by Companies interest Diagram-4

	Year		
	1992-1996	1997-2001	2002-2006
1. Agr. + Min.	2.5	0.0	0.0
2. Manufacturing	2.8	41.5	51.5
3. Utilities	0.0	0.0	0.0
4. Construction	2.0	5.0	10.0
5. Wholesale	5.7	5.0	5.0
6. Retail	0.0	0.0	0.0
7. Rest. + Hotel	10.0	0.0	0.0
8. Transport	3.3	50.0	0.0
9. Finan. + Real est.	2.0	0.0	5.0
10. Private Ser. + Gov.	1.0	1.0	1.0
<b>Total</b>	<b>3.7</b>	<b>24.0</b>	<b>17.9</b>

## 11 - 2 Results of Marketing Research (54/79)

Average Number of lines Express by Companies interest Diagram-4  
Year

	after 2006	unknown
1. Agr.+ Min.	0.0	0.0
2. Manufacturing	101.5	NA
3. Utilities	0.0	0.0
4. Construction	0.0	1.0
5. Wholesale	5.0	NA
6. Retail	0.0	NA
7. Rest.+ Hotel	0.0	NA
8. Transport	0.0	NA
9. Finan.+ Real est.	0.0	NA
10. Private Ser.+ Gov.	1.0	NA
Total	42.0	1

Table 13-(1)-1 Companies' opinions on 'ISDN Diagram- 5 Monitor camera'

	No Interest	Interest
1. Agr.+ Min.	50.0 %	50.0 %
2. Manufacturing	78.9 %	21.1 %
3. Utilities	100.0 %	0.0 %
4. Construction	75.0 %	25.0 %
5. Wholesale	85.7 %	14.3 %
6. Retail	66.7 %	33.3 %
7. Rest.+ Hotel	100.0 %	0.0 %
8. Transport	66.7 %	33.3 %
9. Finan.+ Real est.	67.5 %	32.5 %
10. Private Ser.+ Gov.	82.4 %	17.6 %
Total	75.4 %	24.6 %

Table 13-(1)-2 Average Number of lines Express by Companies interest Diagram-5  
Year

	1992-1996	1997-2001	2002-2006
1. Agr.+ Min.	1	0	0
2. Manufacturing	3	3	3
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	7	4	4
6. Retail	0	0	0
7. Rest.+ Hotel	0	0	0
8. Transport	2	10	0
9. Finan.+ Real est.	52.25	50	1
10. Private Ser.+ Gov.	0	1	1
Total	28.25	16.75	2.67

## 11 - 2 Results of Marketing Research (55/79)

Average Number of lines Express by Companies interest Diagram-5

	Year	
	after 2006	unknown
1. Agr.+ Min.	0	0
2. Manufacturing	3	NA
3. Utilities	0	0
4. Construction	0	0
5. Wholesale	4	NA
6. Retail	0	NA
7. Rest.+ Hotel	0	NA
8. Transport	0	NA
9. Finan.+ Real est.	0	NA
10.Private Ser.+ Gov.	1	NA
Total	3.5	NA

Table 13-(2)-1 Companies' opinions on 'ISON Diagram- 5 Guide phone'

	No Interest	Interest
1. Agr.+ Min.	50.0 %	50.0 %
2. Manufacturing	80.8 %	11.2 %
3. Utilities	100.0 %	0.0 %
4. Construction	66.7 %	33.3 %
5. Wholesale	80.9 %	19.1 %
6. Retail	58.3 %	41.7 %
7. Rest.+ Hotel	100.0 %	0.0 %
8. Transport	63.6 %	26.4 %
9. Finan.+ Real est.	72.5 %	27.5 %
10.Private Ser.+ Gov.	70.6 %	29.4 %
Total	74.1 %	25.9 %

Table 13-(2)-2 Average Number of Lines Express by Companies interest Diagram-5 Guide phone

	Year		
	1992-1996	1997-2001	2002-2006
1. Agr.+ Min.	1	0	0
2. Manufacturing	0	3	3
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	5	4	4
6. Retail	0	0	0
7. Rest.+ Hotel	0	0	0
8. Transport	1	1	0
9. Finan.+ Real est.	6	NA	1
10.Private Ser.+ Gov.	0	0	0
Total	3.8	2.3	2.67

11 - 2 Results of Marketing Research (56/79)

Average Number of lines Express by Companies interest Diagram-5  
Year  
after 2006                      unknown

1. Agr.+ Min.	0	0
2. Manufacturing	3	NA
3. Utilities	0	0
4. Construction	0	0
5. Wholesale	4	NA
6. Retail	0	NA
7. Rest.+ Hotel	0	NA
8. Transport	0	NA
9. Finan.+ Real est.	0	NA
10. Private Ser.+ Gov.	1	NA
Total	3.5	NA

Table 13-(2)-1 Companies' opinions on 'ISDN Diagram- 5 Guide phone'

	No Interest	Interest
1. Agr.+ Min.	50.0 %	50.0 %
2. Manufacturing	80.8 %	11.2 %
3. Utilities	100.0 %	0.0 %
4. Construction	66.7 %	33.3 %
5. Wholesale	80.9 %	19.1 %
6. Retail	58.3 %	41.7 %
7. Rest.+ Hotel	100.0 %	0.0 %
8. Transport	63.6 %	26.4 %
9. Finan.+ Real est.	72.5 %	27.5 %
10. Private Ser.+ Gov.	70.6 %	29.4 %
Total	74.1 %	25.9 %

Table 13-(2)-2 Average Number of lines Express by Companies interest Diagram-5 Guide phone  
Year  
1992-1996                      1997-2001                      2002-2006

1. Agr.+ Min.	1	0	0
2. Manufacturing	0	3	3
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	5	4	4
6. Retail	0	0	0
7. Rest.+ Hotel	0	0	0
8. Transport	1	1	0
9. Finan.+ Real est.	6	NA	1
10. Private Ser.+ Gov.	0	0	0
Total	3.8	2.3	2.67

11 - 2 Results of Marketing Research (57/79)

Average Number of lines Express by Companies interest Diagram-5 Guide phone  
Year

	after 2006	unknown
1. Agr. + Min.	0	0
2. Manufacturing	3	0
3. Utilities	0	0
4. Construction	0	10
5. Wholesale	4	NA
6. Retail	0	NA
7. Rest. + Hotel	0	NA
8. Transport	0	NA
9. Finan. + Real est.	0	50
10. Private Ser. + Gov.	1	NA
Total	3.5	30

Table 13-(3)-1 Companies' opinions on 'ISDN Diagram- 5 TV-Conference'

	No Interest	Interest
1. Agr. + Min.	50.0 %	50.0 %
2. Manufacturing	76.9 %	23.1 %
3. Utilities	100.0 %	0.0 %
4. Construction	66.7 %	33.3 %
5. Wholesale	76.2 %	23.8 %
6. Retail	58.3 %	41.7 %
7. Rest. + Hotel	75.0 %	25.0 %
8. Transport	45.5 %	54.5 %
9. Finan. + Real est.	72.5 %	27.5 %
10. Private Ser. + Gov.	70.6 %	29.3 %
Total	70.7 %	29.3 %

Table 13-(3)-2 Average Number of lines Express by Companies interest Diagram-5 TV-Conference

	Year		
	1992-1996	1997-2001	2002-2006
1. Agr. + Min.	1	0	0
2. Manufacturing	2	4	6.5
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	6.5	4	4
6. Retail	0	0	0
7. Rest. + Hotel	1	2	4
8. Transport	1	1	10
9. Finan. + Real est.	6.3	1	0
10. Private Ser. + Gov.	1	0	0
Total	3.8	3.7	5.33

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Average Number of lines Express by Company interest Diagram-5 TV-Conference  
Year

	after 2006	unknown
1. Agr.+ Min.	0	0
2. Manufacturing	3	NA
3. Utilities	0	0
4. Construction	0	10
5. Wholesale	4	NA
6. Retail	0	0
7. Rest.+ Hotel	4	NA
8. Transport	0	NA
9. Finan.+ Real est.	0	NA
10. Private Ser.+ Gov.	0	NA
Total	3.67	10

Table 13-(4)-1 Companies' opinions on 'ISDN Diagram- 5 G4 FAX'

	No Interest	Interest
1. Agr.+ Min.	0.0 %	100.0 %
2. Manufacturing	67.3 %	32.7 %
3. Utilities	100.0 %	0.0 %
4. Construction	50.0 %	50.0 %
5. Wholesale	65.0 %	35.0 %
6. Retail	58.3 %	41.7 %
7. Rest.+ Hotel	100.0 %	0.0 %
8. Transport	45.5 %	54.5 %
9. Finan.+ Real est.	72.5 %	27.5 %
10. Private Ser.+ Gov.	58.8 %	21.2 %
Total	63.4 %	36.6 %

Table 13-(4)-2 Average Number of lines Express by Companies interest Diagram-5 G4 FAX  
Year

	1992-1996	1997-2001	2002-2006
1. Agr.+ Min.	0	0	0
2. Manufacturing	0	0	0
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	0	0	0
6. Retail	0	0	0
7. Rest.+ Hotel	0	0	0
8. Transport	0	0	0
9. Finan.+ Real est.	0	0	0
10. Private Ser.+ Gov.	1	1	1
Total	NA	NA	NA

11 - 2 Results of Marketing Research (59/79)

Average Number of lines Express by Companies interest Diagram-5 G4 FAX  
Year

	after 2006	unknown
1. Agr.+ Min.	0	0
2. Manufacturing	0	NA
3. Utilities	0	0
4. Construction	0	NA
5. Wholesale	0	0
6. Retail	0	NA
7. Rest.+ Hotel	0	NA
8. Transport	0	NA
9. Finan.+ Real est.	0	0
10. Private Ser.+ Gov.	1	NA
Total	NA	NA

Table 13-(5)-1 Companies' opinions on 'ISDN Diagram-5 Computer'

	No Interest	Interest
1. Agr.+ Min.	0.0 %	100.0 %
2. Manufacturing	38.5 %	61.5 %
3. Utilities	0.0 %	100.0 %
4. Construction	50.0 %	50.0 %
5. Wholesale	52.4 %	47.6 %
6. Retail	58.3 %	41.7 %
7. Rest.+ Hotel	75.0 %	25.0 %
8. Transport	33.3 %	66.7 %
9. Finan.+ Real est.	55.0 %	45.0 %
10. Private Ser.+ Gov.	47.1 %	52.9 %
Total	54.0 %	46.0 %

Table 13-(5)-2 Average Number of lines Express by Companies interest Diagram-5 Computer  
Year

	1992-1996	1997-2001	2002-2006
1. Agr.+ Min.	0	0	0
2. Manufacturing	0	0	0
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	NA	NA	NA
6. Retail	0	0	0
7. Rest.+ Hotel	0	0	0
8. Transport	0	0	0
9. Finan.+ Real est.	0	0	0
10. Private Ser.+ Gov.	0	0	0
Total	0	0	0

11 - 2 Results of Marketing Research (60/79)

Average Number of lines Express by Company interest Diagram-5 Computer  
Year

	after 2006	unknown
1. Agr. + Min.	0	NA
2. Manufacturing	0	NA
3. Utilities	0	NA
4. Construction	0	NA
5. Wholesale	0	NA
6. Retail	0	NA
7. Rest. + Hotel	0	NA
8. Transport	0	NA
9. Finan. + Real est.	0	NA
10. Private Ser. + Gov.	0	NA
Total	0	NA

Table 13-(6)-1 Companies' opinions on 'ISDN Diagram- 5 Digital PBX'

	No Interest	Interest
1. Agr. + Min.	0.0 %	100.0 %
2. Manufacturing	61.5 %	38.5 %
3. Utilities	100.0 %	0.0 %
4. Construction	54.5 %	45.5 %
5. Wholesale	61.9 %	30.1 %
6. Retail	50.0 %	50.0 %
7. Rest. + Hotel	75.0 %	25.0 %
8. Transport	50.0 %	50.0 %
9. Finan. + Real est.	65.0 %	35.0 %
10. Private Ser. + Gov.	58.8 %	41.9 %
Total	59.5 %	41.5 %

Table 13-(6)-2 Average Number of lines Express by Companies interest Diagram-5 Digital PBX

	Year		
	1992-1996	1997-2001	2002-2006
1. Agr. + Min.	0	0	0
2. Manufacturing	0	0	0
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	NA	NA	NA
6. Retail	0	0	0
7. Rest. + Hotel	0	0	0
8. Transport	0	0	0
9. Finan. + Real est.	0	0	0
10. Private Ser. + Gov.	0	0	0
Total	0	0	0



## 11 - 2 Results of Marketing Research (61/79)

Average Number of Express by Company Interest Diagram-5 Digital PBX

	Year	
	after 2006	unknown
1. Agr. + Min.	0	NA
2. Manufacturing	0	NA
3. Utilities	0	0
4. Construction	0	NA
5. Wholesale	0	NA
6. Retail	0	NA
7. Rest. + Hotel	0	NA
8. Transport	0	NA
9. Finan. + Real est.	0	NA
10. Private Ser. + Gov.	0	NA
<b>Total</b>	<b>0</b>	<b>NA</b>

Table 14-(1) Companies' opinions on 'ISDN Diagram- 6 '

	No Interest	Interest
1. Agr. + Min.	25.0 %	75.0 %
2. Manufacturing	69.8 %	31.2 %
3. Utilities	100.0 %	0.0 %
4. Construction	75.0 %	25.0 %
5. Wholesale	85.7 %	14.3 %
6. Retail	75.0 %	25.0 %
7. Rest. + Hotel	100.0 %	0.0 %
8. Transport	63.6 %	26.4 %
9. Finan. + Real est.	77.8 %	22.2 %
10. Private Ser. + Gov.	72.6 %	27.4 %
<b>Total</b>	<b>72.6 %</b>	<b>27.4 %</b>

Table 14-(2) Average Number of lines Express by Companies interest Diagram-6

	Year		
	1992-1996	1997-2001	2002-2006
1. Agr. + Min.	1	0	0
2. Manufacturing	1	3	3
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	10	0	0
6. Retail	0	0	0
7. Rest. + Hotel	0	0	0
8. Transport	1	0	0
9. Finan. + Real est.	3.5	NA	0
10. Private Ser. + Gov.	10	0	0
<b>Total</b>	<b>4.3</b>	<b>3</b>	<b>3</b>

## 11 - 2 Results of Marketing Research (62/79)

Average Number of lines Express by Company Interest Diagram-6  
Year

	after 2006	unknown
1. Agr.+ Min.	0	0
2. Manufacturing	3	NA
3. Utilities	0	0
4. Construction	0	NA
5. Wholesale	0	NA
6. Retail	0	NA
7. Rest.+ Hotel	0	NA
8. Transport	0	NA
9. Finan.+ Real est.	0	2
10. Private Ser.+ Gov.	0	NA
Total	3	2

Table 15-(1) Companies' opinion on ' ISDN Diagram- 7

	No Interest	Interest
1. Agr.+ Min.	60.0 %	40.0 %
2. Manufacturing	78.8 %	21.2 %
3. Utilities	100.0 %	0.0 %
4. Construction	75.0 %	25.0 %
5. Wholesale	90.5 %	9.5 %
6. Retail	58.3 %	41.7 %
7. Rest.+ Hotel	100.0 %	0.0 %
8. Transport	72.7 %	27.3 %
9. Finan.+ Real est.	83.3 %	16.7 %
10. Private Ser.+ Gov.	77.3 %	22.2 %
Total	79.2 %	20.8 %

Table 15-(2) Average Number of lines Express by Companies Interest Diagram-7  
Year

	1992-1996	1997-2001	2002-2006
1. Agr.+ Min.	1	0	0
2. Manufacturing	3	10	20
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	0	0	0
6. Retail	0	0	0
7. Rest.+ Hotel	0	0	0
8. Transport	1	0	0
9. Finan.+ Real est.	1	2	0
10. Private Ser.+ Gov.	0	0	0
Total	1.8	6	20

11 - 2 Results of Marketing Research (63/79)

Average Number of Lines Express by Company Interest Diagram-7  
Year

	after 2006	unknown
1. Agr.+ Min.	0	0
2. Manufacturing	30	NA
3. Utilities	0	0
4. Construction	0	NA
5. Wholesale		
6. Retail	0	NA
7. Rest.+ Hotel	0	NA
8. Transport	0	NA
9. Finan.+ Real est.	0	2
10. Private Ser.+ Gov.		
Total	30	2

Table 16-(1) Companies' opinions on 'ISDN Diagram- 8 '

	No Interest	Interest
1. Agr.+ Min.	25.0 %	75.0 %
2. Manufacturing	63.5 %	36.5 %
3. Utilities	100.0 %	0.0 %
4. Construction	58.3 %	41.7 %
5. Wholesale	66.7 %	33.3 %
6. Retail	75.0 %	25.0 %
7. Rest.+ Hotel	100.0 %	0.0 %
8. Transport	33.3 %	66.7 %
9. Finan.+ Real est.	62.8 %	31.2 %
10. Private Ser.+ Gov.	61.1 %	38.9 %
Total	61.5 %	38.5 %

Table 16-(2) Average Number of Lines Express by Companies interest Diagram-8  
Year

	1992-1996	1997-2001	2002-2006
1. Agr.+ Min.	1	0	0
2. Manufacturing	1.5	0	3
3. Utilities	0	0	0
4. Construction	1	0	0
5. Wholesale	3.6	5	5
6. Retail	0	0	0
7. Rest.+ Hotel	0	0	0
8. Transport	1.5	3.5	3
9. Finan.+ Real est.	1.3	0	1
10. Private Ser.+ Gov.	1	1	1
Total	1.78	3	3.2

## 11 - 2 Results of Marketing Research (64/79)

Average Number of lines Express by Company interest Diagram-8  
Year

	after 2006	unknown
1. Agr.+ Min.	0	0
2. Manufacturing	3	NA
3. Utilities	0	0
4. Construction	0	NA
5. Wholesale	5	NA
6. Retail	0	NA
7. Rest.+ Hotel	0	NA
8. Transport	0	NA
9. Finan.+ Real est.	0	19
10. Private Ser.+ Gov.	0	1
Total	4	14.5

Table 17-(1) Companies' opinions on 'ISDN Diagram - 9'

	No Interest	Interest
1. Agr.+ Min.	40.0 %	60.0 %
2. Manufacturing	82.7 %	17.3 %
3. Utilities	100.0 %	0.0 %
4. Construction	66.7 %	33.3 %
5. Wholesale	80.9 %	19.1 %
6. Retail	58.3 %	41.7 %
7. Rest.+ Hotel	100.0 %	0.0 %
8. Transport	75.0 %	25.0 %
9. Finan.+ Real est.	78.6 %	21.4 %
10. Private Ser.+ Gov.	72.2 %	21.8 %
Total	76.5 %	23.5 %

Table 17-(2) Average Number of lines Express by Companies interest Diagram-9  
Year

	1992-1996	1997-2001	2002-2006
1. Agr.+ Min.	1	0	0
2. Manufacturing	10.5	50	50
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	1	0	0
6. Retail	0	0	0
7. Rest.+ Hotel	0	0	0
8. Transport	1	0	0
9. Finan.+ Real est.	1	0	0
10. Private Ser.+ Gov.	1	1	1
Total	3.5	50	50

11 - 2 Results of Marketing Research (65/79)

Average Number of lines Express by Company interest Diagram-9  
Year

	after 2006	unknown
1. Agr.+ Min.	0	0
2. Manufacturing	50	NA
3. Utilities	0	0
4. Construction	0	NA
5. Wholesale	0	NA
6. Retail	0	NA
7. Rest.+ Hotel	0	NA
8. Transport	0	NA
9. Finan.+ Real est.	0	2
10. Private Ser.+ Gov.	1	NA
Total	50	2

Table 18-(1) Companies' opinions on 'ISDN Diagram-10'

	No Interest	Interest
1. Agr.+ Min.	40.0 %	60.0 %
2. Manufacturing	75.0 %	25.0 %
3. Utilities	100.0 %	0.0 %
4. Construction	75.0 %	25.0 %
5. Wholesale	80.9 %	19.1 %
6. Retail	66.7 %	33.3 %
7. Rest.+ Hotel	100.0 %	0.0 %
8. Transport	75.0 %	0.0 %
9. Finan.+ Real est.	88.1 %	11.9 %
10. Private Ser.+ Gov.	72.2 %	21.8 %
Total	77.1 %	22.9 %

Table 18-(2) Average Number of lines Express by Companies interest Diagram-10  
Year

	1992-1996	1997-2001	2002-2006
1. Agr.+ Min.	1	0	0
2. Manufacturing	1	3	3
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	1	3	0
6. Retail	0	0	0
7. Rest.+ Hotel	0	0	0
8. Transport	1	0	0
9. Finan.+ Real est.	6	50	0
10. Private Ser.+ Gov.	1	1	1
Total	2	17.67	3

11 - 2 Results of Marketing Research (66/79)

Average Number of lines Express by Company Interest Diagram-10  
Year

	after 2006	unknown
1. Agr. + Min.	0	0
2. Manufacturing	3	NA
3. Utilities	0	0
4. Construction	0	NA
5. Wholesale	0	0
6. Retail	0	NA
7. Rest. + Hotel	0	0
8. Transport	0	NA
9. Finan. + Real est.	0	0
10. Private Ser. + Gov.	0	NA
Total	3	NA

Table 19-(1) Companies' opinions on 'ISDN Diagram- 11'

	No Interest	Interest
1. Agr. + Min.	40.0 %	60.0 %
2. Manufacturing	70.6 %	29.4 %
3. Utilities	100.0 %	0.0 %
4. Construction	54.5 %	45.5 %
5. Wholesale	57.1 %	42.9 %
6. Retail	58.3 %	41.7 %
7. Rest. + Hotel	100.0 %	0.0 %
8. Transport	50.0 %	50.0 %
9. Finan. + Real est.	73.8 %	26.2 %
10. Private Ser. + Gov.	61.1 %	38.9 %
Total	65.5 %	34.5 %

Table 19-(2) Average Number of Lines Express by Companies interest Diagram-11  
Year

	1992-1996	1996-2001	2002-2006
1. Agr. + Min.	1	0	0
2. Manufacturing	3	2.5	4
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	2	5	0
6. Retail	0	0	0
7. Rest. + Hotel	0	0	0
8. Transport	1	15	0
9. Finan. + Real est.	0	0	0
10. Private Ser. + Gov.	1	1	1
Total	1.55	11	3

## 11 - 2 Results of Marketing Research (67/79)

Average Number of lines Express by Company Interest Diagram-11

	Year	
	after 2006	unknown
1. Agr. + Min.	0	0
2. Manufacturing	3	0
3. Utilities	0	0
4. Construction	0	NA
5. Wholesale	0	0
6. Retail	0	NA
7. Rest. + Hotel	0	0
8. Transport	0	NA
9. Finan. + Real est.	0	0
10. Private Ser. + Gov.	0	NA
Total	3	NA

Table 20-(1) Companies' opinions on 'ISDN Diagram-12'

	No Interest	Interest
1. Agr. + Min.	16.7 %	83.3 %
2. Manufacturing	63.5 %	36.5 %
3. Utilities	0.0 %	100.0 %
4. Construction	50.0 %	50.0 %
5. Wholesale	57.1 %	42.9 %
6. Retail	58.3 %	41.7 %
7. Rest. + Hotel	60.0 %	40.0 %
8. Transport	58.3 %	41.7 %
9. Finan. + Real est.	42.8 %	57.2 %
10. Private Ser. + Gov.	55.5 %	44.5 %
Total	52.7 %	47.3 %

Table 20-(2) Average Number of lines Express by Companies Interest Diagram-12

	Year		
	1992-1996	1997-2001	2002-2006
1. Agr. + Min.	1.67	0	0
2. Manufacturing	4.67	26.5	51.5
3. Utilities	3	0	0
4. Construction	0	0	0
5. Wholesale	2	0	0
6. Retail	0	0	0
7. Rest. + Hotel	2.5	2	4
8. Transport	1.5	1.5	0
9. Finan. + Real est.	0	0	0
10. Private Ser. + Gov.	1.0	0	0
Total	4.58	9.67	27

11 - 2 Results of Marketing Research (68/79)

Average Number of lines Express by Company interest Diagram-12

	Year	
	after 2006	unknown
1. Agr.+ Min.	0	0
2. Manufacturing	101.5	2
3. Utilities	0	0
4. Construction	0	0
5. Wholesale	0	0
6. Retail	0	0
7. Rest.+ Hotel	4	4
8. Transport	0	NA
9. Finan.+ Real est.	0	0
10. Private Ser.+ Gov.	0	NA
Total	69	15

Table 21-(1) Companies' opinions on 'ISDN Diagram-13'

	No Interest	Interest
1. Agr.+ Min.	20.0 %	80.0 %
2. Manufacturing	63.5 %	36.5 %
3. Utilities	100.0 %	0.0 %
4. Construction	58.3 %	41.7 %
5. Wholesale	52.4 %	47.6 %
6. Retail	66.7 %	41.7 %
7. Rest.+ Hotel	70.0 %	30.0 %
8. Transport	50.0 %	50.0 %
9. Finan.+ Real est.	54.8 %	45.2 %
10. Private Ser.+ Gov.	52.6 %	47.4 %
Total	57.2 %	42.8 %

Table 21-(2) Average Number of lines Express by Companies interest Diagram-13

	Year		
	1992-1996	1997-2001	2002-2006
1. Agr.+ Min.	1	0	0
2. Manufacturing	1.2	5	10
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	2.67	0	0
6. Retail	0	0	0
7. Rest.+ Hotel	1	2	3
8. Transport	1	2	0
9. Finan.+ Real est.	0	0	0
10. Private Ser.+ Gov.	4	2	0
Total	18.5	2.6	4.67



11 - 2 Results of Marketing Research (69/79)

Average Number of lines Express by Company interest Diagram-13  
Year

	after 2006	unknown
1. Agr.+ Min.	0	0
2. Manufacturing	0	NA
3. Utilities	0	0
4. Construction	0	NA
5. Wholesale	0	0
6. Retail	0	NA
7. Rest.+ Hotel	4	NA
8. Transport	0	NA
9. Finan.+ Real est.	0	NA
10. Private Ser.+ Gov.	0	NA
Total	4	5.5

Table 22-(1) Companies' opinions on 'ISDN Diagram- 14'

	No Interest	Interest
1. Agr.+ Min.	16.7 %	83.3 %
2. Manufacturing	47.1 %	52.9 %
3. Utilities	100.0 %	0.0 %
4. Construction	46.2 %	53.8 %
5. Wholesale	47.6 %	52.4 %
6. Retail	50.0 %	50.0 %
7. Rest.+ Hotel	80.0 %	20.0 %
8. Transport	54.5 %	45.5 %
9. Finan.+ Real est.	43.9 %	56.1 %
10. Private Ser.+ Gov.	57.9 %	42.1 %
Total	48.6 %	51.4 %

Table 22-(2) Average Number of lines Express by Companies interest Diagram-14  
Year

	1992-1996	1997-2001	2002-2006
1. Agr.+ Min.	1.5	0	0
2. Manufacturing	16	101.5	3
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	11	20	0
6. Retail	5	0	0
7. Rest.+ Hotel	0	0	0
8. Transport	25.5	0	0
9. Finan.+ Real est.	11.7	NA	1
10. Private Ser.+ Gov.	4	1	0
Total	12.64	74.3	2

11 - 2 Results of Marketing Research (70/79)

Average Number of lines Express by Company Interest Diagram-14  
Year

	after 2006	unknown
1. Agr.+ Min.	0	NA
2. Manufacturing	0	NA
3. Utilities	0	0
4. Construction	0	NA
5. Wholesale	0	NA
6. Retail	0	NA
7. Rest.+ Hotel	0	NA
8. Transport	0	NA
9. Finan.+ Real est.	0	1
10. Private Ser.+ Gov.	0	NA
Total	3	8.5

Table 23-(1) Companies' opinions on 'ISDN Diagram-15'

	No Interest	Interest
1. Agr.+ Min.	20.0 %	80.0 %
2. Manufacturing	54.9 %	46.1 %
3. Utilities	NA	NA
4. Construction	41.7 %	58.3 %
5. Wholesale	61.9 %	38.1 %
6. Retail	50.0 %	50.0 %
7. Rest.+ Hotel	60.0 %	40.0 %
8. Transport	54.5 %	45.5 %
9. Finan.+ Real est.	61.9 %	38.1 %
10. Private Ser.+ Gov.	66.7 %	33.3 %
Total	56.8 %	43.2 %

Table 23-(2) Average Number of lines Express by Companies interest Diagram-15  
Year

	1992-1996	1997-2001	2002-2006
1. Agr.+ Min.	1	0	0
2. Manufacturing	10.8	51.5	101.5
3. Utilities	0	0	0
4. Construction	0	0	0
5. Wholesale	23.5	30	0
6. Retail	5	0	0
7. Rest.+ Hotel	0	0	0
8. Transport	1	0	0
9. Finan.+ Real est.	24	6	1
10. Private Ser.+ Gov.	0	0	0
Total	13.85	30.8	68

11 - 2 Results of Marketing Research (71/79)

Average Number of lines Express by Company Interest Diagram-16

	Year	
	after 2006	unknown
1. Agr.+ Min.	0	0
2. Manufacturing	151.5	1
3. Utilities	0	0
4. Construction	0	NA
5. Wholesale	0	NA
6. Retail	0	NA
7. Rest.+ Hotel	0	NA
8. Transport	0	NA
9. Finan.+ Real est.	0	1
10. Private Ser.+ Gov.	0	NA
Total	151.5	1

Table 24-(1a) Companies's Opinions on Additional monthly change for telephone and G4 FAX

	Cheap	Reasonnable	Expensive	Very expensive
1. Agr.+ Min.	0.00 %	60.00 %	40.00 %	0.00 %
2. Manufacturing	2.40 %	64.30 %	26.20 %	7.10 %
3. Utilities	0.00 %	50.00 %	50.00 %	0.00 %
4. Construction	14.30 %	71.40 %	14.30 %	0.00 %
5. Wholesale	0.00 %	76.50 %	17.60 %	5.90 %
6. Retail	0.00 %	54.50 %	45.50 %	0.00 %
7. Rest.+ Hotel	0.00 %	33.33 %	66.67 %	0.00 %
8. Transport	12.50 %	62.50 %	25.00 %	0.00 %
9. Finan.+ Real est.	2.70 %	64.90 %	29.70 %	2.70 %
10. Private Ser.+ Gov.	0.00 %	63.60 %	27.30 %	9.10 %

Table 24-(1b) Companies's Opinions on Additional monthly change for high speed data transmission

	Cheap	Reasonnable	Expensive	Very expensive
1. Agr.+ Min.	0.00 %	20.00 %	80.00 %	0.00 %
2. Manufacturing	2.40 %	31.70 %	53.70 %	12.20 %
3. Utilities	0.00 %	0.00 %	100.00 %	0.00 %
4. Construction	14.30 %	71.40 %	14.30 %	0.00 %
5. Wholesale	6.25 %	50.00 %	37.50 %	6.25 %
6. Retail	0.00 %	20.00 %	60.00 %	20.00 %
7. Rest.+ Hotel	0.00 %	33.33 %	33.33 %	33.33 %
8. Transport	0.00 %	50.10 %	50.00 %	0.00 %
9. Finan.+ Real est.	0.00 %	40.50 %	51.40 %	8.10 %
10. Private Ser.+ Gov.	0.00 %	27.30 %	63.60 %	9.10 %

11 - 2 Results of Marketing Research (72/79)

Table 24-(2) Additional monthly change by companies that not express 'Reasonable'

	For telephone and G4 FAX (Bath/month)	For high speed data transmission (Bath/month)
1. Agr.+ Min.	200	1,667
2. Manufacturing	157	1,500
3. Utilities	NA	NA
4. Construction	NA	1,750
5. Wholesale	225	1,000
6. Retail	150	1,000
7. Rest.+ Hotel	150	1,500
8. Transport	NA	2,500
9. Finan.+ Real est.	200	1,550
10. Private Ser.+ Gov.	150	1,000

Table 25-(1)-1 Companies' Opinions on Need for Condition 'at the time of renewal of the existing system' to easily introduce the ISDN service

	No need	need
1. Agr.+ Min.	40.0 %	60.0 %
2. Manufacturing	88.0 %	12.0 %
3. Utilities	50.0 %	50.0 %
4. Construction	55.6 %	44.4 %
5. Wholesale	57.9 %	42.1 %
6. Retail	72.7 %	27.3 %
7. Rest.+ Hotel	100.0 %	0.0 %
8. Transport	62.5 %	37.5 %
9. Finan.+ Real est.	75.6 %	24.4 %
10. Private Ser.+ Gov.	62.5 %	37.5 %

Table 25-(1)-2 Companies' Opinions on Need for Condition 'When service become popular'

	No need	need
1. Agr.+ Min.	60.0 %	40.0 %
2. Manufacturing	58.0 %	42.0 %
3. Utilities	100.0 %	0.0 %
4. Construction	33.3 %	66.7 %
5. Wholesale	57.9 %	42.1 %
6. Retail	54.5 %	45.5 %
7. Rest.+ Hotel	50.0 %	50.0 %
8. Transport	75.0 %	25.0 %
9. Finan.+ Real est.	53.7 %	46.3 %
10. Private Ser.+ Gov.	68.8 %	31.3 %

11 - 2 Results of Marketing Research (73/79)

Table 25-(1)-3 Companies' Opinions on Need for Condition 'Lower prices for the terminal'

	No need	need
1. Agr.+ Min.	60.0 %	40.0 %
2. Manufacturing	28.0 %	72.0 %
3. Utilities	50.0 %	50.0 %
4. Construction	22.2 %	77.8 %
5. Wholesale	31.6 %	68.4 %
6. Retail	45.5 %	54.5 %
7. Rest.+ Hotel	50.0 %	50.0 %
8. Transport	25.0 %	75.0 %
9. Finan.+ Real est.	31.7 %	68.3 %
10. Private Ser.+ Gov.	31.3 %	68.7 %

Table 25-(1)-4 Companies' Opinions on Need for Condition 'Changing system should be easy'

	No need	need
1. Agr.+ Min.	20.0 %	80.0 %
2. Manufacturing	54.0 %	46.0 %
3. Utilities	50.0 %	50.0 %
4. Construction	66.7 %	33.3 %
5. Wholesale	42.1 %	57.4 %
6. Retail	9.1 %	90.9 %
7. Rest.+ Hotel	50.0 %	50.0 %
8. Transport	37.5 %	62.5 %
9. Finan.+ Real est.	34.2 %	65.8 %
10. Private Ser.+ Gov.	35.7 %	62.5 %

Table 25-(1)-5 Companies' Opinions on Need for Condition 'Low monthly charge'

	No need	need
1. Agr.+ Min.	0.0 %	100.0 %
2. Manufacturing	33.3 %	66.7 %
3. Utilities	50.0 %	50.0 %
4. Construction	44.9 %	57.1 %
5. Wholesale	42.1 %	57.9 %
6. Retail	54.5 %	45.5 %
7. Rest.+ Hotel	50.0 %	50.0 %
8. Transport	25.0 %	75.0 %
9. Finan.+ Real est.	41.5 %	58.5 %
10. Private Ser.+ Gov.	6.3 %	93.8 %

11 - 2 Results of Marketing Research (74/79)

Table 25-(1)-6 Companies' Opinions on Need for Condition 'Lower Call charge'

	No need	need
1. Agr.+ Min.	20.0 %	80.0 %
2. Manufacturing	54.0 %	46.0 %
3. Utilities	100.0 %	0.0 %
4. Construction	33.3 %	66.7 %
5. Wholesale	52.6 %	47.4 %
6. Retail	63.6 %	36.4 %
7. Rest.+ Hotel	50.0 %	50.0 %
8. Transport	75.0 %	25.0 %
9. Finan.+ Real est.	46.3 %	53.7 %
10. Private Ser.+ Gov.	43.8 %	56.2 %

Table 25-(1)-7 Companies' Opinions on Need for Condition 'Nationwide extension of the communication area to Asia'

	No need	need
1. Agr.+ Min.	60.0 %	40.0 %
2. Manufacturing	72.0 %	28.0 %
3. Utilities	50.0 %	50.0 %
4. Construction	88.9 %	11.1 %
5. Wholesale	63.2 %	36.8 %
6. Retail	63.6 %	36.4 %
7. Rest.+ Hotel	50.0 %	50.0 %
8. Transport	62.5 %	37.5 %
9. Finan.+ Real est.	82.9 %	17.1 %
10. Private Ser.+ Gov.	68.8 %	31.2 %

Table 25-(1)-8 Companies' Opinions on Need for Condition 'Extension of the communication area to Northern America'

	No need	need
1. Agr.+ Min.	100.0 %	0.0 %
2. Manufacturing	86.0 %	14.0 %
3. Utilities	50.0 %	50.0 %
4. Construction	88.9 %	11.1 %
5. Wholesale	78.9 %	21.1 %
6. Retail	81.8 %	18.2 %
7. Rest.+ Hotel	75.0 %	25.0 %
8. Transport	50.0 %	50.0 %
9. Finan.+ Real est.	87.8 %	12.2 %
10. Private Ser.+ Gov.	81.2 %	18.8 %

## 11 - 2 Results of Marketing Research (75/79)

Table 25-(1)-9 Companies' Opinions on Need for Condition 'Extension of Communication area to Western Europe'

	No need	need
1. Agr.+ Min.	100.0 %	0.0 %
2. Manufacturing	86.0 %	14.0 %
3. Utilities	50.0 %	50.0 %
4. Construction	77.8 %	22.2 %
5. Wholesale	84.2 %	15.8 %
6. Retail	81.8 %	18.2 %
7. Rest.+ Hotel	75.0 %	25.0 %
8. Transport	62.5 %	37.5 %
9. Finan.+ Real est.	90.2 %	9.8 %
10. Private Ser.+ Gov.	68.8 %	31.3 %

Table 25-(1)-10 Companies' Opinions on Need for Condition 'Utilization of Valuable application systems and software for the services'

	No need	need
1. Agr.+ Min.	50.0 %	50.0 %
2. Manufacturing	70.3 %	30.0 %
3. Utilities	0.0 %	100.0 %
4. Construction	66.7 %	33.3 %
5. Wholesale	57.9 %	42.1 %
6. Retail	36.4 %	63.6 %
7. Rest.+ Hotel	50.0 %	50.0 %
8. Transport	50.0 %	50.0 %
9. Finan.+ Real est.	36.6 %	63.4 %
10. Private Ser.+ Gov.	56.3 %	43.8 %

Table 25-(1)-11 Companies' Opinions on Need for Other Condition

	No need	need
1. Agr.+ Min.	100.0 %	0.0 %
2. Manufacturing	92.0 %	8.0 %
3. Utilities	100.0 %	0.0 %
4. Construction	100.0 %	0.0 %
5. Wholesale	94.7 %	5.3 %
6. Retail	90.9 %	9.1 %
7. Rest.+ Hotel	100.0 %	0.0 %
8. Transport	100.0 %	0.0 %
9. Finan.+ Real est.	95.1 %	4.9 %
10. Private Ser.+ Gov.	93.8 %	6.3 %

11 - 2 Results of Marketing Research (76/79)

Table 25-(2) Ranking of most three Important Condition to easily introduce the ISDN Service

	First	Second	Third
1. Agr.+ Min.	5	3,1	-
2. Manufacturing	3,5	4	2
3. Utilities	3	1	-
4. Construction	3,6	1,2,3,4,5,10	-
5. Wholesale	2	5	4
6. Retail	2	4,6	10
7. Rest.+ Hotel	5	4,10	-
8. Transport	5	3,4,6,10	-
9. Finan.+ Real est.	2	4	5
10. Private Ser.+ Gov.	5,10	1,3	-

Table 27 Most three Country that Companies trade with mainly

	First	Second	Third
1. Agr.+ Min.	7	2,3,8	1,4
2. Manufacturing	7	3	2
3. Utilities	NA	NA	NA
4. Construction	8	3,5	-
5. Wholesale	7,3	8	1,2
6. Retail	7	3	2
7. Rest.+ Hotel	3	1,2,7	4,6
8. Transport	3	1,7	2,4
9. Finan.+ Real est.	3	7	1
10. Private Ser.+ Gov.	1,2,3,7	4,8	-

- Note: 1 = North America  
 2 = West Europe  
 3 = New Industrializing (NIES) of Asia (Hong Kong, Singapore, Taiwan, Korea)  
 4 = Southern-east Asia oother than NIES  
 5 = NIES of Latin America (Argentina, Mexico, Brazil)  
 6 = NIES of South Europe (Greece, Yugoslavia, Portugal)  
 7 = Japan  
 8 = Other country

Table 27-(2) Portion of companies did not trade abroad

1. Agr.+ Min.	14.3 %
2. Manufacturing	16.7 %
3. Utilities	50.0 %
4. Construction	75.0 %
5. Wholesale	10.0 %
6. Retail	33.3 %
7. Rest.+ Hotel	0.0 %
8. Transport	14.3 %
9. Finan.+ Real est.	50.0 %
10. Private Ser.+ Gov.	58.8 %



11 - 2 Results of Marketing Research (77/79)

Table 28-(1) Category of Office participating in survey

	SECTOR				
	Agr.+Min	Manufacturing	Utilities	Construction	Wholesale
1. Head office	100.0 %	64.8 %	66.7 %	93.8 %	58.3 %
2. Branch office	0.0 %	16.7 %	0.0 %	9.1 %	25.0 %
3. Sale shop	0.0 %	1.9 %	0.0 %	0.0 %	4.2 %
4. Factory	0.0 %	14.8 %	0.0 %	0.0 %	4.2 %
5. Warehouse	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
6. Computer Center	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
7. Laboratory	0.0 %	2.2 %	0.0 %	0.0 %	0.0 %
8. Others	0.0 %	1.9 %	33.3 %	0.0 %	0.0 %

Table 28-(2) Category of Office participating in survey

	SECTOR				
	Retail	Rest.+Hotel	Transport	Finance	Private
1. Head office	63.6 %	75.0 %	73.3 %	79.6 %	60.9 %
2. Branch office	27.3 %	25.0 %	26.7 %	14.3 %	8.7 %
3. Sale shop	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
4. Factory	0.0 %	0.0 %	0.0 %	0.0 %	4.3 %
5. Warehouse	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
6. Computer Center	0.0 %	0.0 %	0.0 %	2.0 %	0.0 %
7. Laboratory	0.0 %	0.0 %	0.0 %	0.0 %	4.3 %
8. Others	0.0 %	0.0 %	0.0 %	4.1 %	21.8 %

Table 29 Any Other Companies' Offices

In Agriculture and Mining Sector

	No	Yes
1. Branch office	57.1 %	42.9 %
2. Sale shop	100.0 %	0.0 %
3. Factory	42.9 %	57.1 %
4. Warehouse	71.4 %	28.6 %
5. Computer Center	85.7 %	14.3 %
6. Laboratory	100.0 %	0.0 %
7. Others	100.0 %	0.0 %

Any Other Companies' Offices

In Manufacturing Sector

	No	Yes
1. Branch office	71.9 %	28.1 %
2. Sale shop	94.7 %	5.3 %
3. Factory	39.3 %	60.7 %
4. Warehouse	77.2 %	22.8 %
5. Computer Center	96.5 %	3.5 %
6. Laboratory	98.2 %	1.8 %
7. Others	94.6 %	5.4 %

11 - 2 Results of Marketing Research (78/79)

Any Other Companies' Offices

	<u>In Utilities Sector</u>	
	No	Yes
1. Branch office	33.3 %	66.7 %
2. Sale shop	100.0 %	0.0 %
3. Factory	100.0 %	0.0 %
4. Warehouse	100.0 %	0.0 %
5. Computer Center	100.0 %	0.0 %
6. Laboratory	100.0 %	0.0 %
7. Others	100.0 %	0.0 %

Any Other Companies' Offices

	<u>In Construction Sector</u>	
	No	Yes
1. Branch office	28.6 %	71.4 %
2. Sale shop	85.7 %	14.3 %
3. Factory	64.3 %	35.7 %
4. Warehouse	71.4 %	28.6 %
5. Computer Center	100.0 %	0.0 %
6. Laboratory	85.7 %	14.3 %
7. Others	92.3 %	7.7 %

Any Other Companies' Offices

	<u>In Wholesale Sector</u>	
	No	Yes
1. Branch office	45.9 %	59.1 %
2. Sale shop	95.5 %	45.5 %
3. Factory	72.7 %	27.3 %
4. Warehouse	72.7 %	27.3 %
5. Computer Center	90.9 %	9.1 %
6. Laboratory	81.8 %	18.2 %
7. Others	77.3 %	22.7 %

Any Other Companies' Offices

	<u>In Retail Sector</u>	
	No	Yes
1. Branch office	45.5 %	54.5 %
2. Sale shop	NA	NA
3. Factory	81.8 %	18.2 %
4. Warehouse	70.0 %	30.0 %
5. Computer Center	90.9 %	9.1 %
6. Laboratory	100.0 %	0.0 %
7. Others	90.9 %	9.1 %

11 - 2 Results of Marketing Research (79/79)

Any Other Companies ' Offices

In Restaurant and Hotel Sector

	No	Yes
1. Branch office	75.0 %	25.0 %
2. Sale shop	100.0 %	0.0 %
3. Factory	100.0 %	0.0 %
4. Warehouse	100.0 %	0.0 %
5. Computer Center	100.0 %	0.0 %
6. Laboratory	100.0 %	0.0 %
7. Others	100.0 %	0.0 %

Any Other Companies ' Offices

In Transport Sector

	No	Yes
1. Branch office	21.4 %	78.6 %
2. Sale shop	100.0 %	0.0 %
3. Factory	92.9 %	7.1 %
4. Warehouse	78.6 %	21.4 %
5. Computer Center	78.6 %	21.4 %
6. Laboratory	100.0 %	0.0 %
7. Others	100.0 %	0.0 %

Any Other Companies ' Offices

In Finance and Real Estate Sector

	No	Yes
1. Branch office	20.4 %	79.6 %
2. Sale shop	100.0 %	0.0 %
3. Factory	93.9 %	6.1 %
4. Warehouse	95.9 %	4.1 %
5. Computer Center	87.8 %	12.2 %
6. Laboratory	100.0 %	0.0 %
7. Others	93.9 %	6.1 %

Any Other Companies ' Offices

In Private and Government Service

	No	Yes
1. Branch office	40.0 %	60.0 %
2. Sale shop	100.0 %	0.0 %
3. Factory	80.0 %	20.0 %
4. Warehouse	80.0 %	20.0 %
5. Computer Center	85.0 %	15.0 %
6. Laboratory	95.0 %	5.0 %
7. Others	85.0 %	15.0 %

11-3 Number of Leased Circuits by Exchange Office

AREA	OFFICE NAME	No. of Lines	AREA	OFFICE NAME	No. of Lines	Area total
1	PHLOEN CHIT	2,020	1	PHLOEN CHIT	2,020	
1	SURAWONG	751	1	SURAWONG	751	
1	KRUNG KASEM	615	1	KRUNG KASEM	615	
4	PHAHONYOTHIN	471	1	SAMRAN RAT	446	
1	SAMRAN RAT	446	1	ASOK DIN DAENG	217	
4	LAT PHRAO 1	234	1	SUKUMWIT	83	
1	ASOK DIN DAENG	217	1	SAMSEN	71	Area 1
2	THUNG MAHAMEK	139	1	PATHUM WAN	43	4,246
1	SUKUMWIT	83	2	THUNG MAHAMEK	139	
3	LAT YA	77	2	PHRA KHANONG	65	
1	SAMSEN	71	2	CHAIYAPHRUK	64	
2	PHRA KHANONG	65	2	HUA MAK	62	
2	CHAIYAPHRUK	64	2	TROK CHAN	56	
2	HUA MAK	62	2	THON BURI	45	
2	TROK CHAN	56	2	SATHU PRADIT	37	
4	BANG SU	46	2	KLONG CHAN	28	
2	THON BURI	45	2	PU CHAO SAMINGPHRAI	28	
1	PATHUM WAN	43	2	THANON TOK	24	
4	LAK SI	43	2	KHLONG TOEI	10	
2	SATHU PRADIT	37	2	BANG PHLI	10	
3	PHRA PRA DAENG	32	2	SAMUT PRAKAN	6	
3	BANG PHLAD	31	2	ON NUT	5	
4	LAT PHRAO 2	29	2	BANG POO	3	Area 2
2	KLONG CHAN	28	2	PRAVET	2	584
2	PU CHAO SAMINGPHRAI	28	3	LAT YA	77	
4	DON MUANG	28	3	PHRA PRA DAENG	32	
2	THANON TOK	24	3	BANG PHLAD	31	
3	DAO KANONG	16	3	DAO KANONG	16	
4	INTHAMARA	15	3	EKKA CHAI	13	
3	EKKA CHAI	13	3	RAT BURANA	12	
4	PATHUM THANI	13	3	NONG KHAEM	10	
4	NGAM WONG NAN	13	3	PHASI CHAROEN	7	
3	RAT BURANA	12	3	CHARAN SANT WONG	6	
4	PAK KRET	11	3	MUBAN SETTHAKIT	3	
2	KHLONG TOEI	10	3	BANG KHAE	3	Area 3
2	BANG PHLI	10	3	PHASI CHAROEN	1	211
3	NONG KHAEM	10	4	PHAHONYOTHIN	471	
4	BANG KHEN	9	4	LAT PHRAO 1	234	
4	CHAENG WATTANA	8	4	BANG SU	46	
3	PHASI CHAROEN	7	4	LAK SI	43	
2	SAMUT PRAKAN	6	4	LAT PHRAO 2	29	
3	CHARAN SANT WONG	6	4	DON MUANG	28	
2	ON NUT	5	4	INTHAMARA	15	
4	CENTRAL PLAZA	5	4	PATHUM THANI	13	
4	RANG SIT	4	4	NGAM WONG NAN	13	
4	NON THABURI	4	4	PAK KRET	11	
2	BANG POO	3	4	BANG KHEN	9	
3	MUBAN SETTHAKIT	3	4	CHAENG WATTANA	8	
3	BANG KHAE	3	4	CENTRAL PLAZA	5	Area 4
2	PRAVET	2	4	RANG SIT	4	935
4	NAWA NAKHON	2	4	NON THABURI	4	Total
3	PHASI CHAROEN	1	4	NAWA NAKHON	2	5,976
34	NAKHON PATHOM	18				
34	SANUT SAKHON	17				
35	AYUTTHAYA	26				

### 11-4 Result of Area Ranking Analysis

Area Code	Exchange Office	Revenue	Leased CCT	Focsimile Set	Company	Total	Order	Rank
		Total Point	Point	Point	Point	Point		
1	SURAWONG	24	9	10	10	53	1	A
2	PHLOEN CHIT	22	2	8	10	42	2	
4	SAMRAN RAT	14	8	8	10	40	3	
1	PHAHONYOTHIN	18	8	4	4	34	4	
1	AMARIN PLAZA	30	0	2	1	33	5	
2	ASOK DIN DAENG	18	6	4	4	32	6	
4	CENTRAL PLAZA	26	2	2	1	31	7	
4	KRUNG KASEM	14	9	4	4	31	7	
2	PATHUM WAN	22	2	4	2	30	9	
2	KHLONG TOEI	22	2	4	1	29	10	
2	THAI WA	26	0	2	1	29	10	
1	MAH BOONKRONG	24	0	2	1	27	12	
4	SATHU PRADIT	20	2	4	1	27	12	
1	BANG PHLI-BANG BO	24	0	2	0	26	14	
3	POM PHRACHOOL	24	0	2	0	26	14	
3	NONG KHAEM	12	10	2	1	25	16	
4	PU CHAO SAMINGPHRA	18	2	4	1	25	16	
2	BANG PHLI	12	10	2	0	24	18	
2	BANG POO	20	2	2	0	24	18	
2	CHAIYAPHRUK	16	2	4	2	24	18	
2	HUA MAK	16	2	4	2	24	18	
4	LAT PHRAO 1	16	2	4	2	24	18	
1	SUKUMWIT	14	2	6	2	24	18	
3	THUNG MAHAMEK	16	2	4	2	24	18	
4	CHARAN SANTI WONG	18	2	2	1	23	25	
3	EKKA CHAI	16	2	4	1	23	25	
2	TROK CHAN	16	2	4	1	23	25	
4	LAT PHRAO 2	14	2	4	2	22	28	
3	LAT YA	14	2	4	2	22	28	
4	NAWA NAKHON	18	2	2	0	22	28	
1	BANG KHEN	16	2	2	1	21	31	
3	BANG SU	16	2	2	1	21	31	
4	DON MUANG	16	2	2	1	21	31	
2	INTHAMARA	16	2	2	1	21	31	
4	NGAM WONG NAN	16	2	2	1	21	31	
4	PHRA KHANONG	16	2	2	1	21	31	
2	PHRA PRA DAENG	16	2	2	1	21	31	
2	SAMSEN	16	2	2	1	21	31	
2	SANUT PRAKAN	16	2	2	1	21	31	
2	THANON TOK	16	2	2	1	21	31	
3	THANYA BURI	18	0	2	1	21	31	
1	THON BURI	16	2	2	1	21	31	
3	BANG PHLAD	14	2	2	2	20	44	
4	PRAVET	16	2	2	0	20	44	
2	BANG NA	14	0	4	1	19	46	
2	KLONG CHAN	14	2	2	1	19	46	
4	NON THABURI	14	2	2	1	19	46	
2	ON NUT	14	2	2	1	19	46	
3	PHASI CHAROEN	14	2	2	1	19	46	
3	RAT BURANA	14	2	2	1	19	46	
3	DAO KANONG	12	2	2	2	18	52	
1	RANG SIT	14	2	2	0	18	52	
1	BANG BUA THONG	16	0	0	1	17	54	
3	BANG KHAE	12	2	2	1	17	55	
4	MUANG EK	14	0	2	1	17	55	
2	NONG CHOK	14	0	2	1	17	55	
4	PAK KRET	14	2	0	1	17	55	
4	PATHUM THANI	12	2	2	1	17	55	
4	RANI INTHRA	14	0	2	1	17	55	
4	SIKAN	14	0	2	1	17	55	
2	BANG CHAN	14	0	2	0	16	62	
2	LAEM THONG	14	0	2	0	16	62	
3	PHUT THAMONTHON	14	0	2	0	16	62	
2	LAD KRABANG	12	0	2	1	15	65	
4	LAK SI	10	2	2	1	15	65	
4	CHAENG WATTANA	10	2	2	0	14	67	
2	PHRUK SACHAT	12	0	2	0	14	67	
3	PHANURANGSI	12	0	0	1	13	69	
1	C.P. Tower	12	0	0	0	12	70	
3	MIBAN SETHAKIT	6	3	2	1	12	70	



*ANNEX*

*CHAPTER 13 TELECOMMUNICATIONS FACILITY PLAN*





13-1 Expansion Volume of the Local Cable Pairs (1/2)

Exchange	Number of Primary Pairs to be Expanded										Number of Primary Pairs at the end of 2007						
	Before 1993	1993	1994	1995	1996	1997	1998	1999	2000	2001		2002	2003	2004	2005	2006	2007
PHLOEN CHIT	107,173	0	10,800	60,000	65,700	58,800	0	0	19,800	16,800	15,300	0	0	9,900	9,000	8,100	381,375
SAMRAN RAT	74,600	0	0	41,700	47,400	52,200	0	0	25,200	24,300	24,300	0	0	19,200	17,700	16,200	342,800
KRUNG KASEM	41,000	0	0	21,600	25,200	28,200	0	0	15,900	15,000	14,700	0	0	11,100	10,500	9,600	192,800
SURAWONG	93,500	0	34,800	108,600	120,300	96,300	0	0	53,700	51,300	49,800	0	0	38,400	35,700	33,000	715,460
SAMSEN	23,400	0	18,000	0	21,000	21,900	0	0	2,400	2,400	1,500	0	0	300	0	0	91,600
ASOK DIN DAENG	64,800	0	23,700	28,800	54,900	36,100	0	0	6,300	4,200	3,600	0	0	0	3,300	0	245,700
PATHUM WAN	45,600	0	14,400	17,100	19,500	0	0	0	12,600	12,300	12,300	0	0	9,900	9,300	8,400	161,400
SUKHUMVIT	49,600	12,300	12,900	13,500	0	0	0	5,400	2,100	0	0	0	0	2,400	900	0	99,100
BMA 1 TOTAL	499,675	12,300	100,200	283,600	351,600	333,000	0	10,500	135,600	126,300	121,500	0	0	91,200	86,400	75,300	2,292,175
CHAIYAPHRUK	61,050	0	0	0	0	0	0	0	0	0	1,800	0	0	0	0	0	62,850
BANG NA	67,200	30,600	34,500	38,400	0	0	17,400	16,200	14,700	0	0	11,100	9,900	9,000	0	0	249,000
KHLONG CHAN	84,900	36,300	40,200	44,400	0	0	16,800	14,700	12,300	0	0	7,500	6,600	5,700	0	0	273,400
THUNG MAHAMEK	31,350	17,100	19,200	21,000	0	0	8,700	7,800	7,200	0	0	4,800	4,200	3,600	0	0	124,950
SATHUPRADIT	30,300	0	0	11,400	0	0	0	0	6,300	0	0	0	0	4,200	0	0	52,200
THANON TOK	25,500	11,700	13,800	0	0	0	9,600	9,000	0	0	0	6,900	6,300	0	0	0	82,800
BANG CHAN	38,700	0	30,900	0	0	36,000	0	8,400	7,200	0	7,800	7,500	5,700	4,800	4,200	0	183,600
PHRA KHANONG	36,900	11,400	13,500	15,300	0	0	9,000	8,200	7,800	0	0	6,300	5,700	5,400	0	0	119,700
HUA MAK	52,800	28,500	32,700	36,900	0	0	18,900	17,400	15,900	0	0	11,100	9,900	8,700	0	0	232,800
TROK CHAN	43,500	0	0	10,800	13,200	0	0	0	11,400	11,100	0	0	0	9,000	8,400	0	107,400
LAT KRABANG	9,600	0	0	0	18,300	19,500	0	0	5,400	5,400	5,100	0	0	3,300	0	0	61,200
KHLONG TOEI	20,400	21,000	23,100	23,200	0	0	8,400	7,200	6,000	0	0	3,300	2,700	2,700	2,700	0	120,000
ON NUT	41,400	14,700	16,200	17,700	0	0	6,000	5,400	4,500	0	0	3,300	3,000	2,700	0	0	114,900
RAMKAMHAENG	20,400	0	0	0	0	0	21,600	0	0	0	0	9,600	0	0	0	0	51,600
SAMUT PRAKAN	25,200	0	0	25,200	29,400	33,300	0	0	19,800	19,200	18,900	0	0	15,300	14,700	13,800	214,800
PU CHAO SAMING I	75,300	0	24,000	0	28,500	30,000	0	9,000	0	6,600	6,000	0	4,200	0	0	3,900	187,500
BANG PHI	44,900	0	0	40,800	45,000	48,300	0	0	16,500	14,700	14,100	0	0	10,200	9,300	8,400	252,200
BANG PU	8,700	0	0	0	11,700	13,500	0	0	10,200	10,500	10,500	0	0	9,000	8,400	0	72,000
BANG PHI-1-BANG E	10,800	0	12,600	0	0	0	6,600	0	0	0	0	0	0	0	0	0	34,800
BMA 2 TOTAL	733,900	171,300	260,700	287,100	182,100	182,400	116,400	111,900	122,400	75,000	63,900	63,900	63,000	73,800	52,200	38,700	2,597,700
THON BURI	41,800	0	0	16,800	19,800	0	0	0	13,800	13,500	0	0	0	11,100	10,200	0	127,000
BANG KHAE	27,000	14,100	16,500	0	0	0	11,700	11,400	0	0	0	8,700	7,800	0	0	0	97,200
DAO KHANONG	60,600	0	0	0	0	0	21,000	0	0	0	0	13,500	0	0	0	0	95,100
BANG PHLAT	83,300	31,500	35,100	39,000	0	0	17,100	15,900	14,400	0	0	10,500	9,600	8,400	0	0	264,800
PHASI CHAROEN	32,500	0	0	0	0	16,500	0	0	0	0	0	1,800	0	0	0	0	50,800
CHARAN SANITWO	44,100	17,100	19,500	21,600	0	0	10,200	9,600	8,700	0	0	6,300	5,400	4,800	0	0	147,300
RAT BURANA	29,700	19,500	0	0	27,600	29,700	12,300	0	8,700	7,800	7,800	0	0	4,800	4,500	0	151,200
LAT YA	42,300	12,900	14,100	15,000	0	0	4,200	3,300	2,700	0	0	900	900	600	0	0	96,600
MURAN SEITHAKE	23,300	27,900	30,900	0	0	39,000	13,200	12,000	0	0	9,000	7,800	7,200	0	5,400	0	175,700
EKKACHAI	48,000	33,000	35,400	0	0	40,500	8,400	6,900	0	0	3,300	2,700	0	2,400	0	0	180,600
NONG KHAEM	28,800	32,400	36,000	0	0	45,600	15,600	14,400	0	0	10,800	9,900	8,700	0	0	6,900	209,100
PHRA PRADAENG	37,300	0	17,700	21,000	24,600	0	0	16,200	15,600	14,700	0	0	11,400	10,500	9,600	0	178,600
BANG BUA THONG	26,700	0	0	36,600	42,900	47,100	0	0	22,500	20,100	18,600	0	0	13,500	12,600	11,400	251,400
BMA 3 TOTAL	525,400	188,400	205,200	150,000	114,300	218,400	113,700	89,700	77,700	57,000	49,500	67,800	51,000	51,300	37,200	28,800	2,025,400
PHAHONGTHIN	56,000	0	0	54,600	61,800	66,100	0	0	28,800	25,200	22,200	0	0	14,700	13,500	12,600	357,500
INTHAMARA	59,400	13,500	14,400	0	16,200	0	0	6,300	0	0	1,500	0	0	1,800	0	0	113,100
BANG KHEN	42,300	12,900	14,100	0	0	0	5,700	5,400	0	0	3,000	0	0	3,000	0	0	86,400
BANG SU	45,600	38,100	43,800	49,500	0	0	23,100	20,100	16,500	0	0	9,000	7,200	6,300	0	0	259,200
DON MUANG	92,800	48,000	54,300	60,000	0	0	26,100	21,000	21,000	0	0	15,300	13,800	12,600	0	0	367,300
LAK SI	41,500	0	21,000	24,300	27,300	0	0	14,100	12,900	12,000	0	0	8,700	8,100	7,200	0	177,100
RAM INTERA	42,800	27,300	29,400	0	33,300	0	8,400	7,200	0	4,800	0	3,600	3,000	0	2,400	0	162,200

13-1 Expansion Volume of the Local Cable Pairs (2/2)

Exchange	Number of Primary Pairs		Number of Primary Pairs to be Expanded													Number of Primary Pairs at the end of 2007	
	Before 1993	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006		2007
LAT PHRAO 1	48,100	13,200	14,400	0	12,300	13,800	0	4,800	4,200	0	0	2,400	2,100	0	0	0	89,200
LAT PHRAO 2	62,350	0	0	12,300	13,800	0	0	0	0	5,700	5,100	0	0	3,300	3,000	0	105,550
CHAENG WATTIYAN	54,200	0	0	14,700	15,900	17,100	0	0	0	5,100	4,500	0	0	0	6,000	0	122,000
NONTIABURI	31,500	0	21,900	26,700	32,400	0	0	29,400	30,600	31,500	0	0	30,600	29,400	23,200	0	291,600
NGAM WONG WAN	47,750	20,700	23,400	0	0	31,200	12,600	12,000	0	0	9,300	8,100	7,200	0	0	5,400	177,650
PAK KRET	26,800	21,900	24,300	0	0	30,900	10,800	9,900	0	0	7,500	6,600	6,000	0	0	4,200	148,900
PATUM THANI	17,700	14,100	15,600	0	0	19,800	6,900	6,300	0	0	4,200	3,600	0	3,600	0	0	91,800
RANGSIT	12,800	0	11,100	0	0	0	0	6,300	0	0	0	0	3,100	0	0	0	54,700
THANABURI	11,800	0	17,700	0	25,500	28,800	0	17,100	0	13,800	12,300	0	9,300	0	7,500	7,200	151,000
NAWA NAKHON	13,800	0	0	0	12,300	0	0	0	0	6,000	0	0	0	0	4,500	0	36,600
BANG PHUEN	18,100	0	0	0	0	0	0	0	0	0	0	0	5,700	0	0	0	23,800
BMA 4 TOTAL	724,700	209,700	304,800	242,100	238,500	195,900	98,400	161,700	120,600	102,900	57,000	56,100	98,700	82,800	72,300	29,400	2,795,600
Nakhon Pathom	23,500	0	17,400	22,200	0	0	0	22,500	21,000	0	0	0	15,300	14,400	0	0	136,300
Kamphaeng Saen	2,800	0	0	8,400	0	0	0	0	14,100	0	0	0	0	15,000	0	0	40,300
Nakhon Chaisi	3,600	12,900	0	0	0	0	21,600	0	0	0	0	16,500	0	0	0	0	54,600
Don Tum	900	0	0	3,000	0	0	0	0	5,100	0	0	0	0	5,100	0	0	14,100
Bang Len	1,500	0	5,100	0	0	0	0	9,300	0	0	0	0	10,200	0	0	0	26,100
Sam Phran	8,400	0	14,100	0	0	0	0	14,100	0	0	0	0	5,900	0	0	0	43,500
Nakhon Pathom Total	40,700	12,900	36,600	33,600	0	0	21,600	43,900	40,200	0	0	16,500	32,400	34,500	0	0	314,900
Samut Sakhon	11,700	25,700	31,500	0	0	0	25,800	24,000	0	0	0	14,700	14,100	0	0	0	148,500
Kraihum Buri	7,800	0	15,900	0	0	0	0	13,200	0	0	0	0	6,900	0	0	0	43,800
Ran Phaeu	5,600	0	11,100	0	0	0	0	12,000	0	0	0	0	7,200	0	0	0	35,900
Samut Sakhon Total	25,100	26,700	58,500	0	0	0	25,800	49,200	0	0	0	14,700	28,200	0	0	0	228,200
Ayutthaya 1	2,400	3,300	0	0	0	2,400	0	0	0	0	0	1,200	0	0	0	0	9,300
Ayutthaya 2	13,200	0	0	0	10,500	2,700	0	0	0	0	0	5,400	0	0	0	3,600	33,400
Bang Pa-in	2,300	4,500	0	0	0	0	5,100	0	0	0	0	0	3,300	0	0	0	15,200
Wang Noi	1,800	6,300	0	0	0	4,500	0	0	0	0	2,700	0	0	0	0	0	15,300
Phacit	1,700	0	2,100	0	0	0	0	2,400	0	0	0	0	1,800	0	0	0	8,000
Tha Rua	1,800	4,200	0	0	0	0	4,500	0	0	0	0	2,400	0	0	0	0	12,900
Sema	2,000	0	3,300	0	0	0	0	3,900	0	0	0	0	3,300	0	0	0	4,200
Ban Phraek	300	900	0	0	0	0	0	0	1,500	0	0	0	0	0	0	0	4,200
Bang Sae	200	900	0	0	0	0	0	0	1,200	0	0	0	0	0	0	0	3,800
Bang Sai	600	0	900	0	0	0	0	0	1,500	0	0	0	0	0	0	0	4,200
Phak Hai	1,800	0	0	0	2,100	0	0	0	0	2,100	0	0	0	0	0	1,800	7,800
Bang Bai	900	0	1,500	0	0	0	0	2,100	0	0	0	0	2,100	0	0	0	6,600
Lat Bua Luang	2,100	0	0	0	0	0	0	0	0	0	0	1,500	0	0	0	0	3,600
Maharat	600	0	0	0	600	0	0	0	0	900	0	0	0	0	0	0	2,100
Nakhon Loeng	1,300	0	2,100	0	0	0	0	0	3,000	0	0	0	0	0	0	0	8,800
Uthai	600	0	1,200	0	0	0	0	1,800	0	0	0	0	2,100	0	0	0	5,700
Bang Phran	1,000	0	1,200	0	0	900	0	0	0	0	0	600	0	0	0	0	3,700
Ayutthaya Total	34,600	20,100	12,300	0	13,200	10,500	9,600	10,200	7,200	3,000	8,100	3,300	15,000	2,400	4,200	5,400	159,100
BMA Total	2,482,675	581,700	870,900	967,800	886,500	929,700	328,500	379,800	456,300	361,200	291,900	187,800	212,700	299,100	248,100	172,200	9,650,875
Surrounding Area Total	100,400	59,700	107,400	33,600	13,200	10,500	57,000	105,300	47,400	3,000	8,100	34,500	75,600	36,900	4,200	5,400	702,200
Study Area Total	2,583,075	641,400	978,300	1,001,400	899,700	940,200	385,500	479,100	503,700	364,200	300,000	222,300	288,300	336,000	252,300	177,600	10,353,075

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (1/20)

NO	Switch Unit Name	ABBR	1	2	3	4	5	6	7	8	9	10	11	12	13
			PNC1	PNC2	PNC3	ASD1	ASD2	SKW1	SRR1	SRR2	SRR3	SRR4	KKM2	KKM3	SMS1
1	Phloen Chit 1	PNC1	0	34	90	0	30	30	0	0	0	0	0	0	0
2	Phloen Chit 2	PNC2	37	0	90	0	30	30	0	0	0	0	0	0	0
3	Phloen Chit 3	PNC3	120	120	0	30	90	180	30	30	30	60	30	0	0
4	Asok Din Daeng 1	ASD1	0	0	30	0	90	0	0	0	0	0	0	0	0
5	Asok Din Daeng 2	ASD2	30	30	60	90	0	60	30	30	0	30	30	0	0
6	Sukhumwit 1	SKW1	60	30	180	30	60	0	150	30	0	30	0	0	0
7	Samran Rat 1	SRR1	0	30	0	0	0	0	0	31	20	60	0	0	0
8	Samran Rat 2	SRR2	0	0	30	0	0	0	31	0	29	60	0	0	60
9	Samran Rat 3	SRR3	0	0	30	0	0	0	29	32	0	60	0	0	0
10	Samran Rat 4	SRR4	0	0	60	0	30	30	60	60	60	0	0	0	0
11	Krung Kasem 2	KKM2	0	0	30	0	30	0	0	0	0	0	0	60	0
12	Krung Kasem 3	KKM3	30	30	30	0	60	0	30	30	0	30	60	0	0
13	Samsen 1	SMS1	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Samsen 2	SMS2	0	0	0	0	0	690	0	0	0	0	0	0	30
15	Pathum Wan 1	PTW1	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Pathum Wan 2	PTW2	0	0	30	0	30	30	0	0	0	0	0	0	0
17	Surawong 1	SRW1	30	0	60	0	30	30	0	0	0	0	0	0	0
18	Surawong 2	SRW2	30	0	30	0	30	30	0	0	0	0	0	0	0
19	Surawong 3	SRW3	30	0	60	0	30	30	0	0	0	30	0	0	0
20	Surawong 4	SRW4	30	30	90	30	30	60	0	0	0	30	0	0	0
21	Surawong 5	SRW5	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Chaiyaphruk 1	CYP1	0	0	30	0	0	30	0	0	0	0	0	0	0
23	Chaiyaphruk 2	CYP2	0	0	30	0	0	30	0	0	0	0	0	0	0
24	Phra Khanong 1	PKG1	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Phra Khanong 2	PKG2	30	30	60	60	180	90	90	90	90	120	60	30	30
26	On Nut 1	ONT1	0	0	0	0	0	30	0	0	0	0	0	0	0
27	Trok Chan 1	TKC1	0	0	0	0	0	0	0	0	0	0	0	0	0
28	Trok Chan 2	TKC2	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Thung Mahamek 1	TMM1	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Thung Mahamek 2	TMM2	0	0	0	0	0	0	0	0	0	0	0	0	0
31	Sathupradit 1	STD1	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Sathupradit 2	STD2	0	0	0	0	0	0	0	0	0	0	0	0	0
33	Thanon Tok 1	TNT1	0	0	0	0	0	0	0	0	0	0	0	0	0
34	Thanon Tok 2	TNT2	0	0	0	0	0	0	0	0	0	0	0	0	0
35	Khlong Toei 1	KTH1	0	0	30	0	0	0	0	0	0	0	0	0	0
36	Hua Mak 1	HAM1	0	0	0	0	0	0	0	0	0	0	0	0	0
37	Hua Mak 2	HAM2	0	0	30	0	60	60	0	0	0	0	0	0	0
38	Khlong Chan 1	KGC1	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Khlong Chan 2	KGC2	0	0	0	0	0	0	0	0	0	0	0	0	0
40	Khlong Chan 3	KGC3	0	0	0	0	0	0	0	0	0	0	0	0	0
41	Ramkhamhaeng 1	RKH1	0	0	0	0	0	0	0	0	0	0	0	0	0
42	Bang Chan 1	BGC1	0	0	0	0	0	0	0	0	0	0	0	0	0
43	Lat Krabang 1	LKG1	0	0	0	0	0	0	0	0	0	0	0	0	0
44	Bang Na 1	BNA1	0	0	0	0	0	0	0	0	0	0	0	0	0
45	Bang Na 2	BNA2	0	0	0	0	0	0	0	0	0	0	0	0	0
46	Bang Na 3	BNA3	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Samut Prakan 1	SPK1	0	0	0	0	0	0	0	0	0	0	0	0	0
48	Samut Prakan 2	SPK2	0	0	0	0	0	0	0	0	0	0	0	0	0
49	Samut Prakan 3	SPK3	0	0	0	0	0	0	0	0	0	0	0	0	0
50	Bang Pu 1	BPU1	0	0	0	0	0	0	0	0	0	0	0	0	0
51	Pu Chao Saming Phrai 1	PSP1	0	0	0	0	0	0	0	0	0	0	0	0	0
52	Pu Chao Saming Phrai 2	PSP2	0	0	0	0	0	0	0	0	0	0	0	0	0
53	Bang Phli 1	BPL1	0	0	0	0	0	0	0	0	0	0	0	0	0
54	Bang Phli 2	BPL2	0	0	0	0	0	0	0	0	0	0	0	0	0
55	Bang Phli Bang Bo 1	BBB1	0	0	0	0	0	0	0	0	0	0	0	0	0
56	Thon Buri 1	TNB1	0	0	0	0	0	0	0	0	0	0	0	0	0
57	Lat Ya T8	LTYT8	0	0	30	30	60	30	90	90	90	150	60	30	30
58	Phasi Charoen 1	PSN1	0	0	0	0	0	0	0	0	0	0	0	0	0
59	Phasi Charoen 2	PSN2	0	0	0	0	0	0	0	0	0	0	0	0	0
60	Bang Phlat 1	BGT1	0	0	0	0	0	0	0	0	0	0	0	0	0
61	Bang Phlat 2	BGT2	0	0	30	0	30	30	0	0	0	30	0	0	0
62	Bang Phlat 3	BGT3	0	0	0	0	0	0	0	0	0	0	0	0	0
63	Bang Bue Thong 1	BBT1	0	0	0	0	0	0	0	0	0	0	0	0	0
64	Bang Bue Thong 2	BBT2	0	0	0	0	0	0	0	0	0	0	0	0	0
65	Charan Sanitwong 1	CSW1	0	0	0	0	0	0	0	0	0	0	0	0	0

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (2/20)

NO	Switch Unit Name	ABBR	1	2	3	4	5	6	7	8	9	10	11	12	13
			PNC1	PNC2	PNC3	ASD1	ASD2	SKW1	SRR1	SRR2	SRR3	SRR4	KKM2	KKM3	SMS1
66	Charan Sanitwong 2	CSW2	0	0	0	0	0	0	0	0	0	0	0	0	0
67	Bang Khae 1	BKE1	0	0	0	0	0	0	0	0	0	0	0	0	0
68	Bang Khae 2	BKE2	0	0	0	0	0	0	0	0	0	0	0	0	0
69	Nong Khaem 1	NGK1	0	0	0	0	0	0	0	0	0	0	0	390	0
70	Muban Settakit 1	MSK1	0	0	0	0	0	0	0	0	0	0	0	0	0
71	Dao khanong 1	DKN1	0	0	0	0	0	0	0	0	0	0	0	0	0
72	Dao khanong 2	DKN2	0	0	0	0	0	0	0	0	0	0	0	0	0
73	Phra Pradaeng 1	PPG1	0	0	0	0	0	0	0	0	0	0	0	0	0
74	Phra Pradaeng 2	PPG2	0	0	0	0	0	0	0	0	0	0	0	0	0
75	Ekkachai 1	EKC1	0	0	0	0	0	0	0	0	0	0	0	0	0
76	Ekkachai 2	EKC2	0	0	0	0	0	0	0	0	0	0	0	0	0
77	Ret Burana 1	RBN1	0	0	0	0	0	0	0	0	0	0	0	0	0
78	Phahonyothin 1	PYT1	0	0	30	0	30	0	0	0	0	0	0	0	0
79	Phahonyothin 2	PYT2	0	0	0	0	0	0	0	0	0	0	0	0	0
80	Phahonyothin T2	PYTT2	0	0	30	390	510	30	30	30	30	30	30	30	30
81	Inthamara 1	ITM1	0	0	0	30	0	0	0	0	0	0	0	0	0
82	Inthamara 2	ITM2	0	0	0	0	30	30	0	0	0	0	0	0	0
83	Bang Khen 1	BGN1	0	0	0	0	0	0	0	0	0	0	0	0	0
84	Bang Khen 2	BGN2	0	0	0	0	0	0	0	0	0	0	0	0	0
85	Lat Phrao 1-1	LTP1-1	0	0	0	0	0	0	0	0	0	0	0	0	0
86	Lat Phrao 1-2	LTP1-2	0	0	30	0	30	30	0	0	0	0	0	0	0
87	Lat Phrao 2-1	LTP2-1	0	0	0	0	0	0	0	0	0	0	0	0	0
88	Lat Phrao 2-1	LTP2-2	0	0	0	0	30	0	0	0	0	0	0	0	0
89	Don Muang 1	DNM1	0	0	0	0	0	0	0	0	0	0	0	0	0
90	Don Muang 2	DNM2	0	0	0	0	0	0	0	0	0	0	0	0	0
91	Thanyaburi 1	TYB1	0	0	0	0	0	0	0	0	0	0	0	0	0
92	Rangsit 1	RST1	0	0	0	0	0	0	0	0	0	0	0	0	0
93	Nawa Nakhon 1	NWN1	0	0	0	0	0	0	0	0	0	0	0	0	0
94	Bang Su 1	BGS1	0	0	0	0	0	0	0	0	0	0	0	0	0
95	Bang Su 2	BGS2	0	0	0	0	0	0	0	0	0	0	0	0	0
96	Ngam Wong Wan 1	NWW1	0	0	0	0	0	0	0	0	0	0	0	0	0
97	Ngam Wong Wan 2	NWW2	0	0	0	0	0	0	0	0	0	0	0	0	0
98	Nonthaburi 1	NTB1	0	0	0	0	0	0	0	0	0	0	0	0	0
99	Nonthaburi 2	NTB2	0	0	0	0	0	0	0	0	0	0	0	0	0
100	Lak Si 1	LKS1	0	0	0	0	0	0	0	0	0	0	0	0	0
101	Lak Si T4	LKST4	30	30	60	60	90	60	90	90	90	90	150	30	90
102	Lak Si 2	LKS2	0	0	0	0	0	0	0	0	0	0	0	0	0
103	Ram Inthra 1	RIT1	0	0	0	0	0	0	0	0	0	0	0	0	0
104	Ram Inthra 2	RIT2	0	0	0	0	0	0	0	0	30	0	0	0	0
105	Pak Kret 1	PKK1	0	0	0	0	0	0	0	0	0	0	0	0	0
106	Pathum Thani 1	PTT1	0	0	0	0	0	0	0	0	0	0	0	0	0
107	Bang Phun 1	BANI	0	0	0	0	0	0	0	0	0	0	0	0	0
108	Chaeng Watthana 1	CWT1	0	0	0	0	0	0	0	0	0	0	0	0	0
109	Krung Kasem T(XB)	KKTA	0	0	0	0	30	0	120	120	120	0	114	0	150
110	Krung Kasem T1	KKT1	0	0	0	0	0	0	30	30	30	270	90	0	30
111	Phahonyothin T(XB)	PYTA	0	0	0	0	0	0	0	0	0	0	30	0	0
112	Phloen Chit T3	PLT3	510	510	720	30	60	630	60	60	90	60	90	0	30
113	Thon Buri T(XB)	TNBTA	0	0	0	0	0	0	30	30	30	0	30	0	0
114	Surawong T(XB)	SWTA	0	0	0	0	0	0	30	30	30	0	30	0	0
115	Lak Si TC	LSTC	0	0	0	0	0	0	60	60	30	150	30	90	0
116	Phra Khanong TC	PNTC	0	0	0	30	150	0	0	0	0	0	0	0	0
117	Lat Ya TC	LYTC	60	30	210	0	0	90	0	0	0	0	0	0	0
118	Lak Si International	LSIT	0	0	0	0	0	0	0	0	0	0	0	30	0
119	Phra Khanong Internatio	PNIT	0	0	0	0	0	0	0	0	0	0	0	0	0
120	Lat Ya International	LYIT	0	0	60	0	0	30	0	0	0	0	0	0	0
	Total		1,027	904	2,280	810	1,860	2,400	990	873	799	1,290	834	690	480

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (3/20)

NO	Switch Unit Name	ABBR	14	15	16	17	18	19	20	21	22	23	24	25	26
			SMS2	PTW1	PTW2	SRW1	SRW2	SRW3	SRW4	SRW5	CYP1	CYP2	PKG1	PKG2	ONT1
1	Phloen Chit 1	PNC1	0	0	0	0	0	0	30	0	0	0	0	150	0
2	Phloen Chit 2	PNC2	0	0	0	0	0	0	30	0	0	0	0	120	0
3	Phloen Chit 3	PNC3	0	0	30	90	60	60	120	0	30	30	0	210	30
4	Asok Din Daeng 1	ASD1	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Asok Din Daeng 2	ASD2	0	0	30	30	30	30	30	0	0	0	0	210	0
6	Sukhumvit 1	SKW1	0	0	30	60	60	30	60	0	60	60	0	210	30
7	Samran Rat 1	SRR1	0	0	0	0	0	0	0	0	0	0	0	60	0
8	Samran Rat 2	SRR2	0	0	0	0	0	0	0	0	0	0	0	60	0
9	Samran Rat 3	SRR3	0	0	0	0	0	0	0	0	0	0	0	60	0
10	Samran Rat 4	SRR4	0	0	30	30	30	0	30	0	0	0	0	150	0
11	Krung Kasem 2	KKM2	0	0	0	0	0	0	0	0	0	0	0	60	0
12	Krung Kasem 3	KKM3	0	0	0	30	0	0	30	0	0	0	0	120	0
13	Samsen 1	SMS1	30	0	0	0	0	0	0	0	0	0	0	30	0
14	Samsen 2	SMS2	0	0	0	0	0	0	0	0	0	0	0	30	0
15	Pathum Wan 1	PTW1	0	0	30	0	0	0	0	0	0	0	0	30	0
16	Pathum Wan 2	PTW2	0	30	0	0	0	0	30	0	0	0	0	120	0
17	Surawong 1	SRW1	0	0	0	0	52	40	90	30	0	0	0	150	0
18	Surawong 2	SRW2	0	0	0	50	0	38	60	30	0	0	30	150	0
19	Surawong 3	SRW3	0	0	0	48	36	0	60	30	0	0	0	120	0
20	Surawong 4	SRW4	0	0	60	90	90	60	0	30	0	0	0	180	0
21	Surawong 5	SRW5	0	0	0	30	30	30	30	0	0	0	0	30	0
22	Chaiyaphruk 1	CYP1	0	0	0	0	0	0	0	0	0	60	0	270	0
23	Chaiyaphruk 2	CYP2	0	0	0	0	0	0	0	0	60	0	0	300	0
24	Phra Khanong 1	PKG1	0	0	0	0	0	0	0	0	0	0	0	240	0
25	Phra Khanong 2	PKG2	30	60	90	150	90	90	60	0	480	450	330	0	480
26	On Nut 1	ONT1	0	0	0	0	0	0	0	0	0	0	0	360	0
27	Trok Chan 1	TKC1	0	0	0	0	0	0	0	0	0	0	0	30	0
28	Trok Chan 2	TKC2	0	0	0	0	0	0	0	0	0	0	0	60	0
29	Thung Mahamek 1	TMM1	0	0	0	0	0	0	0	0	0	0	0	30	0
30	Thung Mahamek 2	TMM2	0	0	0	0	0	0	0	0	0	0	0	30	0
31	Sathupradit 1	STD1	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Sathupradit 2	STD2	0	0	0	0	0	0	0	0	0	0	0	60	0
33	Thanon Tok 1	TNT1	0	0	0	0	0	0	0	0	0	0	0	30	0
34	Thanon Tok 2	TNT2	0	0	0	0	0	0	0	0	0	0	0	60	0
35	Khlong Toei 1	KT1	0	0	0	0	0	0	30	0	0	0	0	150	0
36	Hua Mak 1	HAM1	0	0	0	0	0	0	0	0	0	0	0	300	0
37	Hua Mak 2	HAM2	0	0	0	0	0	0	30	0	0	30	0	450	0
38	Khlong Chan 1	KGC1	0	0	0	0	0	0	0	0	0	0	0	300	0
39	Khlong Chan 2	KGC2	0	0	0	0	0	0	0	0	0	0	0	270	0
40	Khlong Chan 3	KGC3	0	0	0	0	0	0	0	0	0	0	0	120	0
41	Ramkhamhaeng 1	RKH1	0	0	0	0	0	0	0	0	0	0	0	150	0
42	Bang Chan 1	BGC1	0	0	0	0	0	0	0	0	0	0	0	150	0
43	Lai Krabang 1	LKG1	0	0	0	0	0	0	0	0	0	0	0	150	90
44	Bang Na 1	BNA1	0	0	0	0	0	0	0	0	0	0	0	270	0
45	Bang Na 2	BNA2	0	0	0	0	0	0	0	0	0	0	0	300	0
46	Bang Na 3	BNA3	0	0	0	0	0	0	0	0	0	0	0	120	0
47	Samut Prakan 1	SPK1	0	0	0	0	0	0	0	0	0	0	0	120	0
48	Samut Prakan 2	SPK2	0	0	0	0	0	0	0	0	0	0	0	90	0
49	Samut Prakan 3	SPK3	0	0	0	0	0	0	0	0	0	0	0	120	0
50	Bang Pu 1	BPU1	0	0	0	0	0	0	0	0	0	0	0	150	0
51	Pu Chao Saming Phrai 1	PSP1	0	0	0	0	0	0	0	0	0	0	0	240	0
52	Pu Chao Saming Phrai 2	PSP2	0	0	0	0	0	0	0	0	0	0	0	360	0
53	Bang Phli 1	BPL1	0	0	0	0	0	0	0	0	0	0	0	360	0
54	Bang Phli 2	BPL2	0	0	0	0	0	0	0	0	0	0	0	120	0
55	Bang Phli Bang Bo 1	BBB1	0	0	0	0	0	0	0	0	0	0	0	150	0
56	Thon Buri 1	TNB1	0	0	0	0	0	0	0	0	0	0	0	30	0
57	Lai Ya T8	LTYT8	30	60	60	60	60	60	30	0	0	0	0	180	0
58	Phasi Charoen 1	PSN1	0	0	0	0	0	0	0	0	0	0	0	0	0
59	Phasi Charoen 2	PSN2	0	0	0	0	0	0	0	0	0	0	0	30	0
60	Bang Phlat 1	BGT1	0	0	0	0	0	0	0	0	0	0	0	60	0
61	Bang Phlat 2	BGT2	0	0	0	0	0	0	0	0	0	0	0	150	0
62	Bang Phlat 3	BGT3	0	0	0	0	0	0	0	0	0	0	0	30	0
63	Bang Bue Thong 1	BBT1	0	0	0	0	0	0	0	0	0	0	0	0	0
64	Bang Bue Thong 2	BBT2	0	0	0	0	0	0	0	0	0	0	0	0	0
65	Charan Sanitwong 1	CSW1	0	0	0	0	0	0	0	0	0	0	0	0	0

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (4/20)

NO	Switch Unit Name	ABBR	14 SMS2	15 PTW1	16 PTW2	17 SRW1	18 SRW2	19 SRW3	20 SRW4	21 SRW5	22 CYP1	23 CYP2	24 PKG1	25 PKG2	26 ONT1
66	Charan Sanitwong 2	CSW2	0	0	0	0	0	0	0	0	0	0	0	60	0
67	Bang Khae 1	BKE1	0	0	0	0	0	0	0	0	0	0	0	0	0
68	Bang Khae 2	BKE2	0	0	0	0	0	0	0	0	0	0	0	0	0
69	Nong Khaem 1	NGK1	0	0	0	0	0	0	0	0	0	0	0	30	0
70	Muban Settakit 1	MSK1	0	0	0	0	0	0	0	0	0	0	0	30	0
71	Dao khanong 1	DKN1	0	0	0	0	0	0	0	0	0	0	0	30	0
72	Dao khanong 2	DKN2	0	0	0	0	0	0	0	0	0	0	0	0	0
73	Phra Pradaeng 1	PPG1	0	0	0	0	0	0	0	0	0	0	0	0	0
74	Phra Pradaeng 2	PPG2	0	0	0	0	0	0	0	0	0	0	0	60	0
75	Ekkachai 1	EKC1	0	0	0	0	0	0	0	0	0	0	0	60	0
76	Ekkachai 2	EKC2	0	0	0	0	0	0	0	0	0	0	0	0	0
77	Rat Burana 1	RBN1	0	0	0	0	0	0	0	0	0	0	0	60	0
78	Phahonyothin 1	PYT1	0	0	0	0	0	0	0	0	0	0	0	0	0
79	Phahonyothin 2	PYT2	0	0	0	0	0	0	0	0	0	0	0	30	0
80	Phahonyothin T2	PYTT2	0	30	30	30	30	30	0	0	0	0	0	180	0
81	Inthamara 1	ITM1	0	0	0	0	0	0	0	0	0	0	0	60	0
82	Inthamara 2	ITM2	0	0	0	0	0	0	0	0	0	0	0	90	0
83	Bang Khen 1	BGN1	0	0	0	0	0	0	0	0	0	0	0	30	0
84	Bang Khen 2	BGN2	0	0	0	0	0	0	0	0	0	0	0	60	450
85	Lat Phrao 1-1	LTP1-1	0	0	0	0	0	0	0	0	0	0	0	30	0
86	Lat Phrao 1-2	LTP1-2	0	0	0	0	0	0	0	0	0	0	0	150	0
87	Lat Phrao 2-1	LTP2-1	0	0	0	0	0	0	0	0	0	0	0	0	0
88	Lat Phrao 2-1	LTP2-2	0	0	0	0	0	0	0	0	0	0	0	150	0
89	Don Muang 1	DNM1	0	0	0	0	0	0	0	0	0	0	0	0	0
90	Don Muang 2	DNM2	0	0	0	0	0	0	0	0	0	0	0	60	0
91	Thanyaburi 1	TYB1	0	0	0	0	0	0	0	0	0	0	0	0	0
92	Rangsit 1	RST1	0	0	0	0	0	0	0	0	0	0	0	0	0
93	Nawa Nakhon 1	NWN1	0	0	0	0	0	0	0	0	0	0	0	30	0
94	Bang Su 1	BGS1	0	0	0	0	0	0	0	0	0	0	0	30	0
95	Bang Su 2	BGS2	0	0	0	0	0	0	0	0	0	0	0	30	0
96	Ngam Wong Wan 1	NWW1	0	0	0	0	0	0	0	0	0	0	0	0	0
97	Ngam Wong Wan 2	NWW2	0	0	0	0	0	0	0	0	0	0	0	60	0
98	Nonthaburi 1	NTB1	0	0	0	0	0	0	0	0	0	0	0	0	0
99	Nonthaburi 2	NTB2	0	0	0	0	0	0	0	0	0	0	0	30	0
100	Lak Si 1	LKS1	0	0	0	0	0	0	0	0	0	0	0	30	0
101	Lak Si T4	LKST4	60	60	90	90	90	60	30	0	0	0	0	210	0
102	Lak Si 2	LKS2	0	0	0	0	0	0	0	0	0	0	0	0	0
103	Ram Inthra 1	RIT1	0	0	0	0	0	0	0	0	0	0	0	0	0
104	Ram Inthra 2	RIT2	0	0	0	0	0	0	0	0	0	0	0	0	0
105	Pak Kret 1	PKK1	0	0	0	0	0	0	0	0	0	0	0	30	0
106	Pathum Thani 1	PTT1	0	0	0	0	0	0	0	0	0	0	0	30	90
107	Bang Phun 1	BAN1	0	0	0	0	0	0	0	0	0	0	0	0	0
108	Chaeng Wathana 1	CWT1	0	0	0	0	0	0	0	0	0	0	0	60	0
109	Krung Kasem T(XB)	KKTA	0	150	0	30	30	30	0	0	0	0	0	60	0
110	Krung Kasem T1	KKT1	150	0	210	30	30	30	0	0	0	0	0	30	0
111	Phahonyothin T(XB)	PYTA	0	0	0	0	30	0	0	0	0	0	0	150	0
112	Phloen Chit T3	PLT3	30	90	60	60	90	60	570	210	0	0	0	30	0
113	Thon Buri T(XB)	TNBTA	0	0	0	0	0	0	0	0	0	0	0	120	0
114	Surawong T(XB)	SWTA	0	0	30	154	153	166	30	30	0	0	0	60	0
115	Lak Si TC	LSTC	0	30	90	0	0	0	0	0	0	0	0	0	0
116	Phra Khanong TC	PNTC	0	0	0	0	0	0	0	0	30	30	60	270	60
117	Lat Ya TC	LYTC	0	0	0	60	60	60	150	0	0	0	0	0	0
118	Lak Si International	LSIT	0	0	0	0	0	0	0	0	0	0	0	0	0
119	Phra Khanong Internatio	PNIT	0	0	0	0	0	0	0	0	0	0	30	120	0
120	Lat Ya International	LYIT	0	0	0	30	30	30	90	0	0	0	0	0	0
	Total		330	510	870	1,152	1,081	904	1,620	360	660	660	450	11,190	1,230

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (5/20)

NO	Switch Unit Name	ABBR	TKC1	TKC2	TMM1	TMM2	STD1	STD2	TNT1	TNT2	KTI1	HAM1	HAM2	KGC1	KGC2
1	Phloen Chit 1	PNC1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Phloen Chit 2	PNC2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Phloen Chit 3	PNC3	0	30	30	0	0	0	0	0	30	30	60	0	30
4	Asok Din Daeng 1	ASD1	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Asok Din Daeng 2	ASD2	0	0	0	0	0	0	0	0	0	0	60	0	0
6	Sukhumwit 1	SKW1	0	0	0	0	0	0	0	0	60	30	60	0	30
7	Samran Rat 1	SRR1	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Samran Rat 2	SRR2	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Samran Rat 3	SRR3	0	0	0	0	0	0	0	0	0	0	0	0	0
10	Samran Rat 4	SRR4	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Krung Kasem 2	KKM2	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Krung Kasem 3	KKM3	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Samsen 1	SMS1	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Samsen 2	SMS2	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Pathum Wan 1	PTW1	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Pathum Wan 2	PTW2	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Surawong 1	SRW1	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Surawong 2	SRW2	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Surawong 3	SRW3	0	0	0	0	0	0	0	0	0	0	0	0	0
20	Surawong 4	SRW4	0	0	0	0	0	0	0	0	30	0	0	0	0
21	Surawong 5	SRW5	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Chaiyaphruk 1	CYP1	0	0	0	0	0	0	0	0	0	90	0	0	0
23	Chaiyaphruk 2	CYP2	0	0	0	0	0	0	0	0	0	0	30	0	0
24	Phra Khanong 1	PKG1	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Phra Khanong 2	PKG2	60	30	60	0	30	0	30	0	60	390	660	390	390
26	On Nut 1	ONT1	0	0	0	0	0	0	0	0	0	0	30	0	0
27	Trok Chan 1	TKC1	0	30	7	0	11	0	7	0	0	0	0	0	0
28	Trok Chan 2	TKC2	30	0	0	0	0	0	0	0	0	0	0	0	0
29	Thung Mahamek 1	TMM1	7	0	0	30	0	0	0	0	0	0	0	0	0
30	Thung Mahamek 2	TMM2	0	0	30	0	0	0	0	0	0	0	0	0	0
31	Sathupradit 1	STD1	0	0	0	0	0	30	0	0	0	0	0	0	0
32	Sathupradit 2	STD2	0	0	0	0	30	0	0	0	0	0	0	0	0
33	Thanon Tok 1	TNT1	0	0	0	0	0	0	0	30	0	0	0	0	0
34	Thanon Tok 2	TNT2	0	0	0	0	0	0	30	0	0	0	0	0	0
35	Khlong Toei 1	KTI1	0	0	0	0	0	0	0	0	0	0	0	0	0
36	Hua Mak 1	HAM1	0	0	0	0	0	0	0	0	0	0	60	0	0
37	Hua Mak 2	HAM2	0	0	0	0	0	0	0	0	0	60	0	0	30
38	Khlong Chan 1	KGC1	0	0	0	0	0	0	0	0	0	0	0	0	60
39	Khlong Chan 2	KGC2	0	0	0	0	0	0	0	0	0	0	30	30	0
40	Khlong Chan 3	KGC3	0	0	0	0	0	0	0	0	0	0	0	30	30
41	Ramkamhaeng 1	RKH1	0	0	0	0	0	0	0	0	0	0	0	0	0
42	Bang Chan 1	BGC1	0	0	0	0	0	0	0	0	0	0	0	0	0
43	Lat Krabang 1	LKG1	0	0	0	0	0	0	0	0	0	0	0	0	0
44	Bang Na 1	BNA1	0	0	0	0	0	0	0	0	0	0	0	0	0
45	Bang Na 2	BNA2	0	0	0	0	0	0	0	0	0	0	0	0	0
46	Bang Na 3	BNA3	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Samut Prakan 1	SPK1	0	0	0	0	0	0	0	0	0	0	0	0	0
48	Samut Prakan 2	SPK2	0	0	0	0	0	0	0	0	0	0	0	0	0
49	Samut Prakan 3	SPK3	0	0	0	0	0	0	0	0	0	0	0	0	0
50	Bang Pu 1	BPU1	0	0	0	0	0	0	0	0	0	0	0	0	0
51	Pu Chao Saming Phrai 1	PSP1	0	0	0	0	0	0	0	0	0	0	0	0	0
52	Pu Chao Saming Phrai 2	PSP2	0	0	0	0	0	0	0	0	0	0	0	0	0
53	Bang Phli 1	BPL1	0	0	0	0	0	0	0	0	0	0	0	0	0
54	Bang Phli 2	BPL2	0	0	0	0	0	0	0	0	0	0	0	0	0
55	Bang Phli Bang Bo 1	BBB1	0	0	0	0	0	0	0	0	0	0	0	0	0
56	Thon Buri 1	TNB1	0	0	0	0	0	0	0	0	0	0	0	0	0
57	Lat Ya T8	LYT8	60	30	30	0	0	0	30	0	0	0	0	0	0
58	Phasi Charoen 1	PSN1	0	0	0	0	0	0	0	0	0	0	0	0	0
59	Phasi Charoen 2	PSN2	0	0	0	0	0	0	0	0	0	0	0	0	0
60	Bang Phlat 1	BGT1	0	0	0	0	0	0	0	0	0	0	0	0	0
61	Bang Phlat 2	BGT2	0	0	0	0	0	0	0	0	0	0	30	0	0
62	Bang Phlat 3	BGT3	0	0	0	0	0	0	0	0	0	0	0	0	0
63	Bang Bue Thong 1	BBT1	0	0	0	0	0	0	0	0	0	0	0	0	0
64	Bang Bue Thong 2	BBT2	0	0	0	0	0	0	0	0	0	0	0	0	0
65	Charan Sanitwong 1	CSW1	0	0	0	0	0	0	0	0	0	0	0	0	0

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (6/20)

NO	Switch Unit Name	ABBR	27	28	29	30	31	32	33	34	35	36	37	38	39
			TKC1	TKC2	TMM1	TMM2	STD1	STD2	TNT1	TNT2	KT11	HAM1	HAM2	KGC1	KGC2
66	Charan Sanitwong 2	CSW2	0	0	0	0	0	0	0	0	0	0	0	0	0
67	Bang Khae 1	BKE1	0	0	0	0	0	0	0	0	0	0	0	0	0
68	Bang Khae 2	BKE2	0	0	0	0	0	0	0	0	0	0	0	0	0
69	Nong Khaem 1	NGK1	0	0	0	0	0	0	0	0	0	0	0	0	0
70	Muban Sattakit 1	MSK1	0	0	0	0	0	0	0	0	0	0	0	0	0
71	Dao khanong 1	DKN1	0	0	0	0	0	0	0	0	0	0	0	0	0
72	Dao khanong 2	DKN2	0	0	0	0	0	0	0	0	0	0	0	0	0
73	Phra Pradaeng 1	PPG1	0	0	0	0	0	0	0	0	0	0	0	0	0
74	Phra Pradaeng 2	PPG2	0	0	0	0	0	0	0	0	0	0	0	0	0
75	Ekkachai 1	EKC1	0	0	0	0	0	0	0	0	0	0	0	0	0
76	Ekkachai 2	EKC2	0	0	0	0	0	0	0	0	0	0	0	0	0
77	Rat Burana 1	RBN1	0	0	0	0	0	0	0	0	0	0	0	0	0
78	Phahonyothin 1	PYT1	0	0	0	0	0	0	0	0	0	0	0	0	0
79	Phahonyothin 2	PYT2	0	0	0	0	0	0	0	0	0	0	0	0	0
80	Phahonyothin T2	PYTT2	0	0	0	0	0	0	0	0	0	0	30	0	0
81	Inthamara 1	ITM1	0	0	0	0	0	0	0	0	0	0	0	0	0
82	Inthamara 2	ITM2	0	0	0	0	0	0	0	0	0	0	0	0	0
83	Bang Khen 1	BGN1	0	0	0	0	0	0	0	0	0	0	0	0	0
84	Bang Khen 2	BGN2	0	0	0	0	0	0	0	0	0	0	0	0	0
85	Lat Phrao 1-1	LTP1-1	0	0	0	0	0	0	0	0	0	0	0	0	0
86	Lat Phrao 1-2	LTP1-2	0	0	0	0	0	0	0	0	0	0	0	0	0
87	Lat Phrao 2-1	LTP2-1	0	0	0	0	0	0	0	0	0	0	0	0	0
88	Lat Phrao 2-1	LTP2-2	0	0	0	0	0	0	0	0	0	0	0	0	0
89	Don Muang 1	DNM1	0	0	0	0	0	0	0	0	0	0	0	0	0
90	Don Muang 2	DNM2	0	0	0	0	0	0	0	0	0	0	0	0	0
91	Thanyaburi 1	TYB1	0	0	0	0	0	0	0	0	0	0	0	0	0
92	Rangsit 1	RST1	0	0	0	0	0	0	0	0	0	0	0	0	0
93	Nawa Nakhon 1	NWN1	0	0	0	0	0	0	0	0	0	0	0	0	0
94	Bang Su 1	BGS1	0	0	0	0	0	0	0	0	0	0	0	0	0
95	Bang Su 2	BGS2	0	0	0	0	0	0	0	0	0	0	0	0	0
96	Ngam Wong Wan 1	NWW1	0	0	0	0	0	0	0	0	0	0	0	0	0
97	Ngam Wong Wan 2	NWW2	0	0	0	0	0	0	0	0	0	0	0	0	0
98	Nonthaburi 1	NTB1	0	0	0	0	0	0	0	0	0	0	0	0	0
99	Nonthaburi 2	NTB2	0	0	0	0	0	0	0	0	0	0	0	0	0
100	Lak Si 1	LKS1	0	0	0	0	0	0	0	0	0	0	0	0	0
101	Lak Si T4	LKST4	30	0	30	0	0	0	0	0	0	0	60	30	30
102	Lak Si 2	LKS2	0	0	0	0	0	0	0	0	0	0	0	0	0
103	Ram Inthra 1	RIT1	0	0	0	0	0	0	0	0	0	0	0	0	0
104	Ram Inthra 2	RIT2	0	0	0	0	0	0	0	0	0	0	0	0	0
105	Pak Kret 1	PKK1	0	0	0	0	0	0	0	0	0	0	0	0	0
106	Pathum Thani 1	PIT1	0	0	0	0	0	0	0	0	0	0	0	0	0
107	Bang Phun 1	BAN1	0	0	0	0	0	0	0	0	0	0	0	0	0
108	Chaeng Watthana 1	CWT1	0	0	0	0	0	0	0	0	0	0	0	0	0
109	Krung Kasem T(XB)	KKTA	0	0	0	0	0	0	0	0	0	0	0	0	0
110	Krung Kasem T1	KKT1	0	150	30	0	0	0	0	0	0	0	0	0	0
111	Phahonyothin T(XB)	PYTA	0	0	0	0	0	0	0	0	0	0	0	0	0
112	Phloen Chit T3	PLT3	120	30	60	270	30	360	60	360	450	0	0	0	0
113	Thon Buri T(XB)	TNBTA	0	0	0	0	0	0	0	0	0	0	0	0	0
114	Surawong T(XB)	SWTA	180	0	150	0	90	0	90	0	0	0	0	0	0
115	Lak Si TC	LSTC	0	30	0	0	0	0	0	0	0	0	0	0	0
116	Phra Khanong TC	PNTC	0	0	0	0	0	0	0	0	0	30	60	0	30
117	Lat Ya TC	LYTC	0	0	0	0	0	30	0	30	30	0	0	0	0
118	Lak Si International	LSIT	0	30	0	0	0	0	0	0	0	0	0	0	0
119	Phra Khanong Internatio	PNIT	0	0	0	0	0	0	0	0	0	0	0	0	0
120	Lat Ya International	LYIT	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total		487	360	427	300	191	420	247	420	660	630	1,170	480	630



13-2 The Number of Circuits Between Exchanges in BMA in 1992 (7/20)

NO	Switch Unit Name	ABBR	40	41	42	43	44	45	46	47	48	49	50	51	52
			KGC3	RKH1	BGC1	LKG1	BNA1	BNA2	BNA3	SPK1	SPK2	SPK3	BPU1	PSP1	PSP2
1	Phloen Chit 1	PNC1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Phloen Chit 2	PNC2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Phloen Chit 3	PNC3	0	0	0	0	0	0	0	0	0	0	0	0	30
4	Asok Din Daeng 1	ASD1	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Asok Din Daeng 2	ASD2	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Sukhumwit 1	SKW1	0	0	0	0	30	0	0	0	0	0	0	0	0
7	Samran Rat 1	SRR1	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Samran Rat 2	SRR2	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Samran Rat 3	SRR3	0	0	0	0	0	0	0	0	0	0	0	0	0
10	Samran Rat 4	SRR4	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Krung Kasem 2	KKM2	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Krung Kasem 3	KKM3	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Samsen 1	SMS1	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Samsen 2	SMS2	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Pathum Wan 1	PTW1	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Pathum Wan 2	PTW2	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Surawong 1	SRW1	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Surawong 2	SRW2	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Surawong 3	SRW3	0	0	0	0	0	0	0	0	0	0	0	0	0
20	Surawong 4	SRW4	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Surawong 5	SRW5	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Chaiyaphruk 1	CYP1	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Chaiyaphruk 2	CYP2	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Phra Khanong 1	PKG1	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Phra Khanong 2	PKG2	150	150	30	150	420	330	150	150	120	120	150	390	360
26	On Nut 1	ONT1	0	0	0	0	0	0	0	0	0	0	0	0	0
27	Trok Chan 1	TKC1	0	0	0	0	0	0	0	0	0	0	0	0	0
28	Trok Chan 2	TKC2	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Thung Mahamek 1	TMM1	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Thung Mahamek 2	TMM2	0	0	0	0	0	0	0	0	0	0	0	0	0
31	Sathupradit 1	STD1	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Sathupradit 2	STD2	0	0	0	0	0	0	0	0	0	0	0	0	0
33	Thanon Tok 1	TNT1	0	0	0	0	0	0	0	0	0	0	0	0	0
34	Thanon Tok 2	TNT2	30	0	0	0	0	0	0	0	0	0	0	0	0
35	Khlong Toei 1	KTI1	0	0	0	0	0	0	0	0	0	0	0	0	0
36	Hua Mak 1	HAM1	0	0	0	0	0	0	0	0	0	0	0	0	0
37	Hua Mak 2	HAM2	0	0	0	0	0	0	0	0	0	0	0	0	0
38	Khlong Chan 1	KGC1	30	0	0	0	0	0	0	0	0	0	0	0	0
39	Khlong Chan 2	KGC2	30	0	0	0	0	0	0	0	0	0	0	0	0
40	Khlong Chan 3	KGC3	0	0	0	0	0	0	0	0	0	0	0	0	0
41	Ramkamhaeng 1	RKH1	0	0	0	0	0	0	0	0	0	0	0	0	0
42	Bang Chan 1	BGC1	0	0	0	0	0	0	0	0	0	0	0	0	0
43	Lat Krabang 1	LKG1	0	0	0	0	0	0	0	0	0	0	0	0	0
44	Bang Na 1	BNA1	0	0	0	0	0	30	30	0	0	0	0	13	30
45	Bang Na 2	BNA2	0	0	0	0	30	0	30	0	0	0	0	0	0
46	Bang Na 3	BNA3	0	0	0	0	30	30	0	0	0	0	0	0	0
47	Samut Prakan 1	SPK1	0	0	0	0	0	0	0	0	30	30	0	0	0
48	Samut Prakan 2	SPK2	0	0	0	0	0	0	0	30	0	30	0	0	0
49	Samut Prakan 3	SPK3	0	0	0	0	0	0	0	30	30	0	0	0	0
50	Bang Pu 1	BPU1	0	0	0	0	0	0	0	0	0	0	0	0	0
51	Pu Chao Saming Phrai 1	PSP1	90	0	0	0	11	0	0	4	0	0	0	0	60
52	Pu Chao Saming Phrai 2	PSP2	0	0	0	0	0	0	0	0	0	0	0	60	0
53	Bang Phli 1	BPL1	0	0	0	0	0	0	0	0	0	0	0	0	0
54	Bang Phli 2	BPL2	0	0	0	0	0	0	0	0	0	0	0	0	0
55	Bang Phli Bang Bo 1	BBB1	0	0	0	0	0	0	0	0	0	0	0	0	0
56	Thon Buri 1	TNB1	0	0	0	0	0	0	0	0	0	0	0	0	0
57	Lat Ya T8	LTYT8	0	0	0	0	0	0	0	0	0	0	0	0	0
58	Phasi Charoen 1	PSN1	0	0	0	0	0	0	0	0	0	0	0	0	0
59	Phasi Charoen 2	PSN2	0	0	0	0	0	0	0	0	0	0	0	0	0
60	Bang Phlat 1	BGT1	0	0	0	0	0	0	0	0	0	0	0	0	0
61	Bang Phlat 2	BGT2	0	0	0	0	0	0	0	0	0	0	0	0	0
62	Bang Phlat 3	BGT3	0	0	0	0	0	0	0	0	0	0	0	0	0
63	Bang Bue Thong 1	BBT1	0	0	0	0	0	0	0	0	0	0	0	0	0
64	Bang Bue Thong 2	BBT2	0	0	0	0	0	0	0	0	0	0	0	0	0
65	Charan Sanitwong 1	CSW1	0	0	0	0	0	0	0	0	0	0	0	0	0

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (8/20)

NO	Switch Unit Name	ABBR	40	41	42	43	44	45	46	47	48	49	50	51	52
66	Charan Sanitwong 2	CSW2	0	0	0	0	0	0	0	0	0	0	0	0	0
67	Bang Khac 1	BKE1	0	0	0	0	0	0	0	0	0	0	0	0	0
68	Bang Khac 2	BKE2	0	0	0	0	0	0	0	0	0	0	0	0	0
69	Nong Khaem 1	NGK1	0	0	0	0	0	0	0	0	0	0	0	0	0
70	Muban Seitakit 1	MSK1	0	0	0	0	0	0	0	0	0	0	0	0	0
71	Dao Khanong 1	DKN1	0	0	0	0	0	0	0	0	0	0	0	0	0
72	Dao Khanong 2	DKN2	0	0	0	0	0	0	0	0	0	0	0	0	0
73	Phra Pradaeng 1	PPG1	0	0	0	0	0	0	0	0	0	0	0	0	0
74	Phra Pradaeng 2	PPG2	0	0	0	0	0	0	0	0	0	0	0	0	0
75	Ekkachai 1	EKC1	0	0	0	0	0	0	0	0	0	0	0	0	0
76	Ekkachai 2	EKC2	0	0	0	0	0	0	0	0	0	0	0	0	0
77	Rat Burana 1	RBN1	0	0	0	0	0	0	0	0	0	0	0	0	0
78	Phahonyothin 1	PYT1	0	0	0	0	0	0	0	0	0	0	0	0	0
79	Phahonyothin 2	PYT2	0	0	0	0	0	0	0	0	0	0	0	0	0
80	Phahonyothin T2	PYTT2	0	0	0	0	0	0	0	0	0	0	0	0	0
81	Inthamara 1	ITM1	0	0	0	0	0	0	0	0	0	0	0	0	0
82	Inthamara 2	ITM2	0	0	0	0	0	0	0	90	60	0	0	0	0
83	Bang Khen 1	BGN1	0	0	0	0	0	0	0	0	0	0	0	0	0
84	Bang Khen 2	BGN2	0	0	0	0	0	0	0	0	0	0	0	0	0
85	Lat Phrao 1-1	LTP1-1	0	0	0	0	0	0	0	0	0	0	0	0	0
86	Lat Phrao 1-2	LTP1-2	0	0	0	0	0	0	0	0	0	0	0	0	0
87	Lat Phrao 2-1	LTP2-1	0	0	0	0	0	0	0	0	0	0	0	0	0
88	Lat Phrao 2-1	LTP2-2	0	0	0	0	0	0	0	0	0	0	0	0	0
89	Don Muang 1	DNM1	0	0	0	0	0	0	0	0	0	0	0	0	0
90	Don Muang 2	DNM2	0	0	0	0	0	0	0	0	0	0	0	0	0
91	Thanyaburi 1	TYB1	0	0	0	0	0	0	0	0	0	0	0	0	0
92	Rangsit 1	RST1	0	0	0	0	0	0	0	0	0	0	0	0	0
93	Nawa Nakhon 1	NWN1	0	0	0	0	0	0	0	0	0	0	0	0	0
94	Bang Su 1	BGS1	0	0	0	0	0	0	0	0	0	0	0	0	0
95	Bang Su 2	BGS2	0	0	0	0	0	0	0	0	0	0	0	0	0
96	Ngam Wong Wan 1	NWW1	0	0	0	0	0	0	0	0	0	0	0	0	0
97	Ngam Wong Wan 2	NWW2	0	0	0	0	0	0	0	0	0	0	0	0	0
98	Nonthaburi 1	NTB1	0	0	0	0	0	0	0	0	0	0	0	0	0
99	Nonthaburi 2	NTB2	0	0	0	0	0	0	0	0	0	0	0	0	0
100	Lak Si 1	LKS1	0	0	0	0	0	0	0	0	0	0	0	0	0
101	Lak Si T4	LKST4	0	0	390	0	0	0	0	0	0	0	0	0	0
102	Lak Si 2	LKS2	0	0	0	0	0	0	0	0	0	0	0	0	0
103	Ram Inthra 1	RIT1	0	0	0	0	0	0	0	0	0	0	0	0	0
104	Ram Inthra 2	RIT2	0	0	0	0	0	0	0	0	0	0	0	0	0
105	Pak Kret 1	PKK1	0	0	0	0	0	0	0	0	0	0	0	0	0
106	Pathum Thani 1	PTT1	0	0	0	0	0	0	0	0	0	0	0	0	0
107	Bang Phun 1	BAN1	0	0	0	0	0	0	0	0	0	0	0	0	0
108	Chaeng Watthana 1	CWT1	0	0	0	0	0	0	0	0	0	0	0	0	0
109	Krung Kasem T(XB)	KKTA	0	0	0	0	0	0	0	0	0	0	0	0	0
110	Krung Kasem T1	KKT1	0	0	0	0	0	0	0	0	0	0	0	0	0
111	Phahonyothin T(XB)	PYTA	0	0	0	0	0	0	0	0	0	0	0	0	0
112	Phloen Chit T3	PLT3	0	0	0	0	0	0	0	0	0	0	0	0	0
113	Thon Buri T(XB)	TNBTA	0	0	0	0	0	0	0	0	0	0	0	0	0
114	Surawong T(XB)	SWTA	0	0	0	0	0	0	0	0	0	0	0	0	0
115	Lak Si TC	LSTC	0	0	0	0	0	0	0	0	0	0	0	0	0
116	Phra Khanong TC	PNTC	0	0	0	0	0	30	0	0	0	0	0	0	30
117	Lat Ya TC	LYTC	0	0	0	0	0	0	0	0	0	0	0	0	0
118	Lak Si International	LSIT	0	0	0	0	0	0	0	0	0	0	0	0	0
119	Phra Khanong International	PNIT	0	0	0	0	0	0	0	0	0	0	0	0	0
120	Lat Ya International	LYIT	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total		330	150	420	150	521	420	210	304	240	180	150	463	510

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (9/20)

NO	Switch Unit Name	ABBR	53	54	55	56	57	58	59	60	61	62	63	64	65
			BPL1	BPL2	BBB1	TNB1	LTYT8	PSN1	PSN2	BGT1	BGT2	BGT3	BBT1	BBT2	CSW1
1	Phloen Chit 1	PNC1	0	0	0	0	60	0	0	0	0	0	0	0	0
2	Phloen Chit 2	PNC2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Phloen Chit 3	PNC3	0	0	0	30	180	0	0	0	60	0	0	0	0
4	Asok Din Daeng 1	ASD1	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Asok Din Daeng 2	ASD2	0	0	0	0	0	0	0	0	30	0	0	0	0
6	Sukhumwit 1	SKW1	30	0	0	0	0	0	0	0	30	0	0	0	0
7	Samran Rat 1	SRR1	0	0	0	0	60	0	0	0	0	0	0	0	0
8	Samran Rat 2	SRR2	0	0	0	0	60	0	0	0	0	0	0	0	0
9	Samran Rat 3	SRR3	0	0	0	0	90	0	0	0	0	0	0	0	0
10	Samran Rat 4	SRR4	0	0	0	30	150	0	0	0	30	0	0	0	0
11	Krung Kasem 2	KKM2	0	0	0	0	60	0	0	0	0	0	0	0	0
12	Krung Kasem 3	KKM3	0	0	0	0	90	0	0	0	30	0	0	0	0
13	Samsen 1	SMS1	0	0	0	0	30	0	0	0	0	0	0	0	0
14	Samsen 2	SMS2	0	0	0	0	30	0	0	0	0	0	0	0	0
15	Pathum Wan 1	PTW1	0	0	0	0	30	0	0	0	0	0	0	0	0
16	Pathum Wan 2	PTW2	0	0	0	0	60	0	0	0	0	0	0	0	0
17	Surawong 1	SRW1	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Surawong 2	SRW2	0	0	0	0	60	0	0	0	0	0	0	0	0
19	Surawong 3	SRW3	0	0	0	0	60	0	0	0	0	0	0	0	0
20	Surawong 4	SRW4	0	0	0	0	150	0	0	0	0	0	0	0	0
21	Surawong 5	SRW5	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Chaiyaphruk 1	CYP1	0	0	0	0	30	0	0	0	0	0	0	0	0
23	Chaiyaphruk 2	CYP2	0	0	0	0	30	0	0	0	0	0	0	0	0
24	Phra Khanong 1	PKG1	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Phra Khanong 2	PKG2	420	120	180	60	150	30	0	60	90	0	0	0	30
26	On Nut 1	ONT1	0	0	0	0	0	0	0	0	0	0	0	0	0
27	Trok Chan 1	TKC1	0	0	0	0	30	0	0	0	0	0	0	0	0
28	Trok Chan 2	TKC2	0	0	0	0	30	0	0	0	0	0	0	0	0
29	Thung Mahamek 1	TMM1	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Thung Mahamek 2	TMM2	0	0	0	0	0	0	0	0	0	0	0	0	0
31	Sathupradit 1	STD1	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Sathupradit 2	STD2	0	0	0	0	60	0	0	0	0	0	0	0	0
33	Thanon Tok 1	TNT1	0	0	0	0	30	0	0	0	0	0	0	0	0
34	Thanon Tok 2	TNT2	0	0	0	0	30	0	0	0	0	0	0	0	0
35	Khlong Toei 1	KTH1	0	0	0	0	0	0	0	0	0	0	0	0	0
36	Hua Mak 1	HAM1	0	0	0	0	0	0	0	0	0	0	0	0	0
37	Hua Mak 2	HAM2	0	0	0	0	60	0	0	0	0	0	0	0	0
38	Khlong Chan 1	KGC1	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Khlong Chan 2	KGC2	0	0	0	0	30	0	0	0	0	0	0	0	0
40	Khlong Chan 3	KGC3	0	0	0	0	0	0	0	0	0	0	0	0	0
41	Ramkhamhaeng 1	RKH1	0	0	0	0	0	0	0	0	0	0	0	0	0
42	Bang Chan 1	BGC1	0	0	0	0	30	0	0	0	0	0	0	0	0
43	Lat Krabang 1	LKG1	0	0	0	0	0	0	0	0	0	0	0	0	0
44	Bang Na 1	BNA1	0	0	0	0	30	0	0	0	0	0	0	0	0
45	Bang Na 2	BNA2	0	0	0	0	0	0	0	0	0	0	0	0	0
46	Bang Na 3	BNA3	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Samut Prakan 1	SPK1	0	0	0	0	0	0	0	0	0	0	0	0	0
48	Samut Prakan 2	SPK2	0	0	0	0	0	0	0	0	0	0	0	0	0
49	Samut Prakan 3	SPK3	0	0	0	0	0	0	0	0	0	0	0	0	0
50	Bang Pu 1	BPU1	0	0	0	0	0	0	0	0	0	0	0	0	0
51	Pu Chao Saming Phrai 1	PSP1	0	0	0	0	30	0	0	0	0	0	0	0	0
52	Pu Chao Saming Phrai 2	PSP2	0	0	0	0	0	0	0	0	0	0	0	0	0
53	Bang Phli 1	BPL1	0	30	0	0	0	0	0	0	0	0	0	0	0
54	Bang Phli 2	BPL2	30	0	0	0	0	0	0	0	0	0	0	0	0
55	Bang Phli Bang Bo 1	BBB1	0	0	0	0	0	0	0	0	0	0	0	0	0
56	Thon Buri 1	TNB1	0	0	0	0	150	0	0	0	0	0	0	0	0
57	Lat Ya T8	LTYT8	0	0	0	150	0	90	240	60	480	60	0	0	60
58	Phasi Charoen 1	PSN1	0	0	0	5	0	0	30	0	0	0	0	0	0
59	Phasi Charoen 2	PSN2	0	0	0	0	150	30	0	0	0	0	0	0	0
60	Bang Phlat 1	BGT1	0	0	0	0	60	0	0	0	60	30	0	0	0
61	Bang Phlat 2	BGT2	0	0	0	30	450	0	0	90	0	30	0	0	0
62	Bang Phlat 3	BGT3	0	0	0	0	60	0	0	30	30	0	0	0	0
63	Bang Bue Thong 1	BBT1	0	0	0	0	30	0	0	0	0	0	0	30	0
64	Bang Bue Thong 2	BBT2	0	0	0	0	0	0	0	0	0	0	30	0	0
65	Charan Sanitwong 1	CSW1	0	0	0	0	30	0	0	0	0	0	0	0	0

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (10/20)

NO	Switch Unit Name	ABBR	53	54	55	56	57	58	59	60	61	62	63	64	65
			BPL1	BPL2	BBB1	TNB1	LTYT8	PSN1	PSN2	BGT1	BGT2	BGT3	BBT1	BBT2	CSW1
66	Charan Sanitwong 2	CSW2	0	0	0	0	270	0	0	0	30	0	0	0	30
67	Bang Khae 1	BKE1	0	0	0	9	0	0	0	0	0	0	0	0	0
68	Bang Khae 2	BKE2	0	0	0	0	210	0	0	0	0	0	0	0	0
69	Nong Khaem 1	NGK1	0	0	0	0	270	0	0	0	0	0	0	0	0
70	Muban Settsakit 1	MSK1	0	0	0	0	210	0	0	0	0	0	0	0	0
71	Dao khanong 1	DKN1	0	0	0	0	60	0	0	0	0	0	0	0	0
72	Dao khanong 2	DKN2	0	0	0	0	150	0	0	0	0	0	0	0	0
73	Phra Pradaeng 1	PPG1	0	0	0	0	0	0	0	0	0	0	0	0	0
74	Phra Pradaeng 2	PPG2	0	0	0	0	240	0	0	0	0	0	0	0	0
75	Ekkachai 1	EKC1	0	0	0	30	420	0	0	0	0	0	0	0	0
76	Ekkachai 2	EKC2	0	0	0	0	150	0	0	0	0	0	0	0	0
77	Rat Burana 1	RBN1	0	0	0	0	360	0	0	0	0	0	0	0	0
78	Phahonyothin 1	PYT1	0	0	0	0	0	0	0	0	0	0	0	0	0
79	Phahonyothin 2	PYT2	0	0	0	0	0	0	0	0	0	0	0	0	0
80	Phahonyothin T2	PYTT2	0	0	0	30	150	0	0	30	30	0	0	0	0
81	Inthamara 1	ITM1	0	0	0	0	30	0	0	0	0	0	0	0	0
82	Inthamara 2	ITM2	0	0	0	0	30	0	0	0	0	0	0	0	0
83	Bang Khen 1	BGN1	0	0	0	0	0	0	0	0	0	0	0	0	0
84	Bang Khen 2	BGN2	0	0	0	0	30	0	0	0	0	0	0	0	0
85	Lat Phrao 1-1	LTP1-1	0	0	0	0	0	0	0	0	0	0	0	0	0
86	Lat Phrao 1-2	LTP1-2	0	0	0	0	60	0	0	0	0	0	0	0	0
87	Lat Phrao 2-1	LTP2-1	0	0	0	0	0	0	0	0	0	0	0	0	0
88	Lat Phrao 2-2	LTP2-2	0	0	0	0	0	0	0	0	0	0	0	0	0
89	Don Muang 1	DNM1	0	0	0	0	0	0	0	0	0	0	0	0	0
90	Don Muang 2	DNM2	0	0	0	0	30	0	0	0	0	0	0	0	0
91	Thanyaburi 1	TYB1	0	0	0	0	0	0	0	0	0	0	0	0	0
92	Rangsit 1	RST1	0	0	0	0	0	0	0	0	0	0	0	0	0
93	Nawa Nakhon 1	NWN1	0	0	0	0	0	0	0	0	0	0	0	0	0
94	Bang Su 1	BGS1	0	0	0	0	30	0	0	0	0	0	0	0	0
95	Bang Su 2	BGS2	0	0	0	0	30	0	0	0	0	0	0	0	0
96	Ngam Wong Wan 1	NWW1	0	0	0	0	0	0	0	0	0	0	0	0	0
97	Ngam Wong Wan 2	NWW2	0	0	0	0	30	0	0	0	0	0	0	0	0
98	Nonthaburi 1	NTB1	0	0	0	0	0	0	0	0	0	0	0	0	0
99	Nonthaburi 2	NTB2	0	0	0	0	30	0	0	0	0	0	0	0	0
100	Lak Si 1	LKS1	0	0	0	0	0	0	0	0	0	0	0	0	0
101	Lak Si T4	LKST4	0	0	0	60	150	0	0	90	60	0	150	60	30
102	Lak Si 2	LKS2	0	0	0	0	0	0	0	0	0	0	0	0	0
103	Ram Inthra 1	RIT1	0	0	0	0	0	0	0	0	0	0	0	0	0
104	Ram Inthra 2	RIT2	0	0	0	0	0	0	0	0	0	0	0	0	0
105	Pak Kret 1	PKK1	0	0	0	0	30	0	0	0	0	0	0	0	0
106	Pathum Thani 1	PTT1	0	0	0	0	0	0	0	0	0	0	0	0	0
107	Bang Phun 1	BAN1	0	0	0	0	0	0	0	0	0	0	0	0	0
108	Chaeng Watthana 1	CWT1	0	0	0	0	30	0	0	0	0	0	0	0	0
109	Krung Kasem T(XB)	KKTA	0	0	0	30	60	0	0	30	0	0	0	0	0
110	Krung Kasem T1	KKT1	0	0	0	30	60	0	0	30	0	0	0	0	0
111	Phahonyothin T(XB)	PYTA	0	0	0	0	90	0	0	30	30	0	0	0	0
112	Phloen Chit T3	PLT3	0	0	0	60	180	30	0	60	0	0	0	0	30
113	Thon Buri T(XB)	TNBTA	0	0	0	149	180	86	0	150	0	0	0	0	120
114	Surawong T(XB)	SWTA	0	0	0	30	150	0	0	0	0	0	0	0	0
115	Lak Si TC	LSTC	0	0	0	0	0	0	0	0	0	0	0	0	0
116	Phra Khanong TC	PNTC	30	0	0	0	0	0	0	0	0	0	0	0	0
117	Lat Ya TC	LYTC	0	0	0	30	180	0	30	30	90	0	0	0	0
118	Lak Si International	LSIT	0	0	0	0	0	0	0	0	0	0	0	0	0
119	Phra Khanong International	PNIT	0	0	0	0	0	0	0	0	0	0	0	0	0
120	Lat Ya International	LYIT	0	0	0	0	60	0	0	0	0	0	0	0	0
	Total		510	150	180	763	6,630	266	300	690	1,080	120	180	90	300

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (11/20)

NO	Switch Unit Name	ABBR	66	67	68	69	70	71	72	73	74	75	76	77	78
			CSW2	BKB1	BKE2	NGK1	MSK1	DKN1	DKN2	PPG1	PPG2	EKC1	EKC2	RBN1	PYT1
1	Phloen Chit 1	PNC1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Phloen Chit 2	PNC2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Phloen Chit 3	PNC3	0	0	0	0	0	0	0	0	0	0	0	0	30
4	Asok Din Daeng 1	ASD1	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Asok Din Daeng 2	ASD2	0	0	0	0	0	0	0	0	0	0	0	0	30
6	Sukhumwit 1	SKW1	0	0	0	0	0	0	0	0	0	30	0	0	30
7	Samran Rat 1	SRR1	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Samran Rat 2	SRR2	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Samran Rat 3	SRR3	0	0	0	0	0	0	0	0	0	0	0	0	0
10	Samran Rat 4	SRR4	0	0	0	30	0	0	0	0	0	30	0	0	0
11	Krung Kasem 2	KKM2	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Krung Kasem 3	KKM3	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Samsen 1	SMS1	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Samsen 2	SMS2	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Pathum Wan 1	PTW1	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Pathum Wan 2	PTW2	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Surawong 1	SRW1	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Surawong 2	SRW2	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Surawong 3	SRW3	0	0	0	0	0	0	0	0	0	0	0	0	0
20	Surawong 4	SRW4	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Surawong 5	SRW5	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Chaiyaphruk 1	CYP1	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Chaiyaphruk 2	CYP2	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Phra Khanong 1	PKG1	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Phra Khanong 2	PKG2	30	0	0	30	30	30	0	0	30	60	0	60	90
26	On Nut 1	ONT1	0	0	0	0	0	0	0	0	0	0	0	0	0
27	Trok Chan 1	TKC1	0	0	0	0	0	0	0	0	0	0	0	0	0
28	Trok Chan 2	TKC2	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Thung Mahamek 1	TMM1	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Thung Mahamek 2	TMM2	0	0	0	0	0	0	0	0	0	0	0	0	0
31	Sathupradit 1	STD1	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Sathupradit 2	STD2	0	0	0	0	0	0	0	0	0	0	0	0	0
33	Thanon Tok 1	TNT1	0	0	0	0	0	0	0	0	0	0	0	0	0
34	Thanon Tok 2	TNT2	0	0	0	0	0	0	0	0	0	0	0	0	0
35	Khlong Toei 1	KT11	0	0	0	0	0	0	0	0	0	0	0	0	0
36	Hua Mak 1	HAM1	0	0	0	0	0	0	0	0	0	0	0	0	0
37	Hua Mak 2	HAM2	0	0	0	0	0	0	0	0	0	0	0	0	0
38	Khlong Chan 1	KGC1	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Khlong Chan 2	KGC2	0	0	0	0	0	0	0	0	0	0	0	0	0
40	Khlong Chan 3	KGC3	0	0	0	0	0	0	0	0	0	0	0	0	0
41	Ramkhamhaeng 1	RKH1	0	0	0	0	0	0	0	0	0	0	0	0	0
42	Bang Chan 1	BGC1	0	0	0	0	0	0	0	0	0	0	0	0	0
43	Lat Krabang 1	LKG1	0	0	0	0	0	0	0	0	0	0	0	0	0
44	Bang Na 1	BNA1	0	0	0	0	0	0	0	0	0	0	0	0	0
45	Bang Na 2	BNA2	0	0	0	0	0	0	0	0	0	0	0	0	0
46	Bang Na 3	BNA3	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Samut Prakan 1	SPK1	0	0	0	0	0	0	0	0	0	0	0	0	0
48	Samut Prakan 2	SPK2	0	0	0	0	0	0	0	0	0	0	0	0	0
49	Samut Prakan 3	SPK3	0	0	0	0	0	0	0	0	0	0	0	0	0
50	Bang Pu 1	BPU1	0	0	0	0	0	0	0	0	0	0	0	0	0
51	Pu Chao Saming Phrai 1	PSP1	0	0	0	0	0	0	0	0	0	0	0	0	0
52	Pu Chao Saming Phrai 2	PSP2	0	0	0	0	0	0	0	0	0	0	0	0	0
53	Bang Phli 1	BPL1	0	0	0	0	0	0	0	0	0	0	0	0	0
54	Bang Phli 2	BPL2	0	0	0	0	0	0	0	0	0	0	0	0	0
55	Bang Phli Bang Bo 1	BBB1	0	0	0	0	0	0	0	0	0	0	0	0	0
56	Thon Buri 1	TNB1	0	9	0	0	0	0	0	0	0	30	0	0	0
57	Lat Ya T8	LYT8	330	60	240	390	360	90	210	0	270	480	150	420	60
58	Phasi Charoen 1	PSN1	0	0	0	0	0	0	0	0	0	0	0	0	0
59	Phasi Charoen 2	PSN2	0	0	0	0	0	0	0	0	0	0	0	0	0
60	Bang Phlat 1	BGT1	0	0	0	0	0	0	0	0	0	0	0	0	0
61	Bang Phlat 2	BGT2	30	0	0	0	0	0	0	0	0	0	0	0	0
62	Bang Phlat 3	BGT3	0	0	0	0	0	0	0	0	0	0	0	0	0
63	Bang Buc Thong 1	BBT1	0	0	0	0	0	0	0	0	0	0	0	0	0
64	Bang Buc Thong 2	BBT2	0	0	0	0	0	0	0	0	0	0	0	0	0
65	Charan Sanitwong 1	CSW1	30	0	0	0	0	0	0	0	0	0	0	0	0

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (12/20)

NO	Switch Unit Name	ABBR	66	67	68	69	70	71	72	73	74	75	76	77	78
			CSW2	BKE1	BKE2	NGK1	MSK1	DKN1	DKN2	PPG1	PPG2	EKC1	EKC2	RBN1	PYT1
66	Charan Sanitwong 2	CSW2	0	0	0	0	0	0	0	0	0	0	0	0	0
67	Bang Khae 1	BKE1	0	0	30	0	0	0	0	0	0	0	0	0	0
68	Bang Khae 2	BKE2	0	30	0	0	0	0	0	0	0	0	0	0	0
69	Nong Khaem 1	NGK1	0	0	0	0	30	0	0	0	0	0	0	0	0
70	Muban Settakit 1	MSK1	0	0	0	30	0	0	0	0	0	0	0	0	0
71	Dao khanong 1	DKN1	0	0	0	0	0	0	30	0	0	30	0	0	0
72	Dao khanong 2	DKN2	0	0	0	0	0	30	0	0	0	0	0	0	0
73	Phra Pradaeng 1	PPG1	0	0	0	0	0	0	0	0	30	0	0	0	0
74	Phra Pradaeng 2	PPG2	0	0	0	0	0	0	0	30	0	0	0	30	0
75	Ekkachai 1	EKC1	0	0	0	0	0	30	0	0	0	0	60	30	0
76	Ekkachai 2	EKC2	0	0	0	0	0	0	0	0	0	60	0	0	0
77	Rat Burana 1	RBN1	0	0	0	0	0	0	0	0	0	30	0	0	0
78	Phahonyothin 1	PYT1	0	0	0	0	0	0	0	0	0	0	0	0	0
79	Phahonyothin 2	PYT2	0	0	0	0	0	0	0	0	0	0	0	0	16
80	Phahonyothin T2	PYTT2	30	0	0	0	0	0	0	0	0	30	0	0	90
81	Inthamara 1	ITM1	0	0	0	0	0	0	0	0	0	0	0	0	0
82	Inthamara 2	ITM2	0	0	0	0	0	0	0	0	0	0	0	0	0
83	Bang Khen 1	BGN1	0	0	0	0	0	0	0	0	0	0	0	0	0
84	Bang Khen 2	BGN2	0	0	0	0	0	0	0	0	0	0	0	0	0
85	Lat Phrao 1-1	LTP1-1	0	0	0	0	0	0	0	0	0	0	0	0	0
86	Lat Phrao 1-2	LTP1-2	0	0	0	0	0	0	0	0	0	0	0	0	0
87	Lat Phrao 2-1	LTP2-1	0	0	0	0	0	0	0	0	0	0	0	0	0
88	Lat Phrao 2-1	LTP2-2	0	0	0	0	0	0	0	0	0	0	0	0	0
89	Don Muang 1	DNM1	0	0	0	0	0	0	0	0	0	0	0	0	0
90	Don Muang 2	DNM2	0	0	0	0	0	0	0	0	0	0	0	0	0
91	Thanyaburi 1	TYB1	0	0	0	0	0	0	0	0	0	0	0	0	0
92	Rangsit 1	RST1	0	0	0	0	0	0	0	0	0	0	0	0	0
93	Nawa Nakhon 1	NWN1	0	0	0	0	0	0	0	0	0	0	0	0	0
94	Bang Su 1	BGS1	0	0	0	0	0	0	0	0	0	0	0	0	0
95	Bang Su 2	BGS2	0	0	0	0	0	0	0	0	0	0	0	0	0
96	Ngam Wong Wan 1	NWW1	0	0	0	0	0	0	0	0	0	0	0	0	0
97	Ngam Wong Wan 2	NWW2	0	0	0	0	0	0	0	0	0	0	0	0	0
98	Nonthaburi 1	NTB1	0	0	0	0	0	0	0	0	0	0	0	0	0
99	Nonthaburi 2	NTB2	0	0	0	0	0	0	0	0	0	0	0	0	0
100	Lak Si 1	LKS1	0	0	0	0	0	0	0	0	0	0	0	0	0
101	Lak Si T4	LKST4	30	30	0	0	0	30	0	0	0	30	0	30	150
102	Lak Si 2	LKS2	0	0	0	0	0	0	0	0	0	0	0	0	0
103	Ram Inthra 1	RIT1	0	0	0	0	0	0	0	0	0	0	0	0	0
104	Ram Inthra 2	RIT2	0	0	0	0	0	0	0	0	0	0	0	0	0
105	Pak Kret 1	PKK1	0	0	0	0	0	0	0	0	0	0	0	0	0
106	Pathum Thani 1	PTT1	0	0	0	0	0	0	0	0	0	0	0	0	0
107	Bang Phun 1	BAN1	0	0	0	0	0	0	0	0	0	0	0	0	0
108	Chaeng Watthana 1	CWT1	0	0	0	0	0	0	0	0	0	0	0	0	0
109	Krung Kasem T(XB)	KKTA	0	0	0	0	0	0	0	0	0	0	0	0	30
110	Krung Kasem T1	KKT1	0	0	0	0	0	0	0	0	0	0	0	0	30
111	Phahonyothin T(XB)	PYTA	0	0	0	0	0	0	0	0	0	0	0	0	109
112	Phloen Chit T3	PLT3	30	30	0	30	0	60	0	0	30	0	0	30	60
113	Thon Buri T(XB)	TNBTA	0	111	0	0	0	150	0	120	0	0	0	0	0
114	Surawong T(XB)	SWTA	0	0	0	0	0	0	0	0	0	0	0	0	30
115	Lak Si TC	LSTC	0	0	0	0	0	0	0	0	0	0	0	0	0
116	Phra Khanong TC	PNTC	0	0	0	0	0	0	0	0	0	0	0	0	30
117	Lat Ya TC	LYTC	30	0	0	0	0	0	0	0	30	30	0	30	0
118	Lak Si International	LSIT	0	0	0	0	0	0	0	0	0	0	0	0	0
119	Phra Khanong International	PNIT	0	0	0	0	0	0	0	0	0	0	0	0	0
120	Lat Ya International	LYIT	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total		540	270	270	510	420	420	240	150	390	840	210	630	785

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (13/20)

NO	Switch Unit Name	ABBR	79	80	81	82	83	84	85	86	87	88	89	90	91
			PYT2	PYTT2	T1M1	T1M2	BGN1	BGN2	LTP1-1	LTP1-2	LTP2-1	LTP2-2	DNM1	DNM2	TYB1
1	Phloen Chit 1	PNC1	0	30	0	0	0	0	0	0	0	0	0	0	0
2	Phloen Chit 2	PNC2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Phloen Chit 3	PNC3	0	60	0	30	0	0	0	30	0	0	0	0	0
4	Asok Din Daeng 1	ASD1	0	360	0	0	0	0	0	0	0	0	0	0	0
5	Asok Din Daeng 2	ASD2	0	420	0	30	0	0	0	30	0	30	0	0	0
6	Sukhumvit 1	SKW1	0	30	0	30	0	0	0	30	0	30	0	30	0
7	Samran Rat 1	SRR1	0	30	0	0	0	0	0	0	0	0	0	0	0
8	Samran Rat 2	SRR2	0	30	0	0	0	0	0	0	0	0	0	0	0
9	Samran Rat 3	SRR3	0	30	0	0	0	0	0	0	0	0	0	0	0
10	Samran Rat 4	SRR4	0	30	0	0	0	0	0	0	0	0	0	0	0
11	Krung Kasem 2	KKM2	0	30	0	0	0	0	0	0	0	0	0	0	0
12	Krung Kasem 3	KKM3	0	60	0	0	0	0	0	0	0	0	0	0	0
13	Samsen 1	SMS1	0	30	0	0	0	0	0	0	0	0	0	0	0
14	Samsen 2	SMS2	0	30	0	0	0	0	0	0	0	0	0	0	0
15	Pathum Wan 1	PTW1	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Pathum Wan 2	PTW2	0	30	0	0	0	0	0	0	0	0	0	0	0
17	Surawong 1	SRW1	0	30	0	0	0	0	0	0	0	0	0	0	0
18	Surawong 2	SRW2	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Surawong 3	SRW3	0	30	0	0	0	0	0	0	0	0	0	0	0
20	Surawong 4	SRW4	0	30	0	0	0	0	0	0	0	0	0	0	0
21	Surawong 5	SRW5	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Chaiyaphruk 1	CYP1	0	30	0	0	0	0	0	0	0	0	0	0	0
23	Chaiyaphruk 2	CYP2	0	30	0	0	0	0	0	0	0	0	0	0	0
24	Phra Khanong 1	PKG1	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Phra Khanong 2	PKG2	30	90	60	60	0	0	30	30	30	30	0	0	0
26	On Nut 1	ONT1	0	0	0	0	0	0	0	0	0	0	0	0	0
27	Trok Chan 1	TKC1	0	0	0	0	0	0	0	0	0	0	0	0	0
28	Trok Chan 2	TKC2	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Thung Mahamek 1	TMM1	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Thung Mahamek 2	TMM2	0	0	0	0	0	0	0	0	0	0	0	0	0
31	Sathupradit 1	STD1	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Sathupradit 2	STD2	0	0	0	0	0	0	0	0	0	0	0	0	0
33	Thanon Tok 1	TNT1	0	0	0	0	0	0	0	0	0	0	0	0	0
34	Thanon Tok 2	TNT2	0	0	0	0	0	0	0	0	0	0	0	0	0
35	Khlong Toei 1	KTH1	0	0	0	0	0	0	0	0	0	0	0	0	0
36	Hua Mak 1	HAM1	0	0	0	0	0	0	0	0	0	0	0	0	0
37	Hua Mak 2	HAM2	0	30	0	0	0	0	0	0	0	0	0	0	0
38	Khlong Chan 1	KGC1	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Khlong Chan 2	KGC2	0	30	0	0	0	0	0	0	0	0	0	0	0
40	Khlong Chan 3	KGC3	0	0	0	0	0	0	0	0	0	0	0	0	0
41	Ramkhamhaeng 1	RKH1	0	0	0	0	0	0	0	0	0	0	0	0	0
42	Bang Chan 1	BGC1	0	30	0	0	0	0	0	0	0	0	0	0	0
43	Lat Krabang 1	LKG1	0	0	0	0	0	0	0	0	0	0	0	0	0
44	Bang Na 1	BNA1	0	30	0	0	0	0	0	0	0	0	0	0	0
45	Bang Na 2	BNA2	0	0	0	0	0	0	0	0	0	0	0	0	0
46	Bang Na 3	BNA3	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Samut Prakan 1	SPK1	0	0	0	0	0	0	0	0	0	0	0	0	0
48	Samut Prakan 2	SPK2	0	0	0	0	0	0	0	0	0	0	0	0	0
49	Samut Prakan 3	SPK3	0	0	0	0	0	0	0	0	0	0	0	0	0
50	Bang Pu 1	BPU1	0	0	0	0	0	0	0	0	0	0	0	0	0
51	Pu Chao Saming Phrai 1	PSP1	0	0	0	0	0	0	0	0	0	0	0	0	0
52	Pu Chao Saming Phrai 2	PSP2	0	0	0	0	0	0	0	0	0	0	0	0	0
53	Bang Phli 1	BPL1	0	0	0	0	0	0	0	0	0	0	0	0	0
54	Bang Phli 2	BPL2	0	0	0	0	0	0	0	0	0	0	0	0	0
55	Bang Phli Bang Bo 1	BBB1	0	0	0	0	0	0	0	0	0	0	0	0	0
56	Thon Buri 1	TNB1	0	30	0	0	0	0	0	0	0	0	0	0	0
57	Lat Ya T8	LYT8	0	90	30	0	0	0	0	0	0	0	0	0	0
58	Phasi Charoen 1	PSN1	0	0	0	0	0	0	0	0	0	0	0	0	0
59	Phasi Charoen 2	PSN2	0	0	0	0	0	0	0	0	0	0	0	0	0
60	Bang Phlat 1	BGT1	0	30	0	0	0	0	0	0	0	0	0	0	0
61	Bang Phlat 2	BGT2	0	30	0	0	0	0	0	0	0	0	0	0	0
62	Bang Phlat 3	BGT3	0	0	0	0	0	0	0	0	0	0	0	0	0
63	Bang Bue Thong 1	BBT1	0	0	0	0	0	0	0	0	0	0	0	0	0
64	Bang Bue Thong 2	BBT2	0	0	0	0	0	0	0	0	0	0	0	0	0
65	Charan Sanitwong 1	CSW1	0	30	0	0	0	0	0	0	0	0	0	0	0

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (14/20)

NO	Switch Unit Name	ABBR	79	80	81	82	83	84	85	86	87	88	89	90	91
			PYT2	PYTT2	ITM1	ITM2	BGN1	BGN2	LTP1-1	LTP1-2	LTP2-1	LTP2-2	DNM1	DNM2	TYB1
66	Charan Sanitwong 2	CSW2	0	30	0	0	0	0	0	0	0	0	0	0	0
67	Bang Khae 1	BKE1	0	0	0	0	0	0	0	0	0	0	0	0	0
68	Bang Khae 2	BKE2	0	0	0	0	0	0	0	0	0	0	0	0	0
69	Nong Khaem 1	NGK1	0	0	0	0	0	0	0	0	0	0	0	0	0
70	Muban Settakit 1	MSK1	0	0	0	0	0	0	0	0	0	0	0	0	0
71	Dao khanong 1	DKN1	0	0	0	0	0	0	0	0	0	0	0	0	0
72	Dao khanong 2	DKN2	0	0	0	0	0	0	0	0	0	0	0	0	0
73	Phra Pradaeng 1	PPG1	0	0	0	0	0	0	0	0	0	0	0	0	0
74	Phra Pradaeng 2	PPG2	0	0	0	0	0	0	0	0	0	0	0	0	0
75	Ekkachai 1	EKC1	0	30	0	0	0	0	0	0	0	0	0	0	0
76	Ekkachai 2	EKC2	0	0	0	0	0	0	0	0	0	0	0	0	0
77	Rat Burana 1	RBN1	0	30	0	0	0	0	0	0	0	0	0	0	0
78	Phahonyothin 1	PYT1	18	90	0	0	0	0	0	0	0	0	0	0	0
79	Phahonyothin 2	PYT2	0	60	0	0	0	0	0	0	0	0	0	0	0
80	Phahonyothin T2	PYTT2	60	0	30	360	0	0	30	30	30	0	0	0	0
81	Inthamara 1	ITM1	0	60	0	60	0	0	0	0	0	0	0	0	0
82	Inthamara 2	ITM2	0	210	60	0	0	0	0	0	0	0	0	0	0
83	Bang Khen 1	BGN1	0	30	0	0	60	0	0	0	0	0	0	0	0
84	Bang Khen 2	BGN2	0	60	0	0	60	0	0	30	0	0	0	0	0
85	Lat Phrao 1-1	LTP1-1	0	30	0	0	0	0	0	30	0	0	0	0	0
86	Lat Phrao 1-2	LTP1-2	0	30	0	0	0	0	30	0	0	0	0	0	0
87	Lat Phrao 2-1	LTP2-1	0	0	0	0	0	0	0	0	0	0	30	0	0
88	Lat Phrao 2-1	LTP2-2	0	0	0	0	0	0	0	30	30	0	0	0	0
89	Don Muang 1	DNM1	0	0	0	0	0	0	0	0	0	0	0	30	0
90	Don Muang 2	DNM2	0	30	0	0	0	0	0	0	0	0	30	0	0
91	Thanyaburi 1	TYB1	0	0	0	0	0	0	0	0	0	0	0	0	0
92	Rangsit 1	RST1	0	0	0	0	0	0	0	0	0	0	0	0	0
93	Nawa Nakhon 1	NWN1	0	0	0	0	0	0	0	0	0	0	0	0	0
94	Bang Su 1	BGS1	0	30	0	0	0	0	0	0	0	0	0	0	0
95	Bang Su 2	BGS2	0	30	0	0	0	0	0	0	0	0	0	0	0
96	Ngam Wong Wan 1	NWW1	0	0	0	0	0	0	0	0	0	0	0	0	0
97	Ngam Wong Wan 2	NWW2	0	60	0	0	0	0	0	0	0	0	0	0	0
98	Nonthaburi 1	NTB1	0	0	0	0	0	0	0	0	0	0	0	0	0
99	Nonthaburi 2	NTB2	0	0	0	0	0	0	0	0	0	0	0	0	0
100	Lak Si 1	LKS1	0	0	0	0	0	0	0	0	0	0	0	0	0
101	Lak Si T4	LKST4	60	90	60	60	330	480	60	630	30	480	150	480	90
102	Lak Si 2	LKS2	0	0	0	0	0	0	0	0	0	0	0	0	0
103	Ram Inthra 1	RIT1	0	30	0	0	0	0	0	0	0	0	0	0	0
104	Ram Inthra 2	RIT2	0	0	0	0	0	0	0	0	0	0	0	0	0
105	Pak Kret 1	PKK1	0	30	0	0	0	0	0	0	0	0	0	0	0
106	Pathum Thani 1	PTF1	0	0	0	0	0	0	0	0	0	0	0	0	0
107	Bang Phun 1	BAN1	0	0	0	0	0	0	0	0	0	0	0	0	0
108	Chaeng Watthana 1	CWT1	0	30	0	0	0	0	0	0	0	0	0	0	0
109	Krung Kasem T(XB)	KKTA	0	90	0	0	0	0	0	0	0	0	0	0	0
110	Krung Kasem T1	KKT1	0	90	0	0	0	0	0	0	0	0	0	0	0
111	Phahonyothin T(XB)	PYTA	102	60	120	0	0	0	120	0	90	0	0	0	0
112	Phloen Chit T3	PLT3	30	90	60	30	0	0	30	30	0	0	0	0	0
113	Thon Buri T(XB)	TNBTA	0	60	0	0	0	0	0	0	0	0	0	0	0
114	Surawong T(XB)	SWTA	0	90	0	0	0	0	0	0	0	0	0	0	0
115	Lak Si TC	LSTC	0	0	0	0	30	30	0	60	0	90	30	150	0
116	Phra Khanong TC	PNTC	0	150	30	30	0	0	0	0	0	0	0	0	0
117	Lat Ya TC	LYTC	0	0	0	0	0	0	0	0	0	0	0	0	0
118	Lak Si International	LSIT	0	0	0	0	0	0	0	0	0	0	0	0	0
119	Phra Khanong International	PNIT	0	60	0	0	0	0	0	0	0	0	0	0	0
120	Lat Ya International	LYIT	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total		300	3,450	450	690	420	570	300	960	210	690	210	690	90



13-2 The Number of Circuits Between Exchanges in BMA in 1992 (15/20)

NO	Switch Unit Name	ABBR	92	93	94	95	96	97	98	99	100	101	102	103	104
			RST1	NWN1	BGS1	BGS2	NWW1	NWW2	NTB1	NTB2	LKS1	LKST4	LKS2	RIT1	RIT2
1	Phloen Chit 1	PNC1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Phloen Chit 2	PNC2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Phloen Chit 3	PNC3	0	0	0	0	0	0	0	0	0	240	0	0	0
4	Asok Din Daeng 1	ASD1	0	0	0	0	0	0	0	0	0	60	0	0	0
5	Asok Din Daeng 2	ASD2	0	0	0	0	0	30	0	0	0	180	0	0	0
6	Sukhumwit 1	SKW1	0	0	0	0	0	0	0	0	0	210	0	0	0
7	Samran Rat 1	SRR1	0	0	0	0	0	0	0	0	0	60	0	0	0
8	Samran Rat 2	SRR2	0	0	0	0	0	0	0	0	0	60	0	0	0
9	Samran Rat 3	SRR3	0	0	0	0	0	0	0	0	0	60	0	0	0
10	Samran Rat 4	SRR4	0	0	0	0	0	0	0	0	0	120	0	0	0
11	Krung Kasem 2	KKM2	0	0	0	0	0	0	0	0	0	90	0	0	0
12	Krung Kasem 3	KKM3	0	0	0	0	0	0	0	0	0	180	0	0	0
13	Samsen 1	SMS1	0	0	0	0	0	0	0	0	0	60	0	0	0
14	Samsen 2	SMS2	0	0	0	0	0	0	0	0	0	30	0	0	0
15	Pathum Wan 1	PTW1	0	0	0	0	0	0	0	0	0	30	0	0	0
16	Pathum Wan 2	PTW2	0	0	0	0	0	0	0	0	0	90	0	0	0
17	Surawong 1	SRW1	0	0	0	0	0	0	0	0	0	60	0	0	0
18	Surawong 2	SRW2	0	0	0	0	0	0	0	0	0	60	0	0	0
19	Surawong 3	SRW3	0	0	0	0	0	0	0	0	0	60	0	0	0
20	Surawong 4	SRW4	0	0	0	0	0	0	0	0	0	150	0	0	0
21	Surawong 5	SRW5	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Chaiyaphruk 1	CYP1	0	0	0	0	0	0	0	0	0	60	0	0	0
23	Chaiyaphruk 2	CYP2	0	0	0	0	0	0	0	0	0	60	0	0	0
24	Phra Khanong 1	PKG1	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Phra Khanong 2	PKG2	0	0	60	0	0	0	0	0	0	210	0	0	0
26	On Nui 1	ONT1	0	0	0	0	0	0	0	0	0	60	0	0	0
27	Trok Chan 1	TKC1	0	0	0	0	0	0	0	0	0	30	0	0	0
28	Trok Chan 2	TKC2	0	0	0	0	0	0	0	0	0	30	0	0	0
29	Thung Mahamek 1	TMM1	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Thung Mahamek 2	TMM2	0	0	0	0	0	0	0	0	0	0	0	0	0
31	Sathupradit 1	STD1	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Sathupradit 2	STD2	0	0	0	0	0	0	0	0	0	30	0	0	0
33	Thanon Tok 1	TNT1	0	0	0	0	0	0	0	0	0	0	0	0	0
34	Thanon Tok 2	TNT2	0	0	0	0	0	0	0	0	0	30	0	0	0
35	Khlong Toei 1	KT11	0	0	0	0	0	0	0	0	0	60	0	0	0
36	Hua Mak 1	HAM1	0	0	0	0	0	0	0	0	0	60	0	0	0
37	Hua Mak 2	HAM2	0	0	0	0	0	0	0	0	0	180	0	0	0
38	Khlong Chan 1	KGC1	0	0	0	0	0	0	0	0	0	90	0	0	0
39	Khlong Chan 2	KGC2	0	0	0	0	0	0	0	0	0	90	0	0	0
40	Khlong Chan 3	KGC3	0	0	0	0	0	0	0	0	0	0	0	0	0
41	Ramkamhaeng 1	RKH1	0	0	0	0	0	0	0	0	0	30	0	0	0
42	Bang Chan 1	BGC1	0	0	0	0	0	0	0	0	0	210	0	0	0
43	Lai Krabang 1	LKG1	0	0	0	0	0	0	0	0	0	0	0	0	0
44	Bang Na 1	BNA1	0	0	0	0	0	0	0	0	0	30	0	0	0
45	Bang Na 2	BNA2	0	0	0	0	0	0	0	0	0	30	0	0	0
46	Bang Na 3	BNA3	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Samut Prakan 1	SPK1	0	0	0	0	0	0	0	0	0	0	0	0	0
48	Samut Prakan 2	SPK2	0	0	0	0	0	0	0	0	0	0	0	0	0
49	Samut Prakan 3	SPK3	0	0	0	0	0	0	0	0	0	0	0	0	0
50	Bang Pu 1	BPU1	0	0	0	0	0	0	0	0	0	0	0	0	0
51	Pu Chao Saming Phrai 1	PSP1	0	0	0	0	0	0	0	0	0	30	0	0	0
52	Pu Chao Saming Phrai 2	PSP2	0	0	0	0	0	0	0	0	0	30	0	0	0
53	Bang Phli 1	BPL1	0	0	0	0	0	0	0	0	0	30	0	0	0
54	Bang Phli 2	BPL2	0	0	0	0	0	0	0	0	0	0	0	0	0
55	Bang Phli Bang Bo 1	BBB1	0	0	0	0	0	0	0	0	0	0	0	0	0
56	Thon Buri 1	TNB1	0	0	0	0	0	0	0	0	0	30	0	0	0
57	Lat Ya T8	LTYT8	0	0	30	0	0	0	0	0	0	150	0	0	0
58	Phasi Charoen 1	PSN1	0	0	0	0	0	0	0	0	0	0	0	0	0
59	Phasi Charoen 2	PSN2	0	0	0	0	0	0	0	0	0	30	0	0	0
60	Bang Phlat 1	BGT1	0	0	0	0	0	0	0	0	0	90	0	0	0
61	Bang Phlat 2	BGT2	0	0	0	0	0	0	0	0	0	180	0	0	0
62	Bang Phlat 3	BGT3	0	0	0	0	0	0	0	0	0	0	0	0	0
63	Bang Bue Thong 1	BBT1	0	0	0	0	0	0	0	0	0	150	0	0	0
64	Bang Bue Thong 2	BBT2	0	0	0	0	0	0	0	0	0	60	0	0	0
65	Charan Sanitwong 1	CSW1	0	0	0	0	0	0	0	0	0	30	0	0	0

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (16/20)

NO	Switch Unit Name	ABBR	92	93	94	95	96	97	98	99	100	101	102	103	104
			RST1	NWN1	BGS1	BGS2	NWW1	NWW2	NTB1	NTB2	LKS1	LKST4	LKS2	RIT1	RIT2
66	Charan Sanitwong 2	CSW2	0	0	0	0	0	0	0	0	0	60	0	0	0
67	Bang Khae 1	BKE1	0	0	0	0	0	0	0	0	0	0	0	0	0
68	Bang Khae 2	BKE2	0	0	0	0	0	0	0	0	0	0	0	0	0
69	Nong Khaem 1	NGK1	0	0	0	0	0	0	0	0	0	30	0	0	0
70	Muban Settakit 1	MSK1	0	0	0	0	0	0	0	0	0	30	0	0	0
71	Dao khanong 1	DKN1	0	0	0	0	0	0	0	0	0	0	0	0	0
72	Dao khanong 2	DKN2	0	0	0	0	0	0	0	0	0	0	0	0	0
73	Phra Pradaeng 1	PPG1	0	0	0	0	0	0	0	0	0	0	0	0	0
74	Phra Pradaeng 2	PPG2	0	0	0	0	0	0	0	0	0	30	0	0	0
75	Ekkachai 1	EKC1	0	0	0	0	0	0	0	0	0	60	0	0	0
76	Ekkachai 2	EKC2	0	0	0	0	0	0	0	0	0	0	0	0	0
77	Rat Burana 1	RBN1	0	0	0	0	0	0	0	0	0	30	0	0	0
78	Phahonyothin 1	PYT1	0	0	0	0	0	0	0	0	0	150	0	0	0
79	Phahonyothin 2	PYT2	0	0	0	0	0	0	0	0	0	30	0	0	0
80	Phahonyothin T2	PYT2	0	0	30	0	0	0	0	0	0	150	0	0	0
81	Inthamara 1	IFM1	0	0	0	0	0	0	0	0	0	90	0	0	0
82	Inthamara 2	IFM2	0	0	0	0	0	0	0	0	0	150	0	0	0
83	Bang Khen 1	BGN1	0	0	0	0	0	0	0	0	0	270	0	0	0
84	Bang Khen 2	BGN2	0	0	0	0	0	0	0	0	0	270	0	0	0
85	Lat Phrao 1-1	LTP1-1	0	0	0	0	0	0	0	0	0	60	0	0	0
86	Lat Phrao 1-2	LTP1-2	0	0	0	0	0	0	0	0	0	420	0	0	0
87	Lat Phrao 2-1	LTP2-1	0	0	0	0	0	0	0	0	0	0	0	0	0
88	Lat Phrao 2-1	LTP2-2	0	0	0	0	0	0	0	0	0	360	0	0	0
89	Don Muang 1	DNM1	0	0	0	0	0	0	0	0	0	180	0	0	0
90	Don Muang 2	DNM2	0	0	0	0	0	0	0	0	0	360	0	0	0
91	Thanyaburi 1	TYB1	0	0	0	0	0	0	0	0	0	90	0	0	0
92	Rangsit 1	RST1	0	0	0	0	0	0	0	0	0	150	0	0	0
93	Nawa Nakhon 1	NWN1	0	0	0	0	0	0	0	0	0	180	0	0	0
94	Bang Su 1	BGS1	0	0	0	30	0	0	0	0	0	90	0	0	0
95	Bang Su 2	BGS2	0	0	30	0	0	0	0	0	0	180	0	0	0
96	Ngam Wong Wan 1	NWW1	0	0	0	0	0	30	0	0	0	150	0	0	0
97	Ngam Wong Wan 2	NWW2	0	0	0	0	30	0	0	0	0	390	0	0	0
98	Nonthaburi 1	NTB1	0	0	0	0	0	0	0	30	0	30	0	0	0
99	Nonthaburi 2	NTB2	0	0	0	0	0	0	30	0	0	240	0	0	0
100	Lak Si 1	LKS1	0	0	0	0	0	0	0	0	0	210	30	0	0
101	Lak Si T4	LKST4	150	240	90	210	180	540	30	240	270	0	60	300	60
102	Lak Si 2	LKS2	0	0	0	0	0	0	0	0	30	60	0	0	0
103	Ram Inthra 1	RIT1	0	0	0	0	0	0	0	0	0	270	0	0	30
104	Ram Inthra 2	RIT2	0	0	0	0	0	0	0	0	0	60	0	30	0
105	Pak Kret 1	PKK1	0	0	0	0	0	0	0	0	0	270	0	0	0
106	Pathum Thani 1	PTT1	0	0	0	0	0	0	0	0	0	180	0	0	0
107	Bang Phun 1	BAN1	0	0	0	0	0	0	0	0	0	120	0	0	0
108	Chaeng Watthana 1	CWT1	0	0	0	0	0	0	0	0	0	300	0	0	0
109	Krung Kasem T(XB)	KKTA	0	0	0	0	0	0	0	0	0	60	0	0	0
110	Krung Kasem T1	KKT1	0	0	0	0	0	0	0	0	0	60	0	0	0
111	Phahonyothin T(XB)	PYTA	0	0	150	0	0	0	90	0	0	60	0	0	0
112	Phloen Chit T3	PLT3	0	0	30	0	0	0	0	0	0	210	0	0	0
113	Thon Buri T(XB)	TNBTA	0	0	0	0	0	0	0	0	0	90	0	0	0
114	Surawong T(XB)	SWTA	0	0	0	0	0	0	0	0	0	90	0	0	0
115	Lak Si TC	LSTC	30	0	0	0	0	30	0	30	60	240	30	0	0
116	Phra Khanong TC	PNTC	0	0	0	0	0	0	0	0	0	0	0	0	0
117	Lat Ya TC	LYTC	0	0	0	0	0	0	0	0	0	0	0	0	0
118	Lak Si International	LSIT	0	0	0	0	0	0	0	0	30	60	30	0	0
119	Phra Khanong Internatio	PNIT	0	0	0	0	0	0	0	0	0	0	0	0	0
120	Lat Ya International	LYIT	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total		180	240	420	240	210	630	150	300	390	10,470	150	330	90

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (17/20)

NO	Switch Unit Name	ABBR	105	106	107	108	109	110	111	112	113	114	115	116	117
			PKK1	PTT1	BANI	CWT1	MC1	MC2	MC3	MC4	13	KKTA	KKT1	PYTA	PLT3
1	Phloen Chit 1	PNC1	0	0	0	0	0	0	0	0	0	0	0	0	390
2	Phloen Chit 2	PNC2	0	0	0	0	0	0	0	0	0	0	0	0	420
3	Phloen Chit 3	PNC3	0	0	0	0	0	0	0	0	0	0	0	0	360
4	Asok Din Daeng 1	ASD1	0	0	0	0	0	0	0	0	0	0	0	30	60
5	Asok Din Daeng 2	ASD2	0	0	0	0	0	0	0	0	0	0	0	0	60
6	Sukhumwit 1	SKW1	0	0	0	0	0	0	0	0	0	0	0	0	480
7	Samran Rat 1	SRR1	0	0	0	0	0	0	0	0	0	90	60	0	90
8	Samran Rat 2	SRR2	0	0	0	0	0	0	0	0	0	120	30	30	60
9	Samran Rat 3	SRR3	0	0	0	0	0	0	0	0	0	120	30	30	60
10	Samran Rat 4	SRR4	0	0	0	0	0	0	0	0	0	0	270	0	90
11	Krung Kasem 2	KKM2	0	0	0	0	30	0	0	0	0	258	90	0	90
12	Krung Kasem 3	KKM3	0	0	0	0	30	0	0	0	30	60	60	60	60
13	Samsen 1	SMS1	0	0	0	0	0	0	0	0	0	120	30	30	30
14	Samsen 2	SMS2	0	0	0	0	0	0	0	0	0	0	120	0	30
15	Pathum Wan 1	PTW1	0	0	0	0	0	0	0	0	0	120	30	0	30
16	Pathum Wan 2	PTW2	0	0	0	0	0	0	0	0	0	0	270	0	60
17	Surawong 1	SRW1	0	0	0	0	0	0	0	0	8	0	30	0	60
18	Surawong 2	SRW2	0	0	0	0	0	0	0	0	8	0	30	0	90
19	Surawong 3	SRW3	0	0	0	0	0	0	0	0	8	0	0	0	60
20	Surawong 4	SRW4	0	0	0	0	0	0	0	0	30	0	0	0	270
21	Surawong 5	SRW5	0	0	0	0	0	0	0	0	30	0	0	0	180
22	Chaiyaphruk 1	CYP1	0	0	0	0	0	0	0	0	0	0	0	0	60
23	Chaiyaphruk 2	CYP2	0	0	0	0	0	0	0	0	0	0	0	0	60
24	Phra Khanong 1	PKG1	0	0	0	0	0	30	0	0	0	0	0	0	0
25	Phra Khanong 2	PKG2	0	0	0	0	0	30	0	0	60	60	60	60	150
26	On Nut 1	ONT1	0	0	0	0	0	0	0	0	0	0	0	0	60
27	Trok Chan 1	TKC1	0	0	0	0	0	0	0	0	0	30	0	0	90
28	Trok Chan 2	TKC2	0	0	0	0	0	0	0	0	0	0	210	0	90
29	Thung Mahamek 1	TMM1	0	0	0	0	0	0	0	0	0	0	0	0	60
30	Thung Mahamek 2	TMM2	0	0	0	0	0	0	0	0	0	0	0	0	150
31	Sathupradit 1	STD1	0	0	0	0	0	0	0	0	0	0	0	0	30
32	Sathupradit 2	STD2	0	0	0	0	0	0	0	0	0	0	0	0	240
33	Thanon Tok 1	TNT1	0	0	0	0	0	0	0	0	0	0	0	0	60
34	Thanon Tok 2	TNT2	0	0	0	0	0	0	0	0	0	0	0	0	270
35	Khlong Toei 1	KTI1	0	0	0	0	0	0	0	0	0	0	0	0	360
36	Hua Mak 1	HAM1	0	0	0	0	0	0	0	0	0	0	0	0	60
37	Hua Mak 2	HAM2	0	0	0	0	0	0	0	0	0	0	0	0	90
38	Khlong Chan 1	KGC1	0	0	0	0	0	0	0	0	0	0	0	0	30
39	Khlong Chan 2	KGC2	0	0	0	0	0	0	0	0	0	0	0	0	60
40	Khlong Chan 3	KGC3	0	0	0	0	0	0	0	0	0	0	0	0	0
41	Ramkamhaeng 1	RKH1	0	0	0	0	0	0	0	0	0	0	0	0	0
42	Bang Chan 1	BGC1	0	0	0	0	0	0	0	0	0	0	0	0	60
43	Lat Krabang 1	LKG1	0	0	0	0	0	0	0	0	0	0	0	0	30
44	Bang Na 1	BNA1	0	0	0	0	0	0	0	0	0	0	0	0	60
45	Bang Na 2	BNA2	0	0	0	0	0	0	0	0	0	0	0	0	60
46	Bang Na 3	BNA3	0	0	0	0	0	0	0	0	0	0	0	0	30
47	Samut Prakan 1	SPK1	0	0	0	0	0	0	0	0	0	0	0	0	0
48	Samut Prakan 2	SPK2	0	0	0	0	0	0	0	0	0	0	0	0	0
49	Samut Prakan 3	SPK3	0	0	0	0	0	0	0	0	0	0	0	0	0
50	Bang Pu 1	BPU1	0	0	0	0	0	0	0	0	0	0	0	0	0
51	Pu Chao Saming Phrai 1	PSP1	0	0	0	0	0	0	0	0	0	0	0	0	60
52	Pu Chao Saming Phrai 2	PSP2	0	0	0	0	0	0	0	0	0	0	0	0	60
53	Bang Phli 1	BPL1	0	0	0	0	0	0	0	0	0	0	0	0	60
54	Bang Phli 2	BPL2	0	0	0	0	0	0	0	0	0	0	0	0	0
55	Bang Phli Bang Bo 1	BBB1	0	0	0	0	0	0	0	0	0	0	0	0	0
56	Thon Buri 1	TNB1	0	0	0	0	0	0	0	0	0	0	30	0	60
57	Lat Ya T8	LTYT8	0	0	0	0	0	0	30	0	60	60	30	90	180
58	Phasi Charoen 1	PSN1	0	0	0	0	0	0	0	0	0	0	0	0	0
59	Phasi Charoen 2	PSN2	0	0	0	0	0	0	0	0	0	0	0	0	30
60	Bang Phlat 1	BGT1	0	0	0	0	0	0	0	0	0	30	30	30	60
61	Bang Phlat 2	BGT2	0	0	0	0	0	0	0	0	0	0	0	0	60
62	Bang Phlat 3	BGT3	0	0	0	0	0	0	0	0	0	0	0	0	0
63	Bang Bue Thong 1	BBT1	0	0	0	0	0	0	0	0	0	0	0	0	0
64	Bang Bue Thong 2	BBT2	0	0	0	0	0	0	0	0	0	0	0	0	0
65	Charan Sanitwong 1	CSW1	0	0	0	0	0	0	0	0	0	0	0	0	30

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (18/20)

NO	Switch Unit Name	ABBR	105	106	107	108	109	110	111	112	113	114	115	116	117
			PKK1	PTT1	BANI	CWT1	MC1	MC2	MC3	MC4	13	KKTA	KKT1	PYTA	PLT3
66	Charan Sanitwong 2	CSW2	0	0	0	0	0	0	0	0	0	0	0	0	30
67	Bang Khae 1	BKE1	0	0	0	0	0	0	0	0	0	0	0	0	0
68	Bang Khae 2	BKE2	0	0	0	0	0	0	0	0	0	0	0	0	0
69	Nong Khaem 1	NGK1	0	0	0	0	0	0	0	0	0	0	0	0	30
70	Muban Settakit 1	MSK1	0	0	0	0	0	0	0	0	0	0	0	0	30
71	Dao khanong 1	DKN1	0	0	0	0	0	0	0	0	0	0	0	0	30
72	Dao khanong 2	DKN2	0	0	0	0	0	0	0	0	0	0	0	0	30
73	Phra Pradaeng 1	PPG1	0	0	0	0	0	0	0	0	0	0	0	0	0
74	Phra Pradaeng 2	PPG2	0	0	0	0	0	0	0	0	0	0	0	0	60
75	Ekkachai 1	EKC1	0	0	0	0	0	0	0	0	0	0	0	0	90
76	Ekkachai 2	EKC2	0	0	0	0	0	0	0	0	0	0	0	0	0
77	Rat Burana 1	RBN1	0	0	0	0	0	0	0	0	0	0	0	0	60
78	Phahonyothin 1	PYT1	0	0	0	0	0	0	0	0	0	0	30	277	60
79	Phahonyothin 2	PYT2	0	0	0	0	0	0	0	0	0	0	0	89	30
80	Phahonyothin T2	PYTT2	0	0	0	0	30	0	0	30	60	60	60	60	150
81	Inthamara 1	ITM1	0	0	0	0	0	0	0	0	0	0	0	120	30
82	Inthamara 2	ITM2	0	0	0	0	0	0	0	0	0	0	0	0	60
83	Bang Khen 1	BGN1	0	0	0	0	0	0	0	0	0	0	0	0	30
84	Bang Khen 2	BGN2	0	0	0	0	0	0	0	0	0	0	0	0	60
85	Lat Phrao 1-1	LTP1-1	0	0	0	0	0	0	0	0	0	0	0	120	0
86	Lat Phrao 1-2	LTP1-2	0	0	0	0	0	0	0	0	0	0	30	0	60
87	Lat Phrao 2-1	LTP2-1	0	0	0	0	0	0	0	0	0	0	0	90	0
88	Lat Phrao 2-1	LTP2-2	0	0	0	0	0	0	0	0	0	0	0	0	60
89	Don Muang 1	DNM1	0	0	0	0	0	0	0	0	0	0	0	0	30
90	Don Muang 2	DNM2	0	0	0	0	0	0	0	0	0	0	0	0	60
91	Thanyaburi 1	TYB1	0	0	0	0	0	0	0	0	0	0	0	0	0
92	Rangsit 1	RST1	0	0	0	0	0	0	0	0	0	0	0	0	0
93	Nawa Nakhon 1	NWN1	0	0	0	0	0	0	0	0	0	0	0	0	60
94	Bang Su 1	BGS1	0	0	0	0	0	0	0	0	0	30	0	120	30
95	Bang Su 2	BGS2	0	0	0	0	0	0	0	0	0	0	0	0	30
96	Ngam Wong Wan 1	NWW1	0	0	0	0	0	0	0	0	0	0	0	0	0
97	Ngam Wong Wan 2	NWW2	0	0	0	0	0	0	0	0	0	0	0	0	60
98	Nonthaburi 1	NTB1	0	0	0	0	0	0	0	0	0	0	0	90	0
99	Nonthaburi 2	NTB2	0	0	0	0	0	0	0	0	0	0	0	0	0
100	Lak Si 1	LKS1	0	0	0	0	0	0	0	30	0	0	0	0	0
101	Lak Si T4	LKST4	360	210	120	420	0	30	30	30	60	0	60	60	120
102	Lak Si 2	LKS2	0	0	0	0	0	0	0	30	0	0	0	0	0
103	Ram Inthra 1	RIT1	0	0	0	0	0	0	0	0	0	0	0	0	30
104	Ram Inthra 2	RIT2	0	0	0	0	0	0	0	0	0	0	0	0	0
105	Pak Kret 1	PKK1	0	60	0	0	0	0	0	0	0	0	0	0	30
106	Pathum Thani 1	PTT1	60	0	0	0	0	0	0	0	0	0	0	0	0
107	Bang Phun 1	BANI	0	0	0	0	0	0	0	0	0	0	0	0	0
108	Chaeng Watthana 1	CWT1	0	0	0	0	0	0	0	0	0	0	0	0	60
109	Krung Kasem T(XB)	KKTA	0	0	0	0	30	0	0	0	30	0	30	60	90
110	Krung Kasem T1	KKT1	0	0	0	0	30	30	0	0	60	60	0	90	60
111	Phahonyothin T(XB)	PYTA	0	0	0	0	0	0	0	30	30	120	90	0	90
112	Phloen Chit T3	PLT3	0	0	0	0	30	30	0	0	60	60	60	90	0
113	Thon Buri T(XB)	TNBTA	0	0	0	0	0	0	30	0	30	60	60	60	90
114	Surawong T(XB)	SWTA	0	0	0	0	30	30	0	0	15	90	60	90	60
115	Lak Si TC	LSTC	30	0	0	30	0	0	0	0	0	0	90	0	0
116	Phra Khanong TC	PNTC	0	0	0	0	0	0	0	0	0	0	0	30	0
117	Lat Ya TC	LYTC	0	0	0	0	0	0	0	0	0	0	0	0	150
118	Lak Si International	LSIT	0	0	0	0	0	0	0	0	0	0	60	0	0
119	Phra Khanong Internatio	PNIT	0	0	0	0	0	0	0	0	0	0	0	30	0
120	Lat Ya International	LYIT	0	0	0	0	0	0	0	0	0	0	0	0	120
	Total		450	270	120	450	210	180	90	150	579	1,548	2,070	1,806	7,860

13-2 The Number of Circuits Between Exchanges in BMA in 1992 (19/20)

NO	Switch Unit Name	ABBR	118	119	120	121	122	123	124	125	Total
			TNBT	SWTA	LSTC	PNTC	LYTC	LSIT	PNIT	LYIT	
1	Phloen Chit 1	PNC1	0	0	0	0	30	0	0	0	874
2	Phloen Chit 2	PNC2	0	0	0	0	30	0	0	0	787
3	Phloen Chit 3	PNC3	0	0	0	0	150	0	0	90	2,880
4	Asok Din Daeng 1	ASD1	0	0	0	30	0	0	0	0	660
5	Asok Din Daeng 2	ASD2	0	0	0	60	0	0	0	0	1,710
6	Sukhumwit 1	SKW1	0	0	0	0	90	0	0	30	2,460
7	Samran Rat 1	SRR1	30	30	0	0	0	0	0	0	651
8	Samran Rat 2	SRR2	30	30	0	0	0	0	0	0	720
9	Samran Rat 3	SRR3	30	30	30	0	0	0	0	0	721
10	Samran Rat 4	SRR4	0	0	60	0	0	0	0	0	1,410
11	Krung Kasem 2	KKM2	0	0	30	0	0	0	0	0	858
12	Krung Kasem 3	KKM3	60	90	60	0	0	30	0	0	1,380
13	Samsen 1	SMS1	0	0	0	0	0	0	0	0	390
14	Samsen 2	SMS2	0	0	0	0	0	0	0	0	990
15	Pathum Wan 1	PTW1	0	30	0	0	0	0	0	0	330
16	Pathum Wan 2	PTW2	0	0	60	0	0	0	0	0	840
17	Surawong 1	SRW1	0	204	0	0	30	0	0	30	964
18	Surawong 2	SRW2	0	155	0	0	30	0	0	30	941
19	Surawong 3	SRW3	0	181	0	0	30	0	0	30	933
20	Surawong 4	SRW4	0	60	0	0	60	0	0	120	1,710
21	Surawong 5	SRW5	0	30	0	0	0	0	0	0	390
22	Chaiyaphruk 1	CYP1	0	0	0	30	0	0	0	0	690
23	Chaiyaphruk 2	CYP2	0	0	0	30	0	0	0	0	660
24	Phra Khanong 1	PKG1	0	0	0	30	0	0	30	0	330
25	Phra Khanong 2	PKG2	90	60	0	240	0	0	120	0	11,100
26	On Nul 1	ONT1	0	0	0	0	0	0	0	0	540
27	Trok Chan 1	TKC1	30	150	0	0	0	0	0	0	445
28	Trok Chan 2	TKC2	0	0	0	0	0	0	0	0	450
29	Thung Mahamek 1	TMM1	0	150	0	0	0	0	0	0	277
30	Thung Mahamek 2	TMM2	0	0	0	0	0	0	0	0	210
31	Sathupradit 1	STD1	0	90	0	0	0	0	0	0	150
32	Sathupradit 2	STD2	0	0	0	0	0	0	0	0	420
33	Thanon Tok 1	TNT1	0	120	0	0	0	0	0	0	270
34	Thanon Tok 2	TNT2	0	0	0	0	30	0	0	0	480
35	Khlong Toei 1	KTH1	0	0	0	0	30	0	0	0	660
36	Hua Mak 1	HAM1	0	0	0	0	0	0	0	0	480
37	Hua Mak 2	HAM2	0	0	0	60	0	0	0	0	1,170
38	Khlong Chan 1	KGC1	0	0	0	0	0	0	0	0	510
39	Khlong Chan 2	KGC2	0	0	0	30	0	0	0	0	600
40	Khlong Chan 3	KGC3	0	0	0	0	0	0	0	0	180
41	Ramkarnhaeng 1	RKH1	0	0	0	0	0	0	0	0	180
42	Bang Chan 1	BGC1	0	0	0	0	0	0	0	0	480
43	Lat Krabang 1	LKG1	0	0	0	0	0	0	0	0	270
44	Bang Na 1	BNA1	0	0	0	0	0	0	0	0	523
45	Bang Na 2	BNA2	0	0	0	30	0	0	0	0	480
46	Bang Na 3	BNA3	0	0	0	0	0	0	0	0	210
47	Samut Prakan 1	SPK1	0	0	0	0	0	0	0	0	180
48	Samut Prakan 2	SPK2	0	0	0	0	0	0	0	0	150
49	Samut Prakan 3	SPK3	0	0	0	0	0	0	0	0	180
50	Bang Pu 1	BPU1	0	0	0	0	0	0	0	0	150
51	Pu Chao Saming Phrai 1	PSP1	0	0	0	0	0	0	0	0	525
52	Pu Chao Saming Phrai 2	PSP2	0	0	0	0	0	0	0	0	510
53	Bang Phli 1	BPL1	0	0	0	0	0	0	0	0	480
54	Bang Phli 2	BPL2	0	0	0	0	0	0	0	0	150
55	Bang Phli Bang Bo 1	BBB1	0	0	0	0	0	0	0	0	150
56	Thon Buri 1	TNB1	167	0	0	0	0	0	0	0	536
57	Lat Ya T8	LTYT8	90	90	0	0	210	0	0	60	6,780
58	Phasi Charoen 1	PSN1	174	0	0	0	0	0	0	0	209
59	Phasi Charoen 2	PSN2	0	0	0	0	30	0	0	0	300
60	Bang Phlat 1	BGT1	90	30	0	0	0	0	0	0	600
61	Bang Phlat 2	BGT2	0	0	0	0	30	0	0	0	1,230
62	Bang Phlat 3	BGT3	0	0	0	0	0	0	0	0	150
63	Bang Bue Thong 1	BBT1	0	0	0	0	0	0	0	0	210
64	Bang Bue Thong 2	BBT2	0	0	0	0	0	0	0	0	90
65	Charan Sanitwong 1	CSW1	150	0	0	0	0	0	0	0	300