

1. 国内電気通信



I - 1 加入電話需要予測方法

この基本計画の加入電話需要予測は次の方法によった。

(1) 基礎資料

次の資料を需要予測の基礎資料として用いた。

- (a) 人口統計資料として「PROYECCION DE LA POBLACION DEL PARAGUAY POR SEXO Y GRUPOS DE EDADES 1950-2025」の数値(表A I - 1 参照)
- (b) ANTELCOがAsunción 地域について行った電話需要予測(1980-1987)の結果

(2) 全国マクロ需要

上記の基礎資料を用いて、次の方法で予測した。

- (a) ANTELCO が予測したAsunción の各局の需要数(1980-1987)の合計の90%をAsunción のマクロ予測値(仮)とする。(表A I - 2 参照)
- (b) (a)項で求めた値から、1981-1997年のAsunciónのマクロ需要数を予測する。(表A I - 3 参照)
- (c) Asunción の人口及び人口集中率を予測する。(表A I - 4 参照)
- (d) (b)で求めたAsunción のマクロ需要数を(c)で求めた人口集中率で除し、その90%を全国マクロ需要数(仮)とする。
- (e) Asunción を除く地域の需要数(仮)を求める。
- (f) Asunción とAsunción以外の地域の経済格差(ANTELCO の意見により5:1とする)を考慮し、(e)項で求めた値を補正する。
- (g) (b)項で求めた値と(f)項で求めた値を合計して全国マクロ需要数を求める。

(3) 局別需要数(Asunción)

次の方法によりAsunción 地域の局別需要数を求めた。

- (a) ANTELCO が予測した局別需要数の比率を用いて、Asunción マクロの需要数を局別に配分する。
- (b) 配分した値を個々に検討・補正して局別需要数を求める。

(4) 局別需要数 (Asunción 以外)

次の方法により局別需要数を求めた。

- (a) 全国マクロ需要数を県別配分比により県別に配分し、県別需要数を求める。(表A1-5 参照)
- (b) 県別配分比は1972年及び1977年の県別人口から直線回帰により求める(表A1-6 参照)
- (c) 県別需要数を局別配分比(表A1-7)により局別に配分する。
- (d) 局別配分比は1981年11月の加入数比を用いる。
- (e) (c)項で配分した値を検討・補正して局別需要数を求める。

表A1-1 パラグアイ国の人口

(PROYECCION DE LA POBLACION DEL PARAGUAY POR SEXO Y GRUPOS DE EDADES 1950 - 2025)

Year	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Population (x 1,000)	1479	1522	1538	1549	1567	1595	1633	1678	1727	1778

Year	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Population (x 1,000)	1829	1878	1926	1973	2019	2066	2116	2169	2227	2290

Year	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Population (x 1,000)	2359	2433	2513	2598	2686	2779	2873	2970	3068	3168

Year	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Population (x 1,000)	3263	3370	3473	3576	3661	3788	3897	4007	4118	4231

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Population (x 1,000)	4344	4459	4574	4690	4807	4926	5047	5168	5289	5405

表 A I - 2 Asunción 地域の電話需要数 (1980 - 1987 年)

Year	1980	1981	1982	1983	1984	1985	1986	1987
(1) Total of telephone demands for each telephone office through the Asunción area (forecasted by ANTELCO)	62970	70224	78380	87254	97473	106900	117207	128531
Telephone demands through the Asunción area (tentative) (1) x 0.9	56673	63202	70542	78529	87726	96210	105486	115678

表 A I - 3 Asunción 地域の電話需要数 (1980 - 1997 年)

Telephone demands through the Asunción area	1980	1981	1982	1983	1984	1985	1986	1987	1988
	56632	63254	70540	78531	87265	96771	107076	118193	130129
	1989	1990	1991	1992	1993	1994	1995	1996	1997
	142875	156408	170690	185666	201266	217403	233974	250866	267955

Equation $Y = \frac{553630}{1 + 8.776e^{-0.1171x}}$ (data: 1980 ~ 1985, Year 1980: x=0)

表 A 1 - 4 Asuncion 地域の人口集中度

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Population through the country (x:1000)	3263	3370	3473	3576	3681	3788	3897	4007	4118	4231	4344	4459	4574	4690	4807	4926	5047
Population through the Asunción area (x 1000)	669	690	712	734	758	782	807	832	859	886	914	942	972	1002	1033	1065	1098
Population concentration ratio to the Asunción area (%)	20.5	20.5	20.5	20.5	20.6	20.6	20.7	20.8	20.9	20.9	21.0	21.1	21.3	21.4	21.5	21.6	21.8

Population through the Asunción area $Y = \frac{10577.9}{1 + 14.3369e^{-0.033778x}}$ (data: 1982 ~ 1990, Year 1980: x=0)

表 A 1 - 5 "Departamento" 別電話需要数

No.	"Departamento"	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
001	Concepción	2081	2322	2580	2866	3163	3486	3840	4210	4593	5003	5426	5863	6388	6766	7217	7669	8127
002	San Pedro	3154	3519	3911	4344	4795	5284	5821	6302	6962	7503	8225	8885	9561	10253	10937	11622	12314
003	Cordillera	2940	3281	3645	4048	4470	4925	5425	5949	6489	7067	7666	8283	8912	9556	10194	10831	11477
004	Guairá	1974	2203	2446	2718	3000	3307	3644	3994	4358	4744	5147	5560	5985	6417	6845	7272	7706
005	Caaguazú	5308	5922	6580	7309	8069	8892	9793	10738	11714	12759	13839	14950	16088	17252	18403	19554	20720
006	Caazapá	1694	1892	2102	2335	2577	2840	3129	3431	3743	4076	4421	4777	5139	5513	5880	6247	6619
007	Itapúa	4987	4917	5463	6070	6700	7384	8131	8917	9726	10595	11491	12416	13357	14326	15282	16237	17205
008	Misiones	1201	1341	1489	1655	1827	2012	2216	2431	2652	2888	3133	3386	3643	3906	4166	4428	4692
009	Paraguarí	3275	3654	4058	4509	4976	5485	6041	6624	7226	7870	8536	9223	9923	10643	11353	12062	12781
010	Alto Paraná	4108	4582	5092	5656	6243	6880	7579	8308	9065	9872	10709	11569	12448	13351	14241	15131	16033
011	Central	6442	7108	7907	8073	9794	10794	11009	13034	14219	15400	16800	18150	19528	20943	22340	23738	25152
012	Ñemencú	1424	1591	1766	1963	2167	2388	2629	2883	3146	3427	3716	4015	4321	4634	4943	5251	5565
013	Itambay	2061	2298	2556	2838	3134	3453	3803	4169	4548	4954	5374	5886	6246	6698	7146	7593	8044
014	Canendiyú	989	1105	1227	1363	1504	1657	1827	2002	2184	2380	2582	2788	3000	3218	3432	3648	3864
015	Pto. Hayes	826	921	1023	1137	1254	1383	1523	1671	1822	1985	2153	2327	2504	2684	2864	3043	3224
016	Alto Paraguay	283	316	351	389	430	474	521	572	625	680	737	797	858	921	982	1043	1105
017	Chaco	13	13	15	17	20	22	23	25	28	30	34	35	39	42	44	47	51
018	Rva. Asunción	3	3	3	3	5	5	5	6	6	6	8	8	8	10	10	10	11
019	Boqueron	232	260	287	319	353	389	428	470	513	559	605	654	703	754	805	856	907
	Ex-p. Total	42415	47348	52581	58412	64481	71060	78268	85816	93619	101966	110602	119493	128571	137887	147084	156281	165597
020	Asunción*	63254	70540	78541	87205	96771	107076	118193	130129	142875	156408	170690	185600	201266	217403	233974	250866	268070
	Grand Total	105669	117868	131112	145677	161252	178136	196461	215945	236494	258374	281292	305159	329837	355290	381058	407147	433552

* Including I. de la Plata, Lambare

表 A 1 - 6 電話需要配分比 ("Departamento" 別)

No.	"Departamento"	1972		1977		Liner equation	Telephone demands distribution ratio (Population ratio in 1981)
		Population	Ratio	Population (forecast)	Ratio		
001	Concepción	108,130	0.0549162	125,242	0.0516669	$Y = -0.00064986x + 0.05556606$	0.049067
002	San Pedro	138,018	0.0700955	175,655	0.0724641	$Y = 0.00047372x + 0.06962178$	0.074358
003	Cordillera	194,218	0.0986380	199,602	0.0823432	$Y = -0.00325896x + 0.10189696$	0.069307
004	Guairá	124,799	0.0633820	130,958	0.0540250	$Y = -0.0018714x + 0.0652534$	0.046539
005	Cuagazú	202,596	0.1028920	279,347	0.1152400	$Y = 0.0024696x + 0.1004224$	0.125118
006	Cuazapá	103,139	0.0523814	110,271	0.0454908	$Y = -0.00137812x + 0.05375952$	0.039978
007	Itapúa	201,411	0.1022910	250,117	0.1031820	$Y = 0.0001782x + 0.1021128$	0.103894
008	Misiones	69,246	0.0351681	76,044	0.0313709	$Y = -0.00075944x + 0.03592754$	0.028333
009	Paraguari	211,977	0.1076570	219,906	0.0907193	$Y = -0.00338754x + 0.11104454$	0.077169
010	Alto Paraná	69,044	0.0350655	168,162	0.0693730	$Y = 0.0068615x + 0.028204$	0.096819
011	Central	310,390	0.1576380	374,370	0.1544410	$Y = -0.0006394x + 0.1582774$	0.151883
012	Ñeembucú	73,098	0.0371244	85,254	0.0351704	$Y = -0.0003908x + 0.037512$	0.033607
013	Amambay	65,111	0.0330681	101,048	0.0416860	$Y = 0.00172358x + 0.03134452$	0.048580
014	Canendiyú	27,825	0.0141315	46,655	0.0192469	$Y = 0.00102308x + 0.01310842$	0.023339
015	Pte. Hayes	42,338	0.0215023	49,386	0.0203735	$Y = -0.00022576x + 0.02172806$	0.019470
016	Alto Paraguay	15,080	0.0076587	17,243	0.0071134	$Y = -0.00010907x + 0.00776779$	0.006677
017	Chaco	656	0.0003332	769	0.0003172	$Y = -0.0000031848x + 0.0003363488$	0.000304
018	Nva. Asunción	153	0.0000777	179	0.0000738	$Y = -0.00000077208x + 0.00007847658$	0.000070
019	Boquerón	11,768	0.0059766	13,817	0.0057000	$Y = -0.000055324x + 0.006031964$	0.005478
	Total	1,968,997		2,424,025			

表A 1-7 局別電話需要配分比

Telephone office	Distribution ratio	Telephone office	Distribution ratio
CONCEPCION	0.916830	ATYRA	0.022300
HORQUETA	0.054158	CARAGUATAY	0.019953
LORETO	0.005802	COL. 1º DE MARZO	0.002346
PASO BARRETO	0.019342	EUSEBIO AYALA	0.112675
PASO HORQUETA	0.003868	ISLA PUCU	0.011736
ITAC. DEL ROSARIO	0.178151	ITAC. DELA CORDILLERA	0.037558
VILLA DEL ROSARIO	0.115966	LOMA GRANDE	0.001173
COL GRAL AQUINO	0.031932	MBOCAYATY	0.002346
STA. CLARA	0.015126	PIRIBEBUY	0.115023
SAN ESTANISLAO	0.270599	SAN BERNARDINO	0.217135
TACUARAS	0.008403	STA. ELENA	0.005868
FELIPE MATIAUDA	0.008403	TOBATI	0.083332
COL LIBERACION	0.001680	EMBOSCADA	0.011736
GUAYAYBI	0.006722	NUEVA COLOMBIA	0.001173
COL. CHORE	0.016806	VILLARRICA	0.854730
COL. VOLENDAM	0.008403	COL. INDEPENDENCIA	0.077574
VILLA DE SAN PEDRO	0.267226	COL. MAURICIO J. TROCHE	0.001410
COL. SAN PABLO	0.001680	COL. MOISES S. BERTONI	0.004231
COL RIO VERDE	0.001680	CNEL. MARTINES	0.002820
CORORO	0.006722	EUGENIO A. GARAY	0.001410
JEJUI	0.005042	ITURBE	0.038081
LIMA	0.016806	ITAPE	0.001410
NUEVA GERMANIA	0.008403	FELIX PEREZ CARDOZO	0.001410
PTO. ANTEQUERA	0.016806	MBOCAYATY	0.004231
STA. ROSA	0.010084	ÑUMI	0.002820
TACUATI	0.001680	SAN SALVADOR	0.009873
COL SUSANA	0.001680	CNEL. OVIEDO	0.616345
CAACUPE	0.335694	CAAGUAZU	0.253360
ALTOS	0.008215	CAMPO 9	0.031023
ARROYOS Y ESTEROS	0.011736	CARAYAO	0.002066

Telephone office	Distribution ratio	Telephone office	Distribution ratio
COL. CECILIO BAES	0.003102	SAN COSME Y DAMIAN	0.001122
HUGO STROESSNER	0.002068	SAN PEDRO DEL PARANA	0.011229
JUAN M. FRUTOS	0.020682	STA. ROSA DE LIMA	0.000561
LA PASTORA	0.001034	S.J. BAUTISTA MISIONES	0.247491
SAN JOSE DE LOS ARROYOS	0.040330	ARAZAPE	0.001672
COL. REPATRIACION	0.004136	AYOLAS	0.026755
COL. JUAN RAMON CHAVES	0.009307	ITA YURU	0.005016
MBUTUY	0.002068	SAN ANTONIO MISIONES	0.001672
PASO YOBAY	0.005170	SAN IGNACIO	0.277598
CAAZAPA	0.433335	SAN MIGUEL	0.010033
MACIEL	0.016666	SAN PATRICIO	0.005016
SJ. NEPOMUCENO	0.308333	STA. MARIA	0.001672
YEGROS	0.108333	STA. ROSA MISIONES	0.100334
YUTY PUEBLO	0.108333	SANTIAGO	0.010033
GRAL. MORINIGO	0.025000	VILLA FLORIDA	0.095317
ENCARNACION	0.766434	YABEBYRY	0.001672
CAMBYRETA	0.001122	YACYRETA	0.215719
CAPT. MESA	0.002245	PARAGUARI	0.316055
CAPT. MIRANDA	0.006176	ACAHAY	0.029173
CARMEN DEL PARANA	0.015721	CAAPUCU	0.019448
COL. BELLA VISTA	0.020213	CABALLERO	0.011345
COL. FRAM	0.005614	CARAPEGUÀ	0.160453
COL. HOHENAU	0.048287	COL. CESAR BARRIENTOS	0.003241
COL. OBLIGADO	0.019090	ESCOBAR	0.003241
COL. PIRAPO	0.023582	LA COLMENA	0.030794
CNEL. BOGADO	0.057832	PIRAYU	0.032414
GRAL. ARTIGAS	0.007299	QUINDY	0.084278
GRAL. DELGADO	0.003930	QUYQUYHO	0.003241
JESUS	0.000561	RCQUE GONZALES DE STA. CRUZ	0.008103
LA PAZ	0.007860	SAPUCAI	0.016207
SALITRE CUE	0.001122		

Telephone office	Distribution ratio	Telephone office	Distribution ratio
VALLE APUA	0.003241	LIMPIO	0.016798
YAGUARON	0.158833	M.R. ALONSO	0.074158
YBYCUI	0.108589	ZEBALLOS CUE	0.003822
YBYTYMI	0.004862	ALBERDI	0.178294
MBUYAPEY	0.004862	VALLE PUCU	0.007751
CERRO LEON	0.001620	PILAR	0.771327
CDAD. PTE. STROESSNER	0.703056	COL. VICE PTE. SANCHES	0.003875
COL. YGUAZU	0.012562	GRAL. DIAZ	0.005813
HERNANDARIAS	0.147714	HUMAITA	0.009689
JUAN E. O'LEARY	0.010396	ISLA UMBU	0.001937
JUAN. L. MALLORQUIN	0.010396	ITA CORA	0.003875
PTO. PTE. FRANCO	0.04635	LAURELES	0.009689
COL. PTE. STROESSNER	0.04635	MAYOR MARTINES	0.003875
KM 6 RUTA 7	0.01545	PASO DE PATRIA	0.003875
STA. ROSA	0.007725	PJ. CABALLERO	0.853322
AREGUA	0.052370	BELLA VISTA NORTE	0.058118
CAPIATA	0.072629	CAPT. BADO	0.072878
COL. NUEVA ITALIA	0.001911	CRUSE BELLA VISTA	0.001845
GUARAMBARE	0.019495	CHIRIGUELO	0.009225
ITA	0.075687	YBY YAU	0.004612
LUQUE	0.227451	SALTOS DEL GUAIRA	0.881131
NEMBY	0.003822	VILLA CURUGUATY	0.080102
PIQUETE CUE	0.001911	CORPUS CRISTI	0.038767
SAN ANTONIO	0.034021	PUERTO COLON	0.006578
SAN LORENZO	0.270642	VILLA HAYES	0.644741
VALLE PUCU	0.000764	BENJAMIN ACEVAL	0.289473
VILLETA	0.037079	CHACO-1	0.039473
YPANE	0.001911	TACUARAS	0.013157
YBYPOJHY-1	0.001528	25 LENGUAS	0.006578
ZANJITA	0.000382	BAHIA NEGRA	1.0000
YPACARAI	0.056957	COL. FILADELFIA	1.0000
ITAUGUA	0.046660		

表 A I - 8 自動車台数予測 (乗用車, バス, シーズ)

(単位: 1,000 台)

Year	1979	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
"Departamento"																
Asunción	70.7	103.9	114.3	125.6	138.1	151.7	166.5	182.6	200.3	219.6	240.6	263.5	288.5	315.7	345.4	377.4
Central	34.4	50.6	55.6	61.1	67.2	73.8	81.0	88.9	97.5	106.9	117.1	128.2	140.4	153.6	168.1	183.7
Sub-total	105.1	154.5	169.9	186.7	205.3	225.5	247.5	271.5	297.8	326.5	357.7	391.7	428.9	469.3	513.5	561.1
Cordillera	5.6	8.2	9.0	9.9	10.9	12.0	13.1	14.4	15.8	17.3	19.0	20.8	22.8	24.9	27.3	29.8
Caaguazú	2.6	3.8	4.2	4.6	5.0	5.5	6.1	6.6	7.3	8.0	8.8	9.6	10.5	11.5	12.6	13.7
Guairá	1.2	1.7	1.9	2.1	2.3	2.5	2.8	3.0	3.3	3.6	4.0	4.4	4.8	5.2	5.7	6.3
Alto Paraná	8.3	12.2	13.4	14.8	16.2	17.8	19.6	21.5	23.6	25.8	28.3	31.0	33.9	37.1	40.6	44.4
Paraguari	3.2	4.7	5.2	5.7	6.2	6.9	7.5	8.2	9.0	9.9	10.9	11.9	13.0	14.3	15.6	17.0
Misiones	1.6	2.3	2.5	2.8	3.1	3.4	3.7	4.0	4.4	4.9	5.3	5.8	6.4	7.0	7.6	8.4
Itapúa	4.6	6.8	7.2	8.2	9.1	10.0	10.9	12.0	13.2	14.4	15.8	17.3	18.9	20.7	22.7	24.8
Cauazapá	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.8	0.8	0.9
Neembucú	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.7
San Pedro	0.4	0.6	0.7	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.6	1.7	1.9	2.0	2.2
Concepción	1.1	1.6	1.7	1.9	2.1	2.3	2.5	2.7	3.0	3.3	3.6	4.0	4.3	4.8	5.2	5.7
Anambay	2.5	3.6	4.0	4.4	4.8	5.3	5.8	6.4	7.0	7.7	8.4	9.2	10.1	11.0	12.1	13.2
Canendiyú	0.5	0.8	0.8	0.9	1.0	1.1	1.2	1.4	1.5	1.6	1.8	2.0	2.1	2.3	2.6	2.8
Region Occidental	5.1	7.4	8.2	9.0	9.9	10.9	11.9	13.1	14.3	15.7	17.2	18.9	20.7	22.6	24.7	27.0
Total	142.1	208.7	229.2	252.2	277.3	304.8	334.3	366.7	402.3	440.9	483.3	529.3	579.3	634.0	693.6	758.0

Estimation formula: Automobiles number α (Population x PIB per capita)

Population: Refer to Table A I-1.

$$\text{PIB per capita: } P = \frac{297,260}{1 + 897.82e^{-0.065742t}} \quad (\text{Unit: US\$ Fixed price in 1972})$$

Where $t = 0$ in 1974

表A I - 9 加入電話回線数 (1 / 21)

* NO. 2001001 CENTRAL 2 (1)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 11646 12860 14091 15576 17069 18743 20575 23163 26029 28621 32034 35550 39307 43213 47299 51625 56280

* NO. 2001002 CENTRAL 29 (2)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 1916 2136 2358 2628 2919 3231 3581 4061 4552 5207 5831 6497 7228 8020 8862 9753 10720

* NO. 2001003 CENTRAL 30 (3)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 3687 4272 4896 5648 6572 7519 8591 10059 11759 13795 16304 18922 21720 24677 27789 31059 34572

* NO. 2001004 CENTRAL 35 (4)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 813 1015 1238 1576 1898 2268 2775 3351 4030 4945 5831 6984 8313 9624 11078 12923 15008

* NO. 2001005 CENTRAL 1 (5)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 12317 13566 14799 16227 17809 19458 21216 23765 26601 29546 32511 35732 39033 42707 46526 50227 53332

* NO. 2001006 CENTRAL 5 (6)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 1964 2187 2420 2692 2993 3314 3668 4164 4721 5336 5977 6659 7408 8221 9083 9997 10988

* NO. 2001007 CENTRAL 50 (7)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 2635 2936 3243 3613 4014 4445 4921 5618 6287 7159 8018 8933 9938 11027 12185 13410 14740

* NO. 2001008 CENTRAL 6 (8)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 5858 6572 7261 8075 8979 9931 11008 12491 14164 16009 17932 19978 22227 24662 27251 29990 32964

* NO. 2001009 CENTRAL 67 (9)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 1964 2187 2420 2692 2994 3311 3668 4164 4721 5336 5977 6659 7408 8221 9083 9997 10988

* NO. 2001010 CENTRAL 7 (10)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 1963 2190 2419 2692 2991 3313 3669 4164 4721 5343 5985 6667 7418 8230 9083 9997 10988

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**** Subscribers ****

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* NO. 2001001 CENTRAL 8 (11)
(1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
3112 3471 3887 4268 4743 5252 5818 6697 7539 8460 9476 10557 11746 13034 14400 15848 17420

**** Subscribers total ****(11) tel. offices ****

(1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
47875 53392 58982 65687 72981 80785 89490 101697 115124 129757 145876 163138 181746 201636 222639 244826 268000

* NO. 0106001	CONCEPCION															(1)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
474	532	594	663	735	813	900	1198	1537	1925	2360	2844	3376	3949	4586	5258	5979
* NO. 0106002	HORQUETA															(2)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
27	34	42	51	62	74	87	102	119	139	159	182	205	232	259	289	318
* NO. 0106003	LORETO															(3)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
3	3	4	6	7	8	9	10	13	15	17	19	23	24	28	31	34
* NO. 0106004	PASO BARRETO															(4)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
9	12	14	17	21	26	30	36	42	49	57	65	73	83	92	102	115
* NO. 0106005	PASO HORQUETA															(5)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	2	3	3	5	5	6	8	9	10	11	12	14	16	18	21	21
* NO. 0112006	CURUCE BELLA VISTA															(6)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	2	3	3	3	5	5	6	6	6	8	8	10	10	12	12	14
* NO. 0112007	YBY YAU															(7)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
9	12	14	17	21	26	30	36	42	49	57	65	73	83	92	102	115
* NO. 0209001	ITAC. DEL POSARIO															(8)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
106	117	128	140	152	166	180	247	323	412	509	619	741	875	1017	1171	1336
* NO. 0209005	SAN ESTANISLAO															(9)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
160	167	172	178	190	181	180	283	402	540	695	870	1065	1266	1511	1760	2030
* NO. 0214012	VILLA DE SAN PEDRO															(10)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
160	185	213	245	279	318	360	461	574	704	848	1008	1184	1375	1578	1796	2030

* NO. 0209002	VILLA DEL ROSARIO																(11)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
68	81	97	114	133	155	180	218	260	309	362	420	483	551	625	701	797	
* NO. 0209003	COL. GRAL. AQUINO																(12)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
18	21	25	30	35	40	45	57	69	82	97	113	131	151	172	192	216	
* NO. 0209004	SANTA CLARA																(13)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
8	10	13	16	19	23	28	33	38	44	50	58	66	73	82	92	101	
* NO. 0209006	TACUARAS(NORTE)																(14)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
5	6	8	9	11	13	16	19	21	25	29	33	37	41	46	53	57	
* NO. 0209007	FELIPE MATIAUDA																(15)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
5	6	8	9	11	13	16	19	21	25	29	33	37	41	46	53	57	
* NO. 0209008	COL. LIBERACION																(16)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	2	2	4	4	4	4	6	6	6	8	10	10	11	
* NO. 0209009	GUAYABI																(17)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
3	4	5	6	8	10	12	14	17	19	22	25	29	33	36	41	46	
* NO. 0209010	COLONIA CHORE																(18)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
9	11	15	17	21	26	30	36	42	49	56	65	73	83	92	102	113	
* NO. 0209011	COL. VOLENDAN																(19)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
5	6	8	9	11	13	16	19	21	25	29	33	37	41	46	53	57	
* NO. 0214013	COL. SAN PABRO																(20)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	2	2	4	4	4	4	6	6	6	8	10	10	11	

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* NO. 0214014	COL. RIO VERDE															(21)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	2	2	4	4	4	4	6	6	6	8	10	10	11
* NO. 0214015	CORORO															(22)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
3	4	5	6	8	10	12	14	17	19	22	25	29	33	36	41	46
* NO. 0214016	JEJUI															(23)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
3	5	5	6	7	9	9	12	14	15	18	20	23	24	28	31	34
* NO. 0214017	LIMA															(24)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
9	11	15	17	21	26	30	36	42	49	56	65	73	83	92	102	113
* NO. 0214018	NUEVE SELMANIA															(25)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
5	6	8	9	11	13	16	19	21	25	29	33	37	41	46	53	57
* NO. 0214019	PTO. ANTEQUERA															(26)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
9	11	15	17	21	26	30	36	42	49	56	65	73	83	92	102	113
* NO. 0214020	SANTA ROSA															(27)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
6	7	9	11	13	16	19	22	25	29	34	39	45	49	56	62	67
* NO. 0214012	TACUATI															(28)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	2	2	4	4	4	4	6	6	6	8	10	10	11
* NO. 0214022	COL. SUSANA															(29)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	2	2	4	4	4	4	6	6	6	8	10	10	11
* NO. 0303001	CAACUPE															(30)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
286	339	398	466	540	625	720	895	1093	1315	1564	1838	2136	2459	2806	3175	3568

* NO. 0303007	EUSEBIO AYALA															(31)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
95	107	119	132	147	163	180	240	307	386	473	569	676	794	918	1053	1199
* NO. 0303012	PRIBEBUY															(32)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
98	110	121	135	149	164	180	241	311	390	479	579	687	808	935	1075	1222
* NO. 0303013	SAN BERNARDINO															(33)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
185	208	233	262	291	324	360	474	606	755	921	1108	1311	1535	1775	2032	2309
* NO. 0303002	ALTOS															(34)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
6	8	10	12	15	17	21	25	29	33	38	44	51	57	64	70	78
* NO. 0303003	ARROYOS Y ESTEROS															(35)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
9	11	14	17	21	25	30	36	41	48	56	64	72	81	91	101	112
* NO. 0303004	ATYRA															(36)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
18	23	28	34	41	49	58	68	80	93	106	122	137	155	174	192	213
* NO. 0303005	CARAGUATAY															(37)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
16	20	25	30	37	44	52	62	72	83	95	109	123	139	156	173	191
* NO. 0303006	COL. 1° DE MARSO															(38)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	2	3	3	5	5	6	8	8	10	11	13	14	16	18	21	23
* NO. 0303008	ISULA PUCU															(39)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
9	11	14	17	21	25	30	36	41	48	56	64	72	81	91	101	112
* NO. 0303009	ITAC. DE LA CORDILLERA															(40)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
31	39	48	59	70	84	100	117	136	156	181	205	232	263	292	324	360

表 A I-9

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* NO. 0303010	LOMA GRANDE		(41)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	2	2	2	3	4	4	5	6	6	8	8	10	10	11
* NO. 0303011	MBOCAYATY (STA. ELENA)		(42)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	2	3	3	5	5	6	8	8	10	11	13	14	16	18	21	23
* NO. 0303014	SANTA ELENA		(43)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
4	6	9	12	16	19	25	30	36	43	51	59	68	78	89	100	112
* NO. 0303015	TOBATI		(44)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
71	84	99	116	135	157	180	219	263	312	366	425	490	560	634	713	797
* NO. 0301016	EMBOSCADA		(45)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
9	11	14	17	21	25	30	36	41	48	56	64	72	81	91	101	112
* NO. 0301017	NUEVA COLOMBIA		(46)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	2	2	2	3	4	4	5	6	6	8	8	10	10	11
* NO. 0404001	VILLARRICA		(47)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
606	655	702	753	801	850	900	1229	1605	2037	2523	3062	3659	4316	5019	5775	6588
* NO. 0404002	COL. INDIPENDENCIA		(48)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
54	66	80	96	114	134	157	183	212	243	278	315	354	397	441	489	539
* NO. 0404003	COL. MAURICIO J. TROCHE		(49)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	2	2	3	3	4	4	5	6	6	7	8	9	9
* NO. 0404004	CNEL MARTINES		(50)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	3	3	3	4	5	6	7	8	9	11	11	13	15	16	18	20

表 A I-9

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* NO. 0404005	EUGENIO A. GARAY				(51)												
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	2	2	3	3	4	4	5	6	6	7	8	9	9	
* NO. 0404006	ITURBE				(52)												
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
27	33	40	48	56	67	78	91	104	120	136	154	174	196	217	240	265	
* NO. 0404007	ITAPE				(53)												
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	2	2	3	3	4	4	5	6	6	7	8	9	9	
* NO. 0404008	FELIX PEREZ CARDOZO				(54)												
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	2	2	3	3	4	4	5	6	6	7	8	9	9	
* NO. 0404009	MBOCAYATY				(55)												
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
3	3	4	5	7	7	9	10	12	13	15	17	19	22	24	26	29	
* NO. 0404010	NUMI				(56)												
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
2	3	3	3	4	5	6	7	8	9	11	11	13	15	16	18	20	
* NO. 0404011	SAN SALVADOR				(57)												
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
6	8	9	12	14	16	19	22	26	31	35	39	45	50	56	62	69	
* NO. 0505001	CNEL. OVIEDO				(58)												
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
595	662	733	813	894	983	1080	1455	1893	2373	2924	3536	4210	4951	5745	6599	7516	
* NO. 0505002	CAAGUAZU				(59)												
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
245	282	323	370	420	477	540	693	867	1063	1282	1526	1794	2086	2398	2732	3089	
* NO. 0505003	COMPO ?				(60)												
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
29	36	44	53	64	76	90	106	125	145	168	192	217	246	276	307	340	

表 A I-9

**** Subscribers ****

(9/21)

* NO. 0505004 CRAYAO (61)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 2 2 3 3 5 5 6 8 8 10 11 13 15 16 18 21 23

* NO. 0505005 COL. CECILIO BAES (62)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 3 3 4 6 7 7 10 11 12 15 17 19 22 24 28 31 34

* NO. 0505006 HUGO STROESSNER (63)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 1 3 5 9 12 16 21 27 32 40 48 57 66 76 87 99 112

* NO. 0505007 JUAN M FRUTOS (64)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 19 24 30 36 44 53 62 73 85 98 113 129 146 166 185 205 226

* NO. 0505008 LA PASTORA (65)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 1 1 1 2 2 2 4 4 4 5 6 6 8 8 8 10 12

* NO. 0505009 YHU (66)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 8 10 13 16 19 23 28 33 38 44 51 58 66 73 82 92 103

* NO. 0505010 SAN JOSE DE LOS ARROYOS (67)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 38 44 52 60 68 78 90 111 136 164 194 229 266 306 348 394 444

* NO. 0505011 COL. REPATRIACION (68)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 4 5 6 8 9 11 12 14 16 19 23 25 29 33 36 41 46

* NO. 0505012 COL. JUAN RAMON CHAVES (69)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 8 10 13 16 19 23 28 33 38 44 51 58 66 75 82 92 103

* NO. 0505013 NEUTUY (70)
 (1981) (1982) (1983) (1984) (1985) (1986) (1987) (1988) (1989) (1990) (1991) (1992) (1993) (1994) (1995) (1996) (1997)
 2 2 3 3 5 5 6 8 8 10 11 13 15 16 18 21 23

表 A I-9

**** Subscribers ****

(10/21)

* NO. 0504014 PASO YOBAY (71)		(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		5	7	8	10	12	14	17	19	22	25	29	33	37	42	46	48	57

* NO. 0604001 CAAZAPA (72)		(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		51	64	79	96	115	138	163	192	223	258	297	337	383	431	481	534	591

* NO. 0604002 MACIEL (73)		(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		2	2	3	3	5	5	6	8	8	10	11	13	15	16	18	21	23

* NO. 0604003 SAN JUAN NEPOMUCENO (74)		(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		37	42	49	56	63	72	81	101	125	151	180	213	249	288	329	373	421

* NO. 0606004 YEGROS (75)		(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		13	16	20	24	29	34	41	48	56	64	74	85	96	107	121	133	148

* NO. 0604005 YUTY PUERTO (76)		(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		13	16	20	24	29	34	41	48	56	64	74	85	96	107	121	133	148

* NO. 0604006 GENERAL MORINIGO (77)		(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		3	3	4	6	7	8	10	10	13	15	17	19	22	25	28	31	34

* NO. 0604007 COL. MOISES S. BERTONI (78)		(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		3	3	4	5	7	7	9	10	12	13	15	17	19	22	24	26	29

* NO. 0702001 ENCALNACION (79)		(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1363	1630	1932	2281	2667	3105	3600	4202	4861	5598	6398	7267	8201	9204	10254	11358	12526

* NO. 0702008 COL. HOENAU (80)		(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		86	98	111	127	142	160	180	216	257	302	352	408	466	531	599	671	748

* NO. 0702010	CNEL. BOGADO (81)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
103	123	147	175	205	239	278	320	367	419	475	536	599	668	741	815	895
* NO. 0702002	CAMBYRETA (82)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	2	3	3	4	5	5	6	7	8	10	10	12	12	14	16	17
* NO. 0702003	CAPITAN MEZA (83)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
4	4	5	7	8	9	11	13	14	16	18	20	24	26	28	32	35
* NO. 0702004	CAPITAN MIRANDA (84)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
11	13	16	19	22	26	29	34	40	45	51	57	65	71	90	87	96
* NO. 0702005	CARMEN DEL PARANA (85)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
28	34	40	47	55	64	75	87	100	114	129	146	163	182	201	222	243
* NO. 0702006	COL. BELLA VISTA (86)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
35	42	49	58	67	78	90	105	122	140	160	182	205	229	257	284	312
* NO. 0702007	COL. FRAM (87)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
10	12	14	17	19	22	27	30	35	40	46	52	58	64	71	80	87
* NO. 0702009	COL. PIRAPÓ (88)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
42	50	60	71	84	97	113	131	150	171	193	218	244	273	302	332	366
* NO. 0701011	GRAL. ARTIGAS (89)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
12	14	17	21	25	29	34	39	45	51	58	66	74	84	94	103	113
* NO. 0702012	GRAL DELGADO (90)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
7	8	10	12	14	16	19	22	26	28	32	37	41	45	50	56	61

表 A I-9

**** Subscribers ****

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* NO. 0702013	JESUS		(91)														
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	2	2	2	2	2	4	4	4	4	5	5	6	7	7	7	9	
* NO. 0702014	LA PAZ		(92)														
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
14	17	20	24	28	33	37	44	50	57	65	72	82	91	101	111	121	
* NO. 0702015	SALITRE CUE		(93)														
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
2	2	3	3	4	5	5	6	7	8	10	10	12	12	14	16	17	
* NO. 0702016	SAN COSME Y DAMIAN		(94)														
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
3	30	60	90	120	150	180	190	199	209	218	228	237	247	256	266	275	
* NO. 0702017	SAN PEDRO DEL PARANA		(95)														
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
20	24	29	34	40	47	54	62	71	81	92	104	116	130	144	158	174	
* NO. 0702018	SANTA ROSA DE LIMA		(96)														
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	2	2	2	2	2	4	4	4	4	5	5	6	7	7	7	9	
* NO. 0808001	S. J. BAUTISTA MISSIONES		(97)														
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
148	174	203	236	273	313	360	415	475	542	615	694	777	867	961	1059	1161	
* NO. 0808006	SAN IGNACIO		(98)														
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
165	191	217	248	281	319	360	423	492	569	654	745	844	950	1060	1178	1302	
* NO. 0808014	YACYPETA		(99)														
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
128	151	179	210	244	282	326	375	426	484	548	615	686	761	842	925	1012	
* NO. 0808002	ARAZAPE		(100)														
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	2	2	2	2	2	4	4	4	4	6	6	6	6	8	

* NO. 0808004	ITA YARU																(101)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
3	3	4	4	5	6	7	8	9	11	11	13	15	17	17	19	21	
* NO. 0808005	SAN ANTONIO MISSIONES																(102)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	2	2	2	2	2	4	4	4	4	6	6	6	6	8	
* NO. 0808007	SAN MIGUEL																(103)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
5	6	7	9	10	12	13	15	18	20	22	26	28	32	36	38	41	
* NO. 0808008	SAN PATRICIO																(104)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
3	3	4	4	5	6	7	8	9	11	11	13	15	17	17	19	21	
* NO. 0808009	SANTA MARIA																(105)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	2	2	2	2	2	4	4	4	4	6	6	6	6	8	
* NO. 0808010	SANTA ROSA MISSIONES																(106)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
59	69	81	93	109	125	143	164	184	208	235	262	291	322	355	389	424	
* NO. 0808011	SANTIAGO																(107)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
5	6	7	9	10	12	13	15	18	20	22	26	28	32	36	38	41	
* NO. 0808012	VILLA FLORIDA																(108)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
57	68	79	89	104	120	137	157	176	200	224	250	277	307	337	370	402	
* NO. 0808013	YABEBYRY																(109)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	2	2	2	2	2	4	4	4	4	6	6	6	6	8	
* NO. 0907001	PARAGUARI																(110)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
195	217	241	268	296	327	360	482	622	782	962	1161	1382	1624	1881	2160	2458	

* NO. 0907005	CARAPEGUA		(111)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
100	127	158	194	236	283	337	396	463	537	620	708	803	906	1013	1128	1248
* NO. 0907002	ACAHAY		(112)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
17	21	27	33	39	47	56	66	76	89	102	116	131	148	167	185	205
* NO. 0907003	CAAPUCU		(113)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
12	15	18	22	27	32	38	44	52	60	69	78	88	99	111	123	136
* NO. 0907004	CABALLERO		(114)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
6	8	10	12	15	18	21	25	29	34	40	45	51	57	64	72	80
* NO. 0907006	COL. CESAR BARRIENTOS		(115)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	2	3	3	4	5	6	8	9	10	11	13	15	16	18	21	23
* NO. 0907007	ESCOBAR		(116)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	2	3	3	4	5	6	8	9	10	11	13	15	16	18	21	23
* NO. 0907008	LA COLMENA		(117)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
19	24	29	36	43	50	60	71	82	95	109	124	141	157	176	195	216
* NO. 0907009	PIRAYU		(118)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
19	22	26	29	34	39	45	56	68	82	98	116	135	158	177	202	228
* NO. 0907010	QUINDY		(119)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
51	56	62	69	75	83	90	120	153	191	234	281	334	391	454	519	591
* NO. 0907011	QUYQUYHO		(120)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	2	3	3	4	5	6	8	9	10	11	13	15	16	18	21	23

表 A I-9

**** Subscribers ****

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* NO. 0907012	ROQUE GONZALEZ DE S. CRUZ (121)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
5	6	8	9	11	13	16	18	21	25	29	33	37	41	46	51	57
* NO. 0907013	SAPCAI (122)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
9	11	15	17	21	26	30	36	42	49	56	65	73	81	92	102	113
* NO. 0907014	VALLE APUA (123)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	2	3	3	4	5	6	8	9	10	11	13	15	16	18	21	23
* NO. 0907015	YAGUARON (124)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
98	110	122	135	149	164	180	242	312	392	484	584	694	815	946	1086	1236
* NO. 097016	YBYCUI (125)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
67	76	86	96	108	121	135	172	215	264	318	378	443	515	590	673	760
* NO. 0907018	MBUYAPEY (126)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
3	4	5	6	7	9	9	12	13	16	18	20	22	24	27	31	35
* NO. 0907019	CERRO LEON (127)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	2	2	4	4	4	4	6	6	6	8	10	10	11
* NO. 0907017	YBYTYMI (128)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
3	4	5	6	7	9	9	12	13	16	18	20	22	24	27	31	35
* NO. 1011005	JUAN L. MALLOROQUIN (129)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
23	27	31	35	41	47	53	61	69	77	86	96	107	118	129	142	153
* NO. 1011006	PTO. PTE. FRANCO (130)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
107	136	170	210	254	306	367	432	504	585	676	773	878	990	1110	1236	1370

表 A I-9

**** Subscribers ****

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* NO. 1011007	COL. PTE. STROESSNER (131)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
106	123	142	164	187	213	244	276	310	348	389	433	478	527	577	630	685
* NO. 1011001	CIUDAD PTE. STROESSNER (132)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1622	1853	2108	2395	2700	3040	3420	4026	4707	5457	6289	7190	8159	9205	10306	11465	12694
* NO. 1011003	HERNANDARIAS (133)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
340	370	402	436	470	504	540	658	791	940	1106	1287	1485	1699	1926	2167	2424
* NO. 1011002	COL. YGUAZU (134)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
29	36	43	52	61	73	85	101	116	134	153	174	194	219	243	268	297
* NO. 1011004	JUAN E. OLEARY (135)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
23	27	31	35	41	47	53	61	69	77	86	96	107	118	129	142	153
* NO. 1011008	KM 6 RUTA 7 (136)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
0	0	30	38	47	57	68	118	133	150	167	187	205	228	249	271	297
* NO. 1011009	SANTA ROSA (137)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
0	0	9	12	14	17	21	37	41	46	53	57	64	70	77	85	92
* NO. 1101001	AREGUA (138)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
136	145	153	161	168	174	180	257	345	448	563	691	833	990	1158	1339	1533
* NO. 1101002	CAPIATA (139)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
190	213	238	265	294	325	360	465	585	721	874	1042	1228	1430	1648	1879	2128
* NO. 1101005	ITA (140)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
198	221	244	271	298	328	360	470	595	738	898	1075	1269	1483	1710	1955	2217

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**** Subscribers ****

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* NO. 1101006 LUQUE		(141)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
595	716	855	1015	1191	1392	1620	1944	2304	2708	3154	3641	4169	4741	5343	5983	6662	

* NO. 1101009 SAN ANTONIO		(142)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
88	100	113	128	143	161	180	224	273	330	392	461	536	618	705	797	897	

* NO. 1101010 SAN LORENZO		(143)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
708	858	1029	1227	1447	1697	1980	2365	2791	3271	3797	4372	4995	5669	6377	7131	7929	

* NO. 1101012 VILLETA		(144)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
97	117	141	167	198	231	270	323	381	448	519	598	683	776	874	977	1086	

* NO. 1103016 YPACARAY		(145)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
149	175	204	237	273	314	360	442	533	636	751	876	1014	1162	1321	1490	1669	

* NO. 1101003 COL. NUEVA ITALIA		(146)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
2	3	4	6	7	9	11	14	17	19	23	27	31	35	40	45	50	

* NO. 1101004 GURAMBARE		(147)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
50	62	75	90	107	126	149	173	201	231	263	299	337	379	421	466	514	

* NO. 1101007 NEMBY		(148)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
9	11	14	16	20	24	28	33	38	45	51	58	65	74	83	91	101	

* NO. 1101008 PIQUETE CUE		(149)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
5	6	7	10	11	13	15	17	20	23	26	30	34	37	41	46	50	

* NO. 1101011 VALLE PUCU		(150)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
2	3	3	4	4	6	6	7	8	9	11	13	13	15	17	18	20	

表 A I-9

**** Subscribers ****

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* NO. 1101013	YPANE															(151)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
5	6	7	10	11	13	15	17	20	23	26	30	34	37	41	46	50
* NO. 1101014	YBYPOJHY-I															(152)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
3	4	5	6	7	9	10	13	15	17	20	23	25	29	32	37	40
* NO. 1103017	ITAUGUA															(153)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
50	60	72	84	99	115	135	162	192	226	264	306	350	398	450	503	562
* NO. 1101018	LIMPIO															(154)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
17	21	26	32	39	47	55	65	76	87	101	115	131	147	164	183	202
* NO. 1101015	M. R. ALONSO															(155)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
0	0	166	206	251	304	365	528	617	719	829	949	1079	1220	1367	1523	1686
* NO. 1101019	ZEBALLOS CUE															(156)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
0	0	23	29	35	44	52	77	91	105	121	139	158	178	200	224	247
* NO. 1201001	ALBERDI															(157)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
91	103	115	130	145	162	180	223	273	329	391	459	534	616	703	795	892
* NO. 1210003	PILAR															(158)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
397	442	490	543	597	656	720	933	1175	1450	1757	2099	2474	2882	3321	3788	4293
* NO. 1201002	VILLA OLIVA															(159)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
3	3	5	6	7	9	10	12	14	15	18	21	25	28	32	35	38
* NO. 1210004	COL. VICE PTE. SANCHES															(160)
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	3	3	3	4	5	6	7	8	9	10	11	13	15	16	18	20

表 A I-9

**** Subscribers ****

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* NO. 1210005	GRAL. DIAZ (HEMBUCU) (161)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
3	3	4	5	6	7	9	10	12	13	15	17	19	22	24	26	29
* NO. 1210006	HUMITA (162)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
5	6	7	10	10	13	14	16	19	22	26	29	31	35	40	44	49
* NO. 1210007	ISLA UMBU (163)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	2	2	3	3	4	4	5	6	6	7	8	9	9
* NO. 1210008	ITACORA (164)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	3	3	3	4	5	6	7	8	9	10	11	13	15	16	18	20
* NO. 1210009	LAURELES (165)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
5	6	7	10	10	13	14	16	19	22	26	29	31	35	40	44	49
* NO. 1210010	MAYOR MARTINES (166)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	3	3	3	4	5	6	7	8	9	10	11	13	15	16	18	20
* NO. 1210001	PAZO DE PATRIA (167)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	3	3	3	4	5	6	7	8	9	10	11	13	15	16	18	20
* NO. 1201012	ZANJITA (168)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	2	2	3	3	4	4	5	6	6	7	8	9	11
* NO. 1312001	PEDRO J. CABALLERO (169)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
925	1060	1208	1375	1557	1756	1980	2308	2671	3074	3512	3988	4498	5047	5622	6226	6865
* NO. 1312002	BELLA VISTA NORTE (170)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
62	72	83	97	111	127	146	165	186	210	236	262	291	322	353	387	421

表 A I-9

**** Subscribers ****

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* NO. 1312003	CAPITAN BADO		(171)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
79	93	107	124	141	162	185	210	237	266	297	332	368	405	444	484	528
* NO. 1312004	CHIRIGUELO		(172)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
9	10	13	14	17	20	23	26	29	33	37	42	46	52	56	61	66
* NO. 1405001	SALTOS DEL GUAIRA		(173)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
99	119	142	169	199	232	270	332	399	477	563	657	759	871	990	1116	1250
* NO. 1405002	VILLA CURUGUATY		(174)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
8	10	13	16	19	23	28	33	38	44	51	58	66	75	82	92	103
* NO. 1405003	LA PALOMA		(175)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
0	0	9	12	14	17	21	30	34	39	46	52	59	67	74	83	92
* NO. 1405004	CPRPUS CRISTI		(176)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
0	0	9	12	14	17	21	30	34	39	46	52	59	67	74	83	92
* NO. 1515002	VILLA HAYES		(177)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
97	123	154	189	230	277	330	390	456	529	610	699	794	894	1001	1116	1236
* NO. 1506001	PUERTO COLON		(178)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	2	2	4	4	4	5	6	6	8	8	10	10	11
* NO. 1515003	BENJAMIN ACEVAL		(179)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
43	44	45	46	46	46	45	70	100	133	172	214	262	315	372	433	500
* NO. 1515004	CHACO-I		(180)													
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
5	6	8	10	12	15	18	21	25	29	34	38	43	49	56	61	69

* NO. 1515005 TACUARAS (CHACO)		(181)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
2	2	3	3	5	6	6	8	8	10	11	13	14	16	18	21	23	

* NO. 1515006 25 LEGUAS		(182)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	2	2	4	4	4	5	6	6	8	8	10	10	11	

* NO. 1606001 BAHIA NEGRA		(183)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	2	2	3	4	5	6	8	9	11	11	13	15	18	20	21	

* NO. 1915001 COL. FIRADEFIA		(184)															
(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
0	79	93	110	128	148	172	231	277	329	384	449	515	590	669	753	842	

**** Subscribers total *****(184) tel. offices ****

(1981)	(1982)	(1983)	(1984)	(1985)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
13076	15250	17842	20569	23534	26838	30554	37402	44865	53276	62606	72826	83943	95984	108802	122399	136901

1-2 公衆電話の設置目標

1. Asunción

- (1) 1 km²に15個設置する。
- (2) Asunción の面積 (F. de la Mora, Lambaréを含む) …… 177 km²
- (3) 従って, 15個×177 = 2,655 個……①
- (4) ホテル, レストランへの設置数 150 個……②
- (5) バスターミナル, 主要バス停への設置数 50 個……③
- (6) Asunción における1997年の公衆電話機数は, ①+②+③ = 2855 個→2900 個…④

2 Asunción 以外の地域

- (1) Asunción における公衆電話と加入電話の比率で設置する。(ルーラル電話方式による公衆電話は含まない。)
- (2) Asunción の公衆電話と加入電話の比率 $2900/268000=0.011$ ……⑤
- (3) Asunción 以外の地域の1997年の加入数は, 137014 であるからAsunción 以外の地域の1997年の公衆電話機数は, $137014 \times 0.011=1507 \rightarrow 1500$ 個となる。

公衆電話の増設数

公衆電話の設備数を1997年で4400個とするための1988年からの増設数を求める。

1981年から1987年まで, 直線的に増加するとし, 過去のデータから1987年までの設備数を推定すると, 表A1-10のとおりで, 1987年で1405個となる。

従って, 1988年から1997年までの増設数の合計は, 2995個となる。

表A1-10 公衆電話機数(1981~1987年)

	1981	1982	1983	1984	1985	1986	1987
"Capital"	696	761	830	898	967	1035	1104
"Interior"	237	245	256	267	278	290	301
Total	933	1006	1086	1165	1245	1325	1405

$$\text{"Capital"} \quad y = 68.4857x - 134977$$

$$\text{"Interior"} \quad y = 11.1143x - 21783.4$$

表A I - 11 局別公衆電話機数 (1987 ~ 1997年)

** Public telephones (ASUNCION) total **<11> tel. offices **

(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1104	1284	1463	1643	1822	2002	2181	2360	2540	2719	2900

表 A I-11 (2/20)

***** Public telephones *****

* NO. 0106001	CONCEPCION										< 1 >
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
6	11	16	22	28	34	40	46	52	58	64	
* NO. 0106002	HORQUETA										< 2 >
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	2	2	2	2	3	3	3	4	
* NO. 0106003	LORETO										< 3 >
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 0106004	PASO BARRETO										< 4 >
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 0106005	PASO HORQUETA										< 5 >
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 0112006	CURUCE BELLA VISTA										< 6 >
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 0112007	YBY YAU										< 7 >
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 0209001	ITAC. DEL ROSARIO										< 8 >
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	3	5	6	7	8	9	10	11	12	14	
* NO. 0209005	SAN ESTANISLAO										< 9 >
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	3	5	7	9	11	13	15	17	19	21	
* NO. 0214012	VILLA DE SAN PEDRO										< 10 >
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
2	4	6	8	10	12	14	16	17	18	19	

表 A I-11 (3/20)

***** Public telephones *****

* NO. 0209002	VILLA DEL ROSARIO	< 11 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	2	2	3	4	4	5	6	7	8
* NO. 0209003	COL. GRAL. AQUINO	< 12 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		2	2	2	2	2	2	2	3	3	3	3
* NO. 0209004	SANTA CLARA	< 13 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	1	1	1	1	1	1	1	1	1
* NO. 0209006	TACUARAS(NORTE)	< 14 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	1	1	1	1	1	1	1	1	1
* NO. 0209007	FELIPE MATIAUDA	< 15 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	1	1	1	1	1	1	1	1	1
* NO. 0209008	COL. LIBERACION	< 16 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	1	1	1	1	1	1	1	1	1
* NO. 0209009	GUAYABI	< 17 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	1	1	1	1	1	1	1	1	1
* NO. 0209010	COLONIA CHORE	< 18 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	1	1	1	1	1	1	1	1	1
* NO. 0209011	COL. VOLENDAN	< 19 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	1	1	1	1	1	1	1	1	1
* NO. 0214013	COL. SAN PABRO	< 20 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	1	1	1	1	1	1	1	1	1

表 A I-11 (4/20)

***** Public telephones *****

* NO. 0214014	COL. RIO VERDE	< 21 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0214015	CORORO	< 22 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0214016	JEJUI	< 23 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0214017	LIMA	< 24 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0214018	NUEVE GELMANIA	< 25 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0214019	PTO. ANTEQUERA	< 26 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0214020	SANTA ROSA	< 27 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0214012	TACUATI	< 28 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0214022	COL. SUSANA .	< 29 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0303001	CAACUPE	< 30 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
4	7	10	14	18	22	25	28	31	34	37

表 A I-11 (5/20)

***** Public telephones *****

* NO. 0303007	EUSEBIO AYALA	< 31 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	3	3	4	5	6	7	8	9	10	11
* NO. 0303012	PRIBEBUY	< 32 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	3	3	4	5	6	8	9	10	11	12
* NO. 0303013	SAN BERNARDINO	< 33 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	5	8	11	14	17	20	22	24	26	28
* NO. 0303002	ALTOS	< 34 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0303003	ARROYOS Y ESTEROS	< 35 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0303004	ATYRA	< 36 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	2	2	2	2	2
* NO. 0303005	CARAGUATAY	< 37 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	2	2	2	2
* NO. 0303006	COL. 1° DE MARSO	< 38 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0303008	ISULA PUCU	< 39 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0303009	ITAC. DE LA CORDILLERA	< 40 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	2	2	2	3	3	3	4	4

表 A I-11 (6/20)

***** Public telephones *****

* NO. 0303010	LOMA GRANDE										< 41 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0303011	MBOCAYATY (STA. ELENA)										< 42 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0303014	SANTA ELENA										< 43 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0303015	TOBATI										< 44 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	2	2	3	4	4	5	6	7	8
* NO. 0301016	EMBOSCADA										< 45 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0301017	NUEVA COLOMBIA										< 46 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0404001	VILLARRICA										< 47 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	6	13	19	25	32	39	46	52	58	64	70
* NO. 0404002	COL. INDIPENDENCIA										< 48 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	2	2	2	3	3	4	4	5
* NO. 0404003	COL. MAURICIO J. TROCHE										< 49 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0404004	CNEL MARTINES										< 50 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1

表 A I-11 (7/20)

***** Public telephones *****

* NO. 0404005	EUGENIO A. GARAY										< 51 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0404006	ITURBE										< 52 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	2	2	2	2	2	3	2
* NO. 0404007	ITAPE										< 53 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0404008	FELIX PEREZ CARDOZO										< 54 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0404009	MBOCAYATY										< 55 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0404010	ÑUMI										< 56 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0404011	SAN SALVADOR										< 57 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0505001	CNEL. OVIEDO										< 58 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	3	10	17	24	31	38	45	52	59	60	73
* NO. 0505002	CAAGUAZU										< 59 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	3	7	10	14	18	22	26	28	31	34	37
* NO. 0505003	COMPO 9										< 60 >
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	2	2	2	2	3	3	3	4

表 A I-11 (8/20)

***** Public telephones *****

* NO. 0505004	CRAYAO							< 61 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0505005	COL. CECILIO BAES							< 62 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0505006	HUGO STROESSNER							< 63 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0505007	JUAN M FRUTOS							< 64 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	2	2	2	2	2
* NO. 0505008	LA PASTORA							< 65 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0505009	YHU							< 66 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0505010	SAN JOSE DE LOS ARROYOS							< 67 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	3	3	3	4	4	4	5	5	6
* NO. 0505011	COL. REPATRIACION							< 68 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0505012	COL. JUAN RAMON CHAVES							< 69 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 0505013	MBUTUY							< 70 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1

表 A I-11 (9/20)

***** Public telephones *****

* NO. 0504014	PASO YOBAY	< 71 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0604001	CAAZAPA	< 72 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	2	2	3	3	4	4	5	5	
* NO. 0604002	MACIEL	< 73 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0604003	SAN JUAN NEPOMUCENO	< 74 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	2	2	2	3	3	4	4	5	
* NO. 0606004	YEGROS	< 75 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	3	3	3	3	3	3	3	3	3	4	
* NO. 0604005	YUTY PUEBRO	< 76 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	2	
* NO. 0604006	GENERAL MORINIGO	< 77 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 0604007	COL. MOISES S. BERTONI	< 78 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	2	2	2	2	2	2	2	2	2	2	
* NO. 0702001	ENCALNACION	< 79 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
24	33	41	51	61	71	81	91	101	111	121	
* NO. 0702008	COL. HOENAU	< 80 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	3	4	6	7	8	9	10	10	11	

表 A I-11 (10/20)

**** Public telephones ****

* NO. 0702010	CNEL. BOGADO	< 81 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
2	4	4	5	6	7	8	8	9	10	11	
* NO. 0702002	CAMBYRETA	< 82 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0702003	CAPITAN MEZA	< 83 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0702004	CAPITAN MIRANDA	< 84 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0702005	CARMEN DEL PARANA	< 85 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	2	2	2	2	2	2	3
* NO. 0702006	COL. BELLA VISTA	< 86 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	2	2	2	2	3	3	3	3	3
* NO. 0702007	COL. FRAM	< 87 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0702009	COL. PIRAPO	< 88 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	3	3	3	3	4	4	4	5	5	
* NO. 0701011	GRAL. ARTIGAS	< 89 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0702012	GRAL DELGADO	< 90 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1

表 A I-11 (11/20)

***** Public telephones *****

* NO. 0702013	JESUS	< 91 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0702014	LA PAZ	< 92 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	3	3	3	3	3	3	3	3	3	3
* NO. 0702015	SALITRE CUE	< 93 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0702016	SAN COSME Y DAMIAN	< 94 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	2	2	2	2	2	2	2
* NO. 0702017	SAN PEDRO DEL PARANA	< 95 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	2	2	2	
* NO. 0702018	SANTA ROSA DE LIMA	< 96 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0808001	S. J. BAUTISTA MISSIONES	< 97 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
2	4	4	6	8	9	10	10	11	12	12	
* NO. 0808006	SAN IGNACIO	< 98 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
2	4	4	5	6	7	8	9	10	11	11	
* NO. 0808014	YACYRETA	< 99 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
2	3	5	6	7	8	9	9	10	11	11	
* NO. 0808002	ARAZAPE	< 100 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1

表 A I-11 (12/20)

***** Public telephones *****

* NO. 0808004	ITA YARU	< 101 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0808005	SAN ANTONIO MISSIONES	< 102 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0808007	SAN MIGUEL	< 103 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0808008	SAN PATRICIO	< 104 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0808009	SANTA MARIA	< 105 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0808010	SANTA ROSA MISSIONES	< 106 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	2	2	2	3	3	3	4	
* NO. 0808011	SANTIAGO	< 107 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0808012	VILLA FLORIDA	< 108 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	2	2	2	3	3	3	
* NO. 0808013	YABEBYRY	< 109 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 0907001	PARAGUARI	< 110 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
2	5	8	11	14	17	20	22	24	26	28	

表 A I-11 (13/20)

***** Public telephones *****

* NO. 0907005	CARAPEGUA	< 111 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
2	2	4	6	7	8	9	9	10	11	13	
* NO. 0907002	ACAHAY	< 112 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	2	2	2	2	
* NO. 0907003	CAAPUCU	< 113 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	3	3	3	3	3	3	3	3	3	
* NO. 0907004	CABALLERO	< 114 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 0907006	COL. CESAR BARRIENTOS	< 115 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 0907007	ESCOBAR	< 116 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 0907008	LA COLMENA	< 117 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	2	2	2	2	2	
* NO. 0907009	PIRAYU	< 118 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	3	3	3	3	3	3	4	4	4	4	
* NO. 0907010	QUINDY	< 119 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	3	5	6	6	7	7	8	9	9	
* NO. 0907011	QUYQUYHO	< 120 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	

表 A I-11 (14/20)

***** Public telephones *****

* NO. 0907012	ROQUE GONZALEZ DE S. CRUZ	< 121 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0907013	SAPCAI	< 122 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0907014	VALLE APUA	< 123 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0907015	YAGUARON	< 124 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	3	4	5	6	7	8	9	10	11	12
* NO. 0907016	YBYCUI	< 125 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	3	4	5	6	7	8	9	9	10	11
* NO. 0907018	MBUYAPEY	< 126 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	2	2	2	2	2	2	2	2	2	2
* NO. 0907019	CERRO LEON	< 127 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 0907017	YBYTYMI	< 128 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	1	1
* NO. 1011005	JUAN L. MALLDROQUIN	< 129 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
1	1	1	1	1	1	1	1	1	2	2
* NO. 1011006	PTO. PTE. FRANCO	< 130 >								
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
2	4	6	8	10	12	13	14	15	16	17

表 A I-11 (15/20)

***** Public telephones *****

* NO. 1011007	COL. PTE. STROESSNER	< 131 >										
	(1987)(1988)(1989)(1990)(1991)(1992)(1993)(1994)(1995)(1996)(1997)	1	1	1	2	2	3	3	4	5	6	7
* NO. 1011001	CIUDAD PTE. STROESSNER	< 132 >										
	(1987)(1988)(1989)(1990)(1991)(1992)(1993)(1994)(1995)(1996)(1997)	21	29	38	49	60	71	81	92	103	114	125
* NO. 1011003	HERNANDARIAS	< 133 >										
	(1987)(1988)(1989)(1990)(1991)(1992)(1993)(1994)(1995)(1996)(1997)	4	6	9	10	12	14	16	19	22	25	28
* NO. 1011002	COL. YGUAZU	< 134 >										
	(1987)(1988)(1989)(1990)(1991)(1992)(1993)(1994)(1995)(1996)(1997)	1	1	1	1	2	2	2	2	3	3	3
* NO. 1011004	JUAN E. OLEARY	< 135 >										
	(1987)(1988)(1989)(1990)(1991)(1992)(1993)(1994)(1995)(1996)(1997)	1	1	1	1	1	1	1	1	1	2	2
* NO. 1011008	KM 6 RUTA 7	< 136 >										
	(1987)(1988)(1989)(1990)(1991)(1992)(1993)(1994)(1995)(1996)(1997)	1	1	1	2	2	2	2	3	3	3	3
* NO. 1011009	SANTA ROSA	< 137 >										
	(1987)(1988)(1989)(1990)(1991)(1992)(1993)(1994)(1995)(1996)(1997)	1	1	1	1	1	1	1	1	1	1	1
* NO. 1101001	AREGUA	< 138 >										
	(1987)(1988)(1989)(1990)(1991)(1992)(1993)(1994)(1995)(1996)(1997)	1	3	5	6	8	10	11	13	15	17	18
* NO. 1101002	CAPIATA	< 139 >										
	(1987)(1988)(1989)(1990)(1991)(1992)(1993)(1994)(1995)(1996)(1997)	3	5	7	9	11	12	15	18	21	24	26
* NO. 1101005	ITA	< 140 >										
	(1987)(1988)(1989)(1990)(1991)(1992)(1993)(1994)(1995)(1996)(1997)	3	5	8	10	12	14	16	18	20	23	25

表 A I-11 (16/20)

***** Public telephones *****

* NO. 1101006	LUQUE	< 141 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
10	14	19	25	31	37	43	49	55	62	69	
* NO. 1101009	SAN ANTONIO	< 142 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	3	4	5	6	7	8	9	10	11	
* NO. 1101010	SAN LORENZO	< 143 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
14	21	29	36	43	50	57	64	72	80	88	
* NO. 1101012	VILLETA	< 144 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
2	4	4	5	6	7	8	9	10	11	12	
* NO. 1103016	YPACARAY	< 145 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
2	4	6	7	8	10	11	13	15	16	17	
* NO. 1101003	COL. NUEVA ITALIA	< 146 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 1101004	GURAMBARE	< 147 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	2	2	2	3	3	4	4	5	
* NO. 1101007	ÑEMBY	< 148 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 1101008	PIQUETE CUE	< 149 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 1101011	VALLE PUCU	< 150 >									
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	

表 A I-11 (17/20)

***** Public telephones *****

* NO. 1101013	YPANE	< 151 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	1	1	1	1	1	1	1	1	1
* NO. 1101014	YBYPOJHY-I	< 152 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	1	1	1	1	1	1	1	1	1
* NO. 1103017	ITAUGUA	< 153 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	3	3	3	4	4	5	5	6	7	7
* NO. 1101018	LIMPIO	< 154 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	1	1	1	1	1	2	2	2	2
* NO. 1101015	M. R. ALONSO	< 155 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		2	5	7	8	9	10	12	13	14	15	15
* NO. 1101019	ZEBALLOS CUE	< 156 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	1	1	1	2	2	2	2	2	3
* NO. 1201001	ALBERDI	< 157 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	3	4	4	5	6	7	8	9	10
* NO. 1210003	PILAR	< 158 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		4	7	11	14	18	22	26	31	36	41	45
* NO. 1201002	VILLA OLIVA	< 159 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	1	1	1	1	1	1	1	1	1
* NO. 1210004	COL. VICE PTE. SANCHES	< 160 >										
		(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
		1	1	1	1	1	1	1	1	1	1	1

表 A I-11 (18/20)

**** Public telephones ****

* NO. 1210005	GRAL. DIAZ (ÑEMBUCU)							< 161 >			
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 1210006	HUMITA							< 162 >			
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 1210007	ISLA UMBU							< 163 >			
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 1210008	ITACORA							< 164 >			
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 1210009	LAURELES							< 165 >			
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 1210010	MAYOR MARTINES							< 166 >			
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 1210001	PAZO DE PATRIA							< 167 >			
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 1201012	ZANJITA							< 168 >			
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	
* NO. 1312001	PEDRO J. CABALLERO							< 169 >			
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
12	17	22	27	32	37	42	49	54	59	63	
* NO. 1312002	BELLA VISTA NORTE							< 170 >			
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	2	2	2	3	3	3	3	

表 A I-11 (19/20)

***** Public telephones *****

* NO. 1312003	CAPITAN BADO							< 171 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	3	3	3	4	4	4	5	5	6
* NO. 1312004	CHIRIGUELO							< 172 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 1405001	SALTOS DEL GUAIRA							< 173 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	2	4	4	5	6	7	8	10	11	12	14
* NO. 1405002	VILLA CURUGUATY							< 174 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 1405003	LA PALOMA							< 175 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 1405004	CPRPUS CRISTI							< 176 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 1515002	VILLA HAYES							< 177 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	3	4	5	6	7	8	9	10	11
* NO. 1506001	PUERTO COLON							< 178 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1
* NO. 1515003	BENJAMIN ACEVAL							< 179 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	3	3	3	4	4	5	5	6	7	8
* NO. 1515004	CHACO-I							< 180 >			
	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
	1	1	1	1	1	1	1	1	1	1	1

表 A I-11 (20/20)

***** Public telephones *****

* NO. 1515005	TACUARAS (CHACO)										< 181 >
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 1515006	25 LENGUAS										< 182 >
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 1606001	BAHIA NEGRA										< 183 >
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	1	1	1	1	1	1	1	1	1	1	1
* NO. 1915001	COL. FIRADELFIA										< 184 >
(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	
1	3	4	5	6	7	8	8	8	9	10	

***** Public telephones total ***** < 184 > tel. offices *****

(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)
301	421	541	661	781	901	1021	1141	1261	1381	1500

I - 3 中継回線数及び市外回線数の算出方法

この基本計画の中継回線数及び市外回線数は、次の方法によって計算した。

(1) Asunción 地域の中継線

1) 局間トラヒック予測

- (a) 第3次拡張計画で用いた局間トラヒックのデータを基礎資料として使用する。
- (b) 上記データと局別加入者回線数から、各区分における局間トラヒックの呼率（発信及び着信）を求める。
- (c) 次の仮定によって第4次拡張計画（1983 - 1987）の計画期末における局間トラヒック呼率を求める。

既設の電話局については、(b)で求めた呼率が維持されるものとする。新設の電話局については、電話トラヒックについて類似の条件をもった他の電話局の呼率から推定する。

- (d) 上記の方法で求めた局間トラヒックの呼率が比較的大きい値であることから、1988 - 1997年の呼率は、住宅用電話の普及に伴って漸次減少し、1997年には(c)で求めた値の80%になると仮定する。

2) 中継回線数の計算

1) で求めた局間呼率と、本基本計画で計画している加入者回線数から、各区分の中継回線数を計算した。

中継回線数の算出に当っては、次の条件を適用した。

呼損率：1%

負荷表

デジタル局間	：完全群用負荷表
EMD局間及びEMD局とデジタル局間	：不完全群用負荷表

この回線数には、特番呼用回線が含まれていないので、上記で求めた値の10%を特番呼用回線数として追加する。

(2) 自動電話局間の市外回線

1) 市外トラヒック予測

- (a) ANTELCO が1979 - 1980年に測定・収集した市外トラヒック・データを基礎資料とする。

このトラヒック・データと加入者回線数から各電話局の市外呼率を求める。

(b) 基本計画期間の市外呼率を求めるために、次の仮定を設ける。

加入者市外ダイヤル・サービスの拡大によるトラヒック増と、住宅用電話の普及によるトラヒック減とが相殺して、本計画期間中、上記(a)で求めた市外呼率が維持される。

(c) 新しい自動電話局については、トラヒック条件が類似している他の電話局のデータから類推する。

2) 市外回線数の計算

上記によって求めた市外呼率と、本計画の加入者回線数から、次の条件によって市外回線数を算出した。

呼損率：1%

負荷表：不完全群負荷表

表A I - 13 市外電話回線數

- Note: 1. The number of toll trunk line in 1987 shows the number planned by ANTELCO.
2. The number of toll trunk line in 1988 - 1997 shows the necessary number for estimated traffic.
3. S.C. means the secondary center.
P.C. means the primary center.

ASUNCION S.C.

Circuit section	Year										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
ASUNCION S.C. -CENTRAL2		350	350	350	350	376	376	376	480	480	480
-CENTRAL29		37	37	64	64	64	64	85	85	85	85
-CENTRAL30		115	115	115	115	220	220	220	290	290	290
-CENTRAL35		29	68	68	68	68	86	86	86	118	118
-CENTRAL4		88	88	88							
-CENTRAL9	1062	276	276	276	452	452	452	584	584	584	584
-CENTRAL5		40	68	68	68	68	76	76	76	92	92
-CENTRAL50		51	51	51	84	84	84	112	112	112	126
-CENTRAL6		95	238	238	238	238	256	256	256	256	294
-CENTRAL67		46	46	46	88	88	88	88	88	88	90
-CENTRAL7		37	37	60	60	60	60	82	82	82	97
-CENTRAL8		55	55	111	111	111	126	126	126	150	150

Circuit section	Year										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
ASUNCION S.C. -ALBERDI	12	13	15	18	20	22	24	26	29	31	33
-AREGUA	12	21	26	30	34	39	45	54	60	68	76
-CAPIATA	30	46	56	66	79	91	106	122	139	155	174
-EMBOSCADA	-	-	-	-	11	11	13	13	13	15	15
-COL NEUVA ITALBA	-	-	-	-	-	-	-	-	-	-	13
-GUARAMBARE	11	17	19	21	25	27	29	32	34	36	38
-ITA	24	36	42	54	61	71	82	94	107	122	136
-LIMPIO	-	11	13	13	15	15	15	17	19	19	21
-LUQUE	154	185	218	255	296	338	383	436	494	551	613
SAN ANTONIO -ÑEMBY	(30 pairs)	(30)	(30)	(30)	(30)	(30)	(30)	-	-	-	-
ASUNCION S.C. -ÑEMBY	-	-	-	-	-	-	-	13	13	15	15
-SAN ANTONIO	18	23	25	27	31	36	40	44	50	55	61
-SANLORENZO	218	226	259	305	354	403	461	523	586	654	728
-VILLETA	24	29	34	38	42	46	52	61	65	71	75
-M. R. ALONSO	46	46	54	60	69	77	85	96	106	116	129
-ZEBALLOS CUE	11	15	15	17	17	19	21	21	23	25	27
-CAACUPE	45	46	54	64	73	83	96	109	122	138	153
-ALTOS	-	-	-	-	-	-	-	11	11	11	11
-ARROYOS Y ESTEROS	-	-	-	-	9	9	9	9	9	9	9
-ATYRA	-	11	11	11	13	13	15	15	15	17	17
-CARAGUATAY	-	9	9	11	11	11	13	13	13	15	15
-EUSEBIO AYALA	28	19	21	25	27	31	35	37	41	47	51
-ISULA PUCU	-	-	-	-	9	9	9	11	11	11	11
-ITAUQUA	-	19	21	23	25	27	29	32	36	38	42

Circuit section	Year										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
E. AYALA -ITAC.D.CORDILLERA	11	13	13	-	-	-	-	-	-	-	-
ASUNCION S.C. -ITAC.D.CORDILLERA	-	-	-	13	15	15	17	19	19	21	21
-PIRIBEBUY	12	17	19	22	26	30	34	39	43	43	52
-SAN BERNARDINO	24	32	38	46	55	63	74	84	97	110	122
E. AYALA -SANTA ELENA	10	10	10	10	10	10	10	-	-	-	-
ASUNCION S.C. -SANTA ELENA	-	-	-	-	-	-	-	11	11	11	11
-TOBATI	11	17	19	21	23	28	30	32	36	38	41
-YPACARAI	48	38	42	48	57	65	73	82	92	104	113
-VILLARRICA	36	56	57	66	79	92	108	125	145	165	185
-CAAZAPA	14	15	15	17	19	19	22	24	26	26	28
-COL. INDEPENDENCIA	-	15	17	17	19	19	21	24	26	26	28
-ITURBE	-	11	11	13	13	13	15	15	17	17	19
-PASO YOBAI	-	-	-	-	-	-	-	-	-	-	11
VILLARRICA -SAN JUAN NEPOMUCENO	10	-	-	-	-	-	-	-	-	-	-
-COL. INDEPENDENCIA	11	-	-	-	-	-	-	-	-	-	-
ASUNCION S.C. -SAN JUAN NEPOMUCENO	-	11	13	13	15	17	17	19	21	24	24
-SAN SALVADOR	-	-	-	-	-	-	-	-	-	9	9
-YEGROS	-	-	9	9	11	11	11	11	13	13	13
-YUTY PUEBLO	-	-	9	9	11	11	11	11	13	13	13
CAAZAPA -YUTY PUEBLO	8	-	-	-	-	-	-	-	-	-	-

Circuit section	Year										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
ASUNCION S.C. -PARAGUARI	53	34	38	47	57	68	78	89	99	114	129
-ACAHAY	-	9	11	11	11	13	13	15	15	15	17
-CAAPUCU	-	-	-	11	11	11	11	11	13	13	13
-CABALLERO	-	-	-	-	-	-	-	9	9	11	11
-CARAPEGUA	40	24	28	30	32	36	41	43	47	52	58
-LA COLMENA	11	11	11	11	13	13	13	15	15	17	17
PARAGUARI -PIRAYU	8	-	-	-	-	-	-	-	-	-	-
ASUNCION S.C. -PIRAYU	-	9	9	11	11	13	13	15	15	17	17
CARAPEGUA -QUINDY	10	-	-	-	-	-	-	-	-	-	-
ASUNCION S.C. -QUINDY	-	13	15	15	17	19	21	24	28	30	32
-ROQUE GONZALEZ DE S. CRUZ	-	-	-	-	-	-	-	-	-	-	11
-SAPCAI	-	-	-	-	9	9	11	11	11	11	13
PARAGUARI -YAGUARON	11	-	-	-	-	-	-	-	-	-	-
-QUINDY	10	-	-	-	-	-	-	-	-	-	-
ASUNCION S.C. -YAGUARON	-	19	21	24	28	32	36	41	45	51	56
CARAPEGUA -YBYCUI	11	-	-	-	-	-	-	-	-	-	-
ASUNCION S.C. -YBYCUI	-	15	17	19	21	24	26	30	32	34	38
-PILAR	34	35	41	48	57	66	77	86	99	112	125
-VILLA HAYES	31	28	30	32	36	40	45	49	53	58	64
VILLA HAYES -BENJAMIN ACEVAL	8	-	-	-	-	-	-	-	-	-	-

Circuit section	Year										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
ASUNCION S.C. -BENJAMIN ACEVAL	-	11	13	15	17	19	21	23	26	28	32
-CHACO-I	-	-	-	-	-	-	-	-	-	11	11
-COL. FILADELFIA	11	15	17	19	22	22	24	28	30	33	35

CNEL. OVIEDO S.C.

Circuit section \ Year	Year										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
CNEL.OVIEDO S.C. -CNEL.OVIEDO	110	68	86	106	128	152	180	208	238	274	306
-CAAGUAZU	55	49	57	68	80	93	107	122	139	158	168
CAAGUAZU -CAMPO 9	11	11	-	-	-	-	-	-	-	-	-
CNEL.OVIEDO S.C. -CAMPO 9	-	-	13	15	17	17	19	19	21	23	24
CNEL.OVIEDO S.C. -C.H.STROESSNER	10	10	10	10	10	10	10	10	-	-	-
-SAN JOSE DE LOS ARROYOS	12	-	-	-	-	-	-	-	-	-	-
CNEL.OVIEDO S.C. -C.H.STROESSNER	-	-	-	-	-	-	-	-	11	13	13
CAAGUAZU -JUAN M FRUTOS	10	10	10	-	-	-	-	-	-	-	-
CNEL.OVIEDO S.C. -JUAN M FRUTOS	-	-	-	13	13	15	15	15	17	17	19
-YHU	-	-	-	-	-	11	11	11	11	13	13
-VILLA CURUGUATY	-	-	-	-	-	11	11	11	11	13	13
-SAN JOSE DE LOS ARROYOS	-	13	15	15	17	19	21	23	25	28	30
-COL.JUAN RAMON CHAVEZ	-	-	-	-	-	11	11	11	11	13	13
-SALTOS DEL GUAIRA	36	23	28	30	34	38	43	47	53	58	64
SALTOS DEL GUAIRA -LA PALOMA	10	10	10	10	10	10	10	10	10	13	13
-CORPUS CRISTI	11	11	11	11	11	11	11	11	11	11	11
CNEL.OVIEDO S.C. -CONCEPCION	75	55	68	81	98	118	137	158	180	206	231

Circuit section	Year										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
CNEL.OVIEDO S.C. -HORQUETA	11	11	13	13	13	15	15	17	17	19	21
-PASO BARRETO	-	-	-	-	9	9	11	11	11	11	13
-ITAC.DEL ROSARIO	14	15	17	20	24	26	31	33	37	42	50
-VILLA DEL ROSARIO	11	19	21	23	26	30	32	34	38	44	47
I.D.ROSARIO -COL.GRAL.AQUINO	-	8	8	-	-	-	-	-	-	-	-
CNEL.OVIEDO S.C. -COL.GRAL.AQUINO	-	-	-	11	11	11	13	13	15	15	17
-SANTA CLARA	-	-	-	-	-	9	9	11	11	11	11
-SAN ESTANISLAO	12	17	22	26	28	35	41	48	54	61	70
-TACUARAS (NORTE)	-	-	-	-	-	-	-	-	-	-	11
-FELIPE MATIAUDA	-	-	-	-	-	-	-	-	-	-	11
-COLONIA CHORE	-	-	-	-	9	9	9	9	11	11	11
-COLONIA VOLENDAN	-	-	-	-	-	-	-	-	-	-	11
-CDAD.P. STROESSNER	224	279	320	370	428	486	551	624	696	775	858
-HERNANDARIAS	36	28	33	37	44	46	52	61	68	74	83
-COL.PTE. STROESSNER	32	25	27	29	32	34	36	40	42	44	48
CDAD.P. STROESSNER -COL.YGUAZU	11	13	13	15	15	17	17	19	19	21	21
-JUAN E.O'LEARY	10	10	10	10	10	13	13	13	15	15	15
-JUAN L.MALLORQUIN	10	10	10	10	10	13	13	13	15	15	15
-KM6 RUTA7	-	13	13	13	15	15	15	17	17	19	19
-SANTA ROSA	-	9	9	11	11	11	11	13	13	13	13
-HERNANDARIAS	25	20	22	24	28	30	32	38	40	46	50
-COL.PTE. STROESSNER	12	12	12	14	14	14	16	16	16	18	18
-SALTOS DEL GUAIRA	11	13	13	13	19	19	19	27	27	27	33

Circuit section	Year										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
CNEL.OVIEDO S.C. -PEDRO J.CABALLERO	86	96	111	124	141	156	178	197	219	240	248
-BELLA VISTA NORTE	11	13	13	15	15	17	17	19	19	22	22
-CAPITAN BADO	11	15	15	17	17	19	22	22	22	24	26
-CHIRIGUELO	-	-	-	-	-	-	11	11	11	11	11
P.J.CABALLERO -YBY YAU	8	8	8	-	-	-	-	-	-	-	-
CNEL.OVIEDO S.C. -YBY YAU	-	-	-	9	9	9	11	11	11	11	13

Encarnación S.C.

Circuit section	Year										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
ENCARNACION S.C. -ENCARNACION	239	145	165	188	214	243	273	304	334	369	408
-CAPITAN MIRANDA	-	-	-	-	-	-	11	11	11	11	13
-CARMEN DEL PARANA	10	13	15	15	17	17	19	19	21	21	23
-COL.BELLA VISTA	-	-	15	15	15	17	19	19	21	21	23
-COL.HOHENAU	18	25	27	31	33	35	39	43	47	53	57
-COL.PIRAPO	11	15	15	17	17	19	19	21	23	23	25
-CNEL.BOGADO	-	32	34	38	42	44	48	52	58	62	68
-GRAL.ARTIGAS	-	-	-	-	11	11	13	13	13	15	15
-GRAL.DELGADO	-	-	-	-	-	-	-	-	-	11	11
-LA PAZ	-	-	-	9	11	11	11	13	13	13	13
-SANCOSME Y DAMIAN	11	17	17	19	19	19	19	19	21	21	21
CNEL BOGADO -SAN PEDRO DEL PARANA	10	10	10	10	-	-	-	-	-	-	-
-COL.FRAN	10	11	11	11	11	11	11	11	11	11	11
ENCARNACION S.C. -SAN PEDRO DEL PARANA	-	-	-	-	13	15	15	17	17	19	19
-S.J.BAUTISTA MISIONES	24	30	32	36	38	42	47	51	55	59	64
-SAN IGNACIO	24	26	28	32	34	38	41	45	49	54	60
-SANTA ROSA MISIONES	11	15	15	17	17	17	21	21	23	24	26
-VILLA FLORIDA	11	15	15	17	17	19	19	21	21	24	26
-YACYRETA (AYOLAS)	48	32	34	38	40	44	48	53	57	63	67

Circuit section	Year										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
ASUNCION S.C. -CNEL.OVIEDO S.C.	667	762	895	990	1090	1200	1300	1410	1510	1600	1685
-ENCARNACION S.C.	344	330	375	405	440	475	510	545	575	600	635
CNEL.OVIEDO S.C. -ENCARNACION S.C.	139	97	112	122	132	142	150	162	170	180	186
Total circuit											
ASUNCION S.C.	3139	3541	4114	4564	5144	5660	6133	6820	7442	8563	8558
CNEL.OVIEDO S.C.	1734	1793	2069	2325	2627	2966	3284	3676	3950	4318	4650
ENCARNACION S.C.	942	815	924	1024	1132	1234	1348	1452	1558	1671	1716

表 A I - 14 自動車電話方式設計条件 (トラヒック関係)

Item	Value
Number of calls per day, per telephone (originating and terminating)	3
Mean holding time	4.17 minutes
Concentration ratio to busy hour	1/8
Calling rate	0.026 Erl.
Percentage of automobile traffic in the service area	94%

表A 1 - 15 デジタル交換方式による各種電話サービス

Digital switching system can economically provide a wide range of subscriber services. The following lists the service feature available, along with a brief description of each.

<u>Feature</u>	<u>Brief description</u>
• Abbreviated dialing	- This feature allows subscribers to dial 3-digits code ('Special code' + 2 digits) and be connected to the number associated with the code.
• Call forwarding	- This service allows a subscriber to have his incoming calls automatically transferred to another number which he has registered by special number.
• Don't disturb	- Enables the subscriber to restrict incoming calls. The denied call is connected to the announcement.
• Call waiting	- If a second call is made to a busy line the busy line subscriber hears the tone alert of the waiting call. The subscriber can place either call in a hold status while talking to the other.
• Three-way calling	- A third party can be added to a two-way conversation (Add-on) without operator assistance.
• Hot-line	- Allows subscribers to be connected to predetermined number without dialing.
• Wake-up (Alarm-call service)	- Enables the subscriber to be rung up at a predetermined time. He will hear announcement when he answers.

<u>Feature</u>	<u>Brief description</u>
• Service interception	- Terminating calls to the designated subscriber are routed to operator or announcement machine.
• Special ringing	- Two telephone numbers are given to a single party line. According to each of two telephone numbers, two kind of ringing form is possible. By the above function, one telephone line is used as two telephone line similar to two-party line.
• PB dialing	- Subscriber who has the PB class of service can dial by PB telephone.
• Toll restriction	- This feature is included in Restriction of Outgoing Calls.
• Inward wide area telephone service (IN-WATS)	- Service which allows a customer to place a toll call to the telephone of this service class without charge.
• Outward wide area telephone service (OUT-WATS)	- This service permits a customer having this service class, for a monthly charge, to place toll calls to telephones within prescribed service area.
• Line lockout	- The subscriber line goes into line lockout after a predetermined time interval without dialing.

表A I - 16 公衆電話の各種サービス

- Local/long distance call - Payphone is available to handling local as well as long distance calls.
- Community service call - Calls to community services, e.g. emergency calls, may be completed from payphone without use of coin or token (free call).
- Coin/token - Payphone is designed for single/multiple coin or token insertion. Basically, payphone must check the coins or tokens inserted and deposit them into a theft proof cash-box.
- Credit cards - The use of credit (debit) cards for payphone calls is being studied and some systems are already in use.
- Operator service - The payphone service may also include the possibility to make calls which are set up and charged by an operator.
- Ordinary telephone sets as public telephone station - Ordinary telephone sets installed in public locations may be used as public telephone stations. In such cases, call charges are collected by the operator, shop keeper, etc. who supervises the use of the telephone set.

I - 4 データ通信

1. データ通信網の将来計画

本文 3 - 3 - 2 項に述べたとおりパラグアイ国のデータ通信網として、将来、パケット交換網を構築することを提案する。Fig. A1-1 にその網構成を示したようにパケット交換局を、Asunción, Cdad. Pte. Stroessner, Encarnación, 及び Cnel. Oviedo に設置し、これらの局を相互接続して交換網を形成する。

また、比較的トラヒックの少ない地域からもパケット交換網への接続を経済的に実現するため、集線局を San Pedro 及び P.J. Caballero に設置し Cnel. Oviedo に接続すればほぼ全国主要地域をカバーできる。

このパケット交換網には Fig. A1-2 及び Fig. A1-3 に示すようにパケット端末機、None Packet 端末機及び電子計算機等多彩な端末機が接続できるので、多角的な電気通信サービスが可能となる。Fig. A1-4 より Fig. A1-9 までに、異なる端末機を交換網に接続する方法及びそれぞれ異なるインタフェース条件が判るように、CCITT 勧告番号を示してある。

2. データ通信システム例

将来、ANTELCO が設計・建設しサービスを提供することができると予想されるデータ通信システム例の構成を示しその概要を記述する。

2-1 予約案内システム

本システムは、Asunción に中央データ処理センターを設置し、航空会社、バス会社、旅行代理店、および予約案内センター等に本システム専用設計されたデータ端末を設置し中央データ処理センターと専用線で接続する。

ホテル、スーパーマーケットあるいは百貨店等で比較的業務量の少ない所には、簡易データ端末を設置し、パケット交換網を経由して中央処理センターと接続する。なお、業務量の少ない地方の予約案内センターには小型ファクシミリ装置を用意し、これより最寄の都市の予約案内センターへ照会、予約依頼を行なう。システム構成を Fig. A1-10 に示す。

2-2 気象観測データ通信システム

本システムは ANTELCO が気象庁と協同で開発できるシステムの一例である。

すべての気象観測所で観測された雨量、風向、風速、気温および日照等の気象データを一定時間毎に電話回線により自動的にセンターへ収集し、センターに於いてデータを処理

後、全国の気象台、測候所などへ自動的に配信するものである。変わりやすい集中豪雨などの様子を正確かつ迅速にとらえることができ気象災害から人命や財産を守るために効果があるシステムである。構成図をFig.A1-11に示す。

2-3 救急医療情報データ通信システム

本システムは、コンピューターと救急情報センター、病院、診療所、消防本部などの間を通信回線で結び、救急医療活動の迅速円滑な運営を側面から支援するもので、ANTELCOが関係機関と協力して開発し、社会に貢献できるシステムと云える。

救急情報センターは救急患者を最適な医療機関で診療するために必要な情報例えば、医師の在否、空ベット数、特殊設備の有無、血液・血清などの保有、休日夜間当番医師の有無などを、コンピューターに収集、記録しておき、一般市民、消防署、医療機関からの問い合わせに対し迅速・正確に情報を与えるものである。システム構成をFig.A1-12に示す。

2-4 在庫管理システム

本システムはANTELCOが所有するぼう大な通信施設用物品を管理するものである。

コンピューターセンターと電話局、本社などに設置されたデータ端末機を加入電話回線で結び、電話機、屋内・屋外ケーブル等通信設備用品、部品類数1000点について要求から払出しまでに関する業務、在庫検索業務等をOn-line Systemで処理するものである。

電気通信サービスの種類の多様化により通信機器及び部品類が益々増える傾向にある将来を考えるとこのシステムの重要さは充分想像できる。システム構成図をFig.A1-13に示す。

2-5 生鮮食料品流通情報システム

本システムはANTELCOが農牧省と協力して建設できるシステムで、生鮮食料品の需要供給の調整に直接関係する市況情報及び産地情報等をセンターへ収集し農牧省の関係部局やあらかじめ決められた利用者へ自動的に生産、出荷、市況の情報を迅速かつ正確に提供するものである。これにより日々の消費地における需給の安定や地域間の価格の均衡などに大きな役割を果たすものである。システム構成をFig.A1-14に示す。

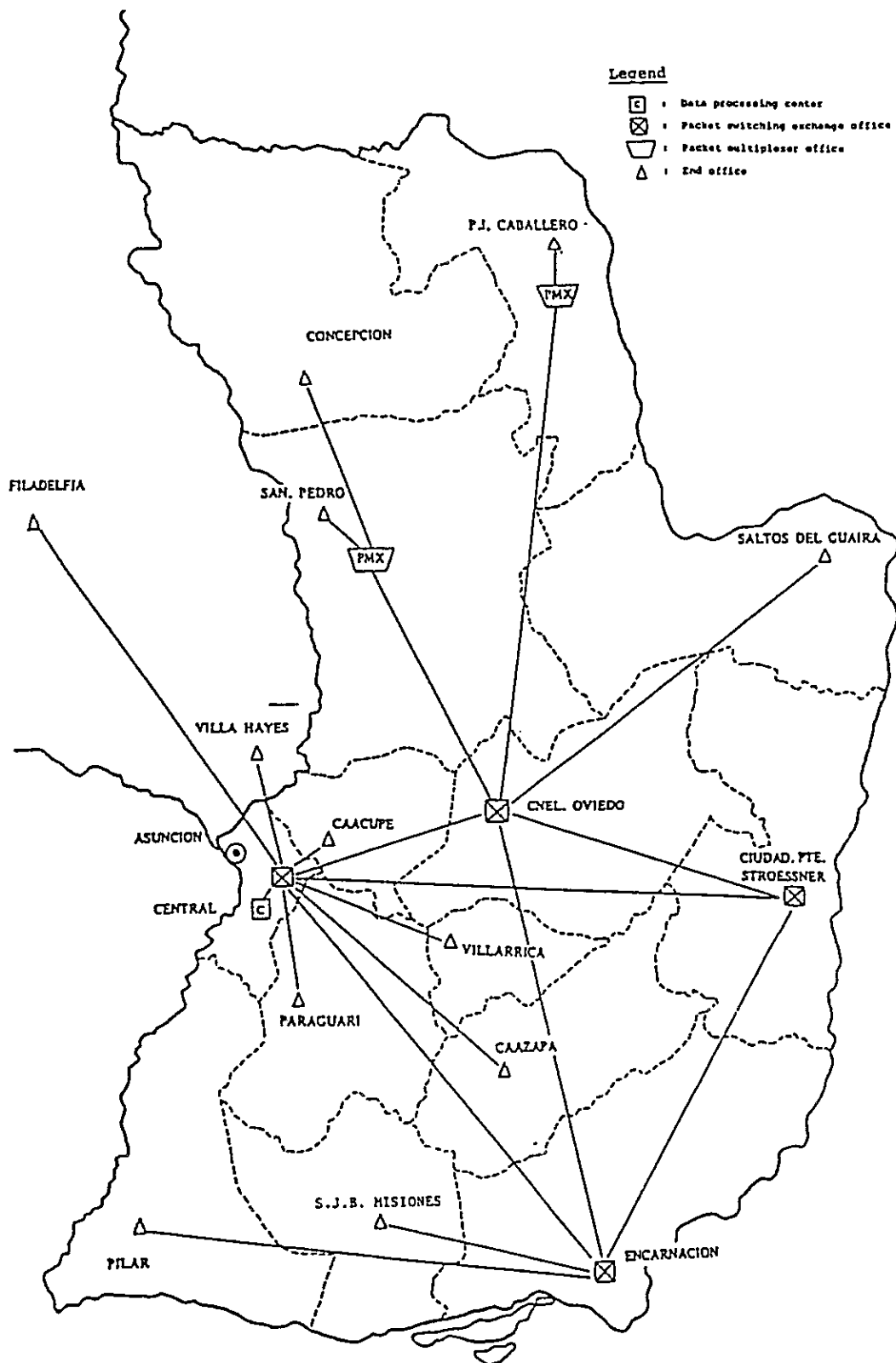


図 A 1 - 1 データ通信網

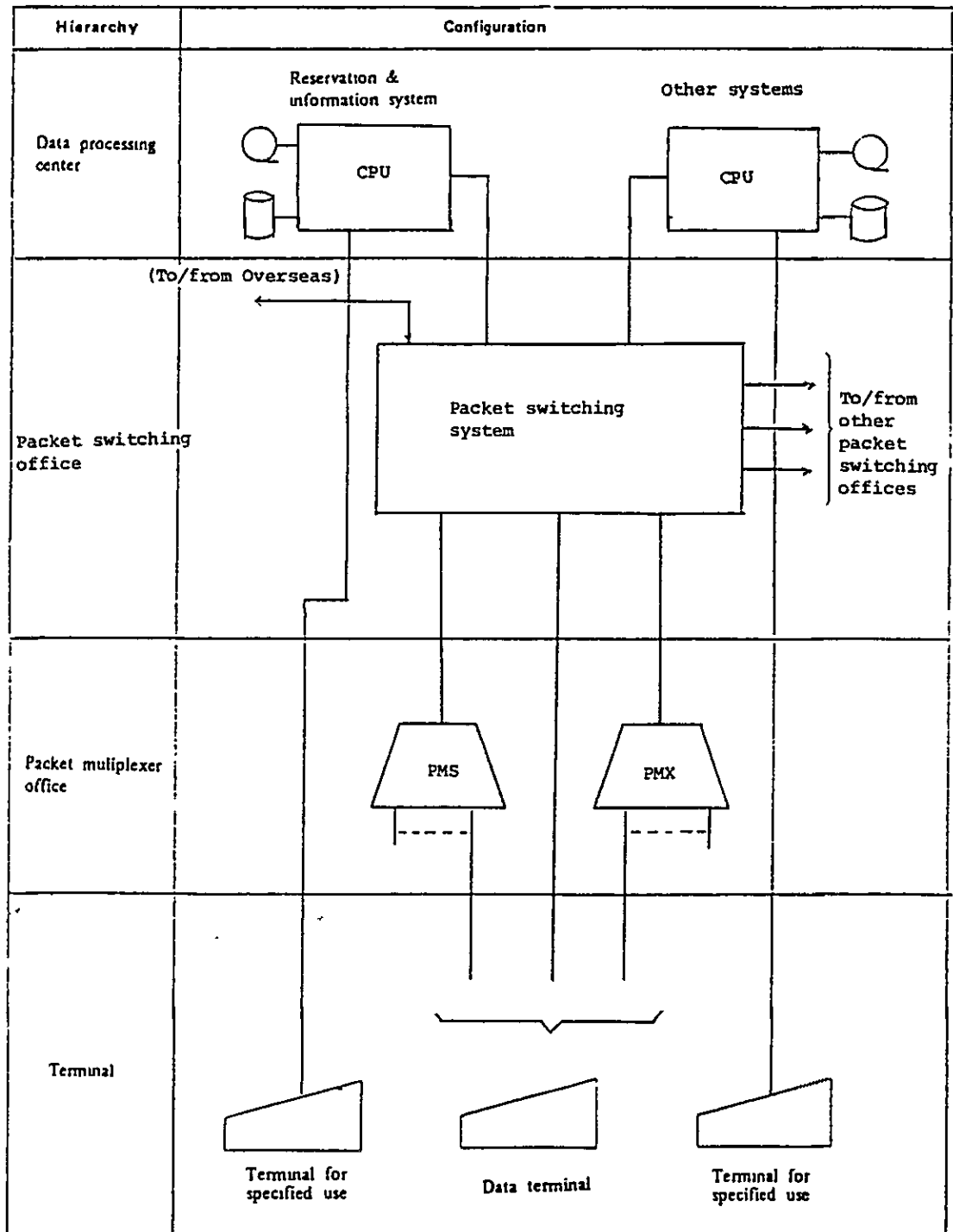


図 A 1 - 2 データ通信網の構成

TO INTERNATIONAL NETWORK
 (INTERNATIONAL PACKET SWITCHING
 SYSTEM, VIDEOTEX, FACSIMILE)

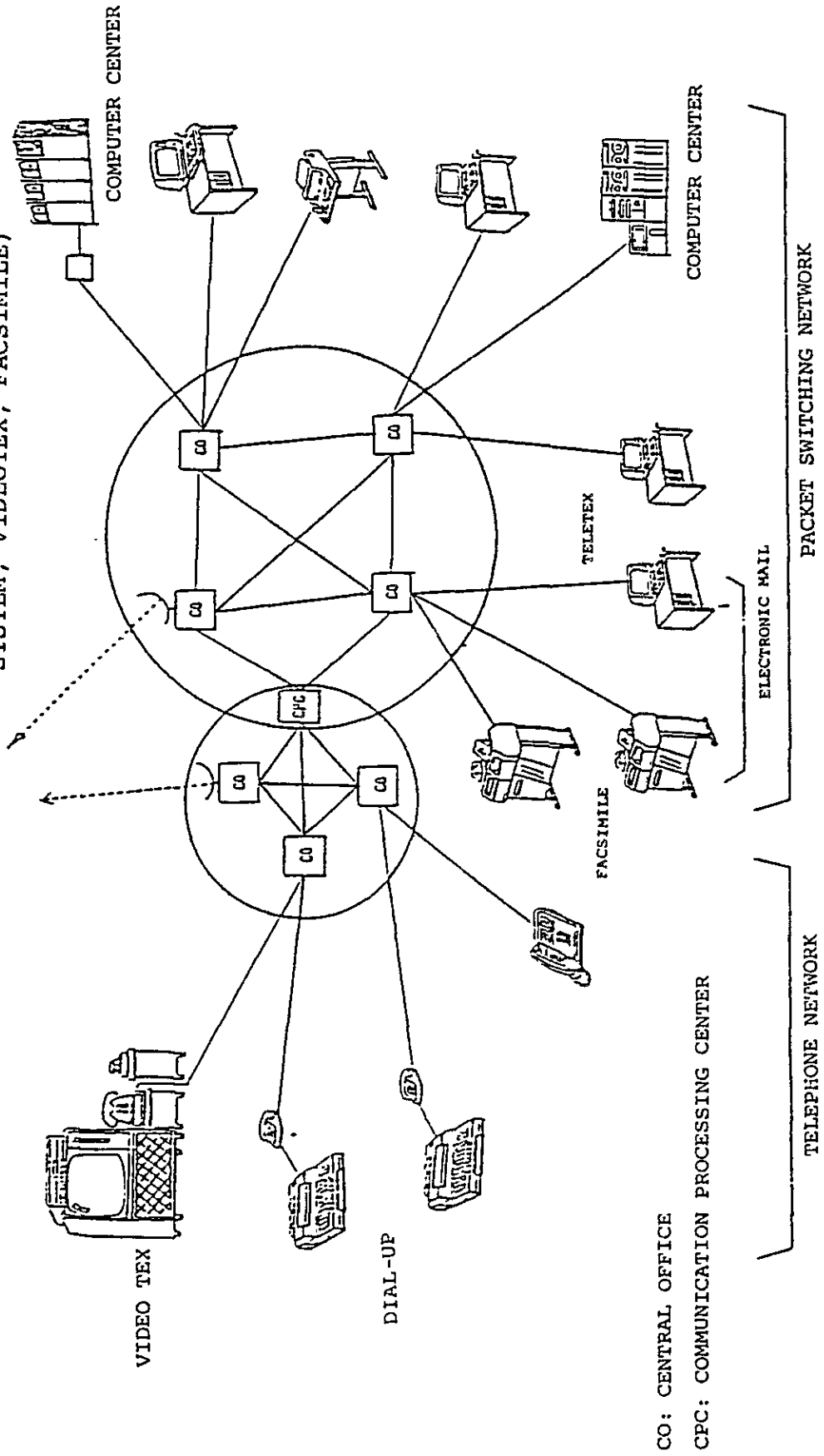


図 A 1 - 3 データ交換方式の構成

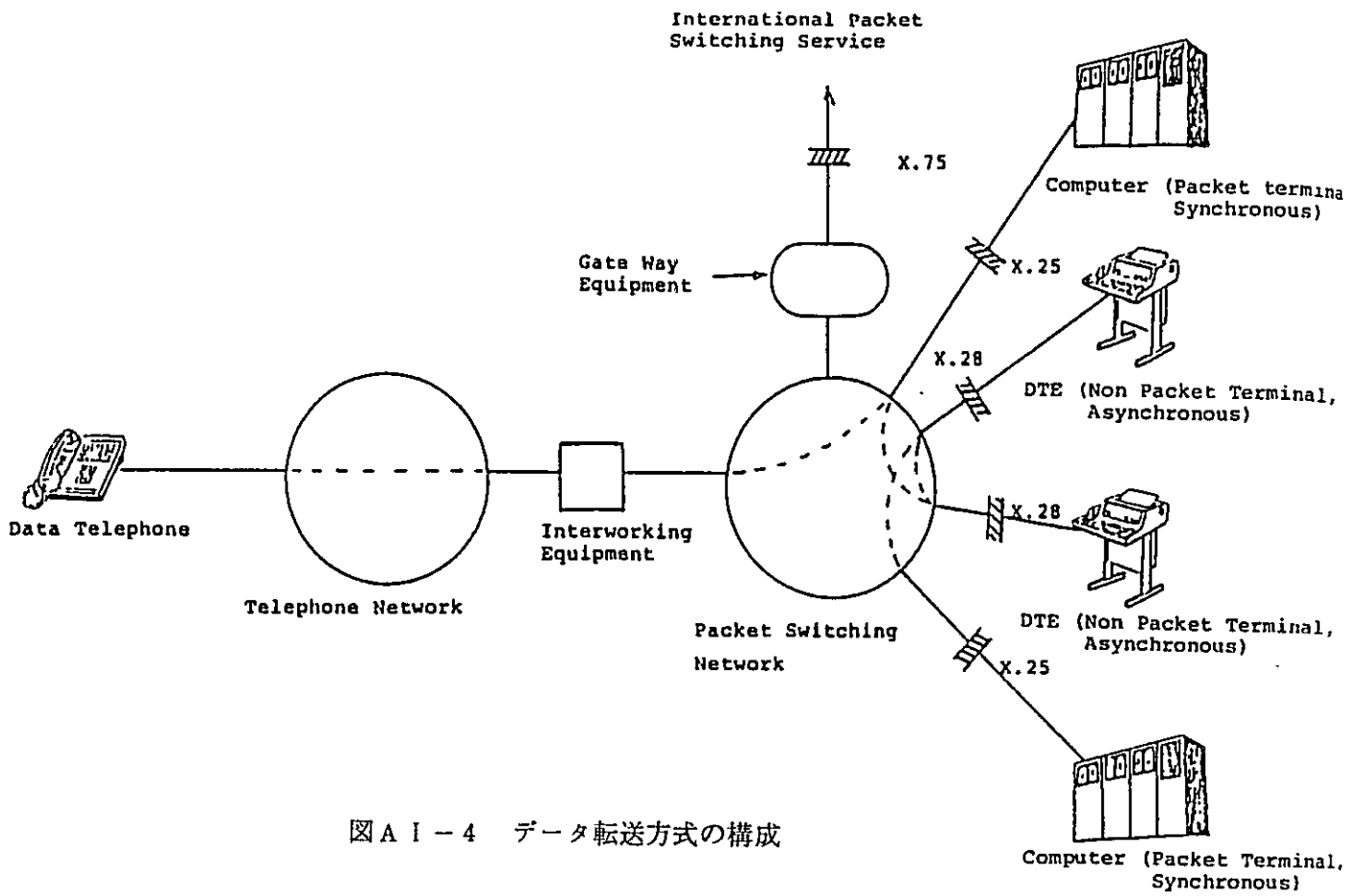


図 A I - 4 データ転送方式の構成

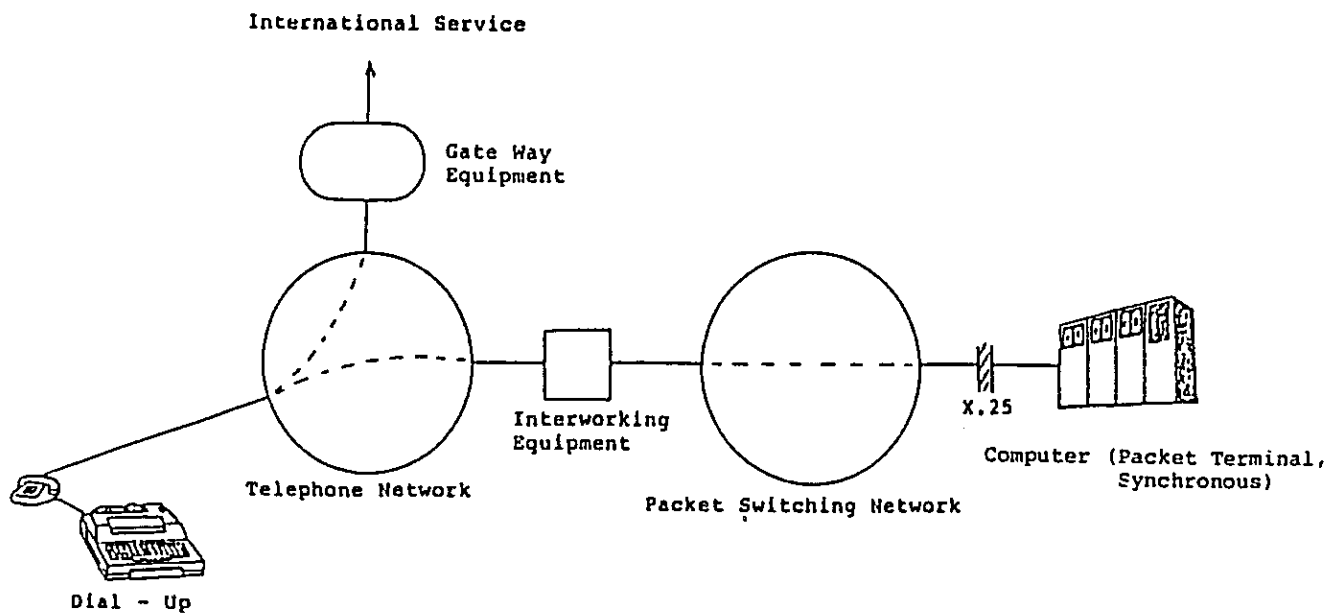


図 A I - 5 ダイヤル・アップ・サービス

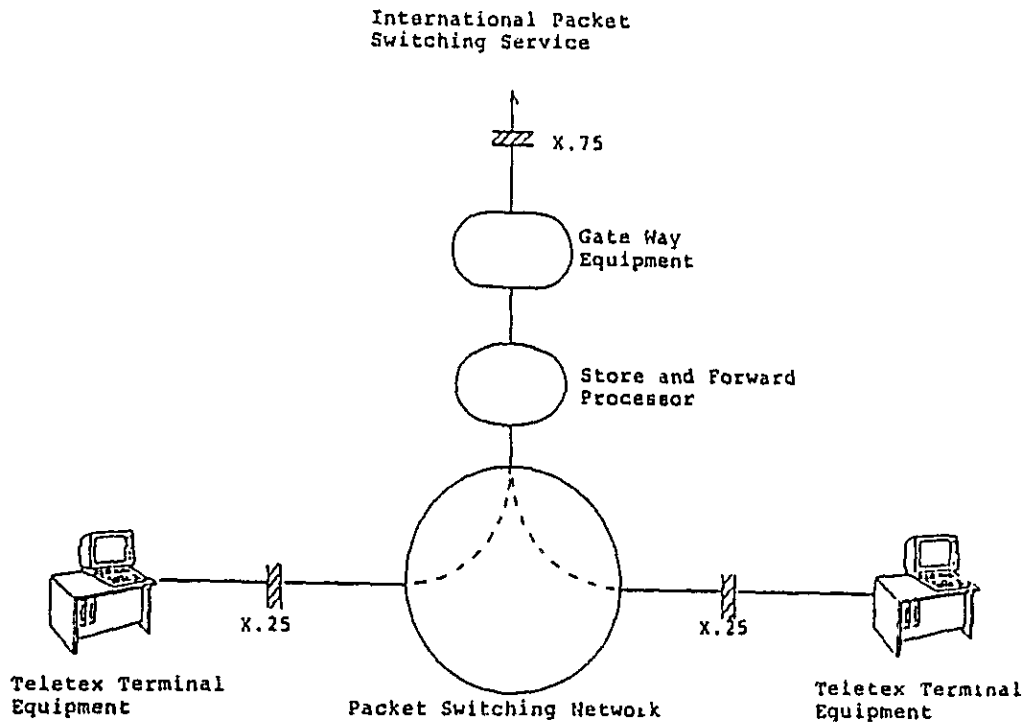


図 A I - 6 Teletex 方式の構成

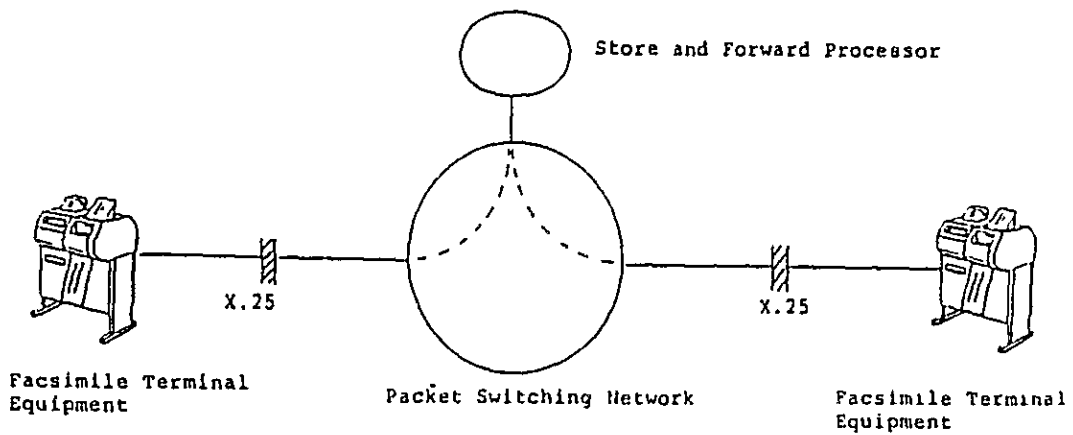
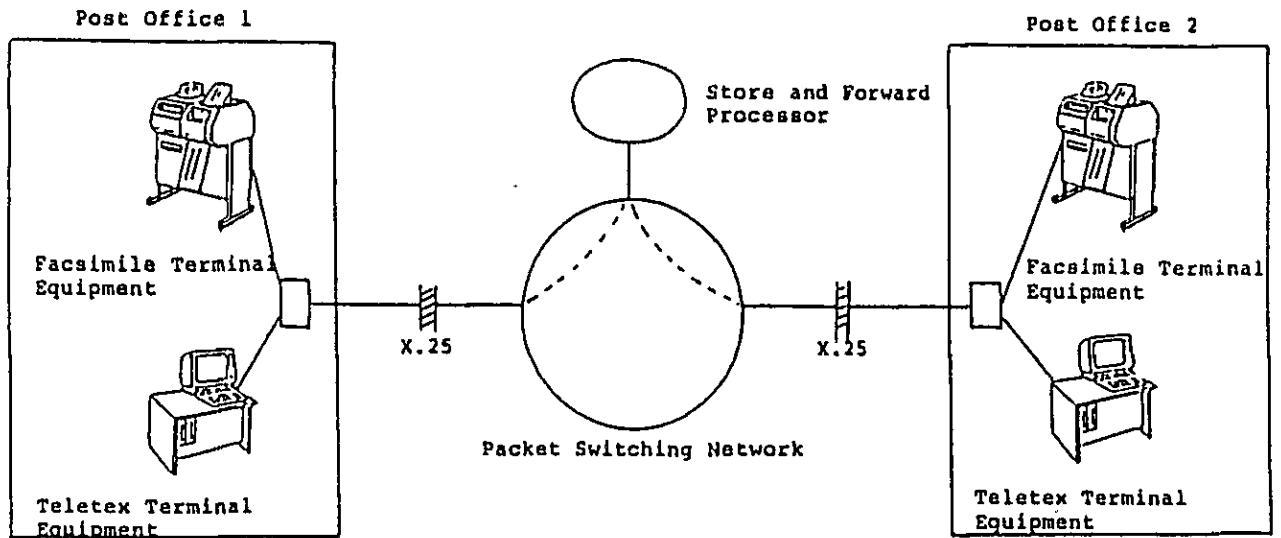
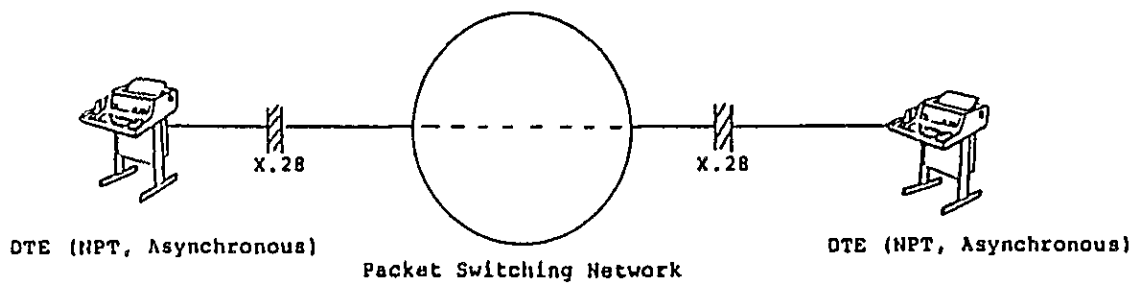


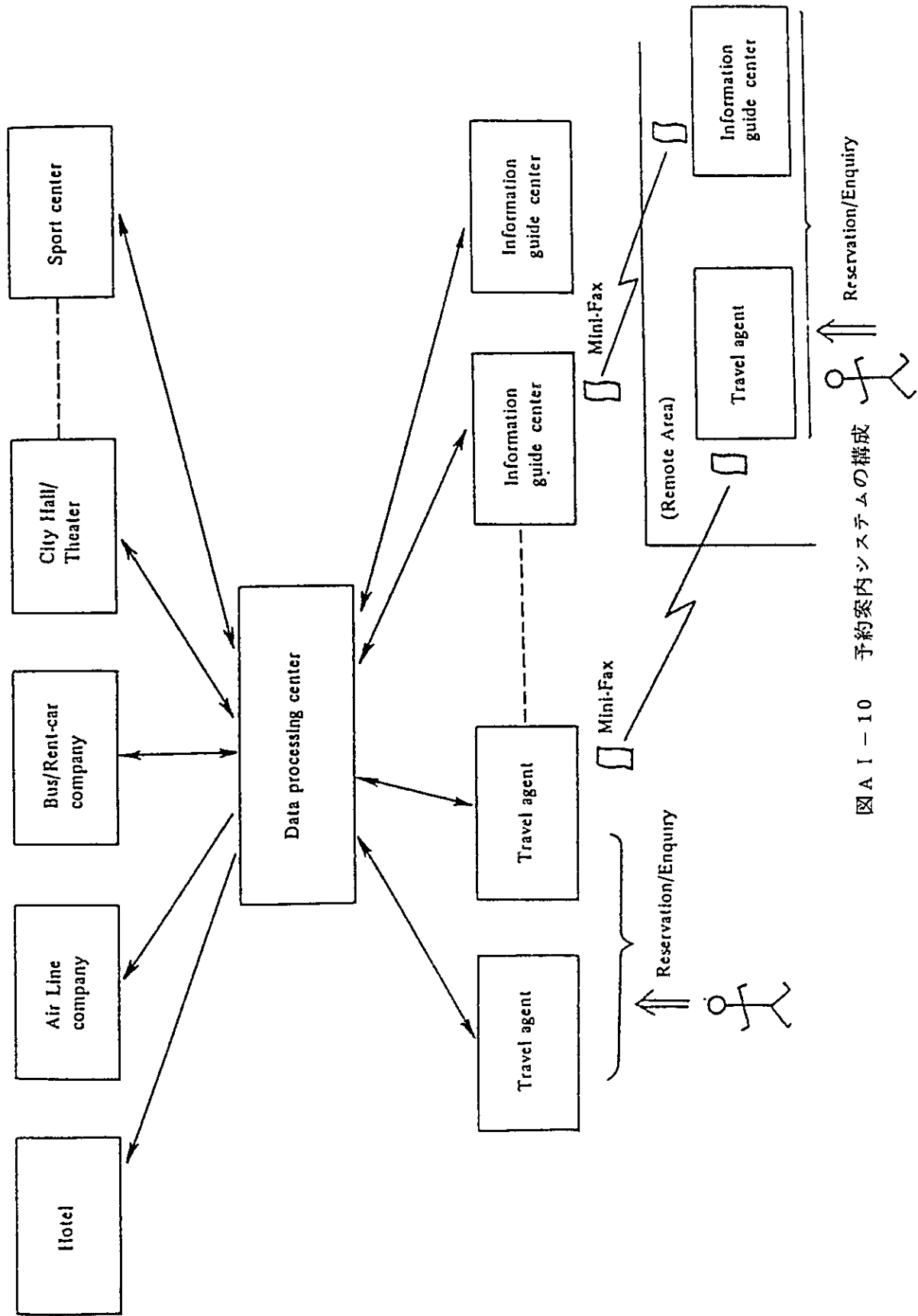
図 A I - 7 デジタル・ファクシミリ方式の構成



図A 1 - 8 電子郵便方式の構成



図A 1 - 9 メッセージ交換方式の構成



図A1-10 予約案内システムの構成

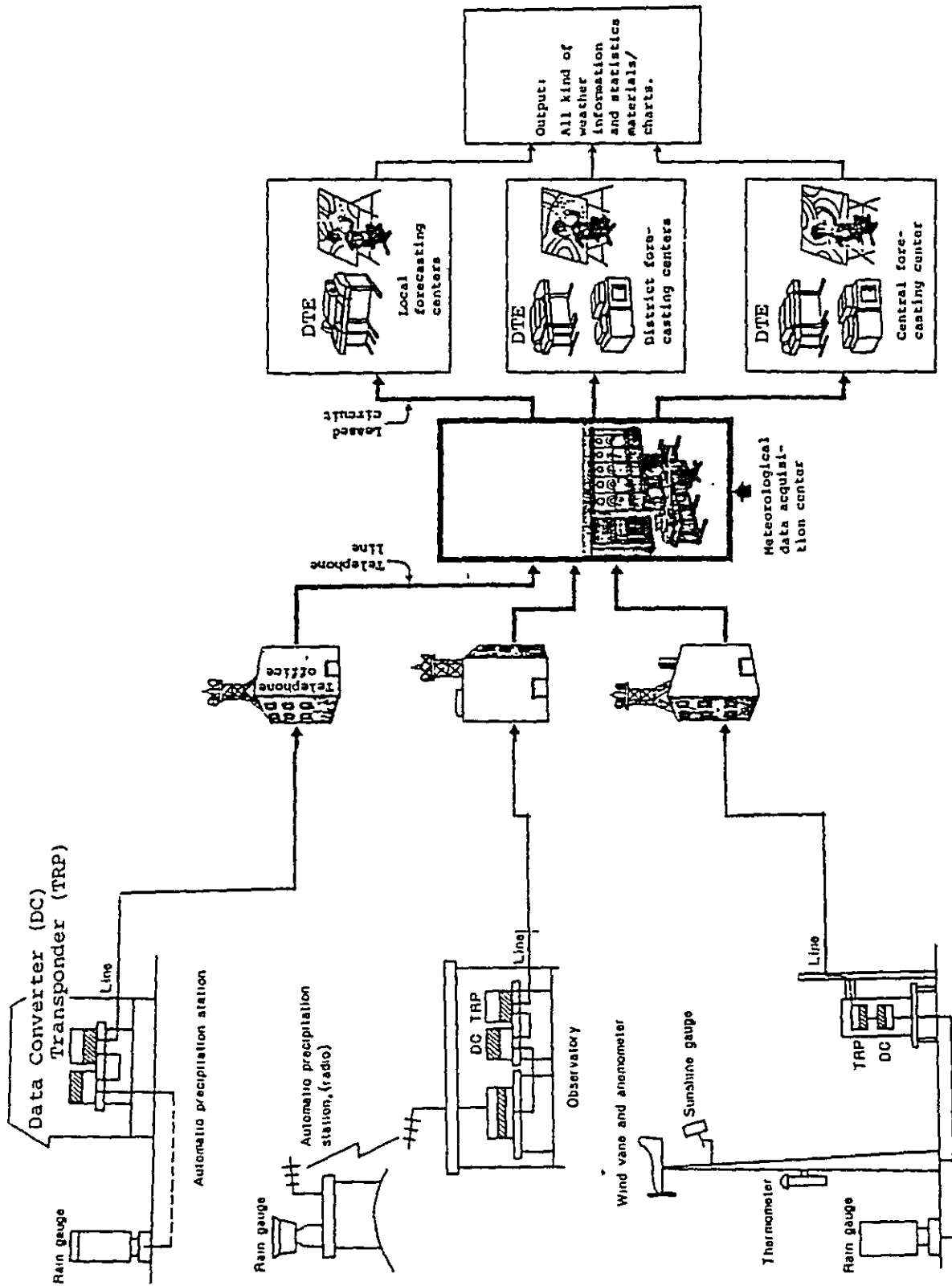


図 A I - 11 気象観測データ通信システムの構成

Automatic weather station

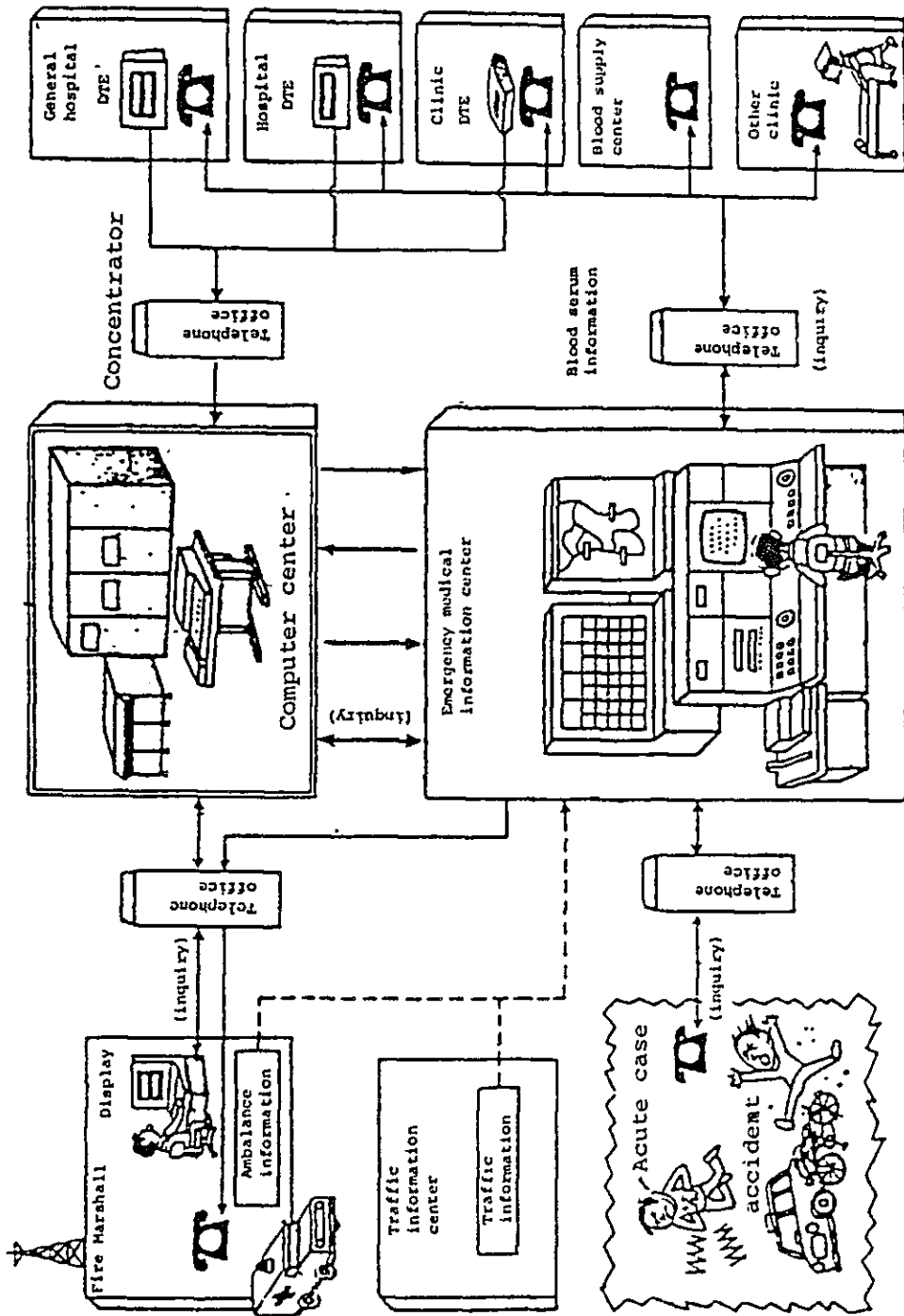
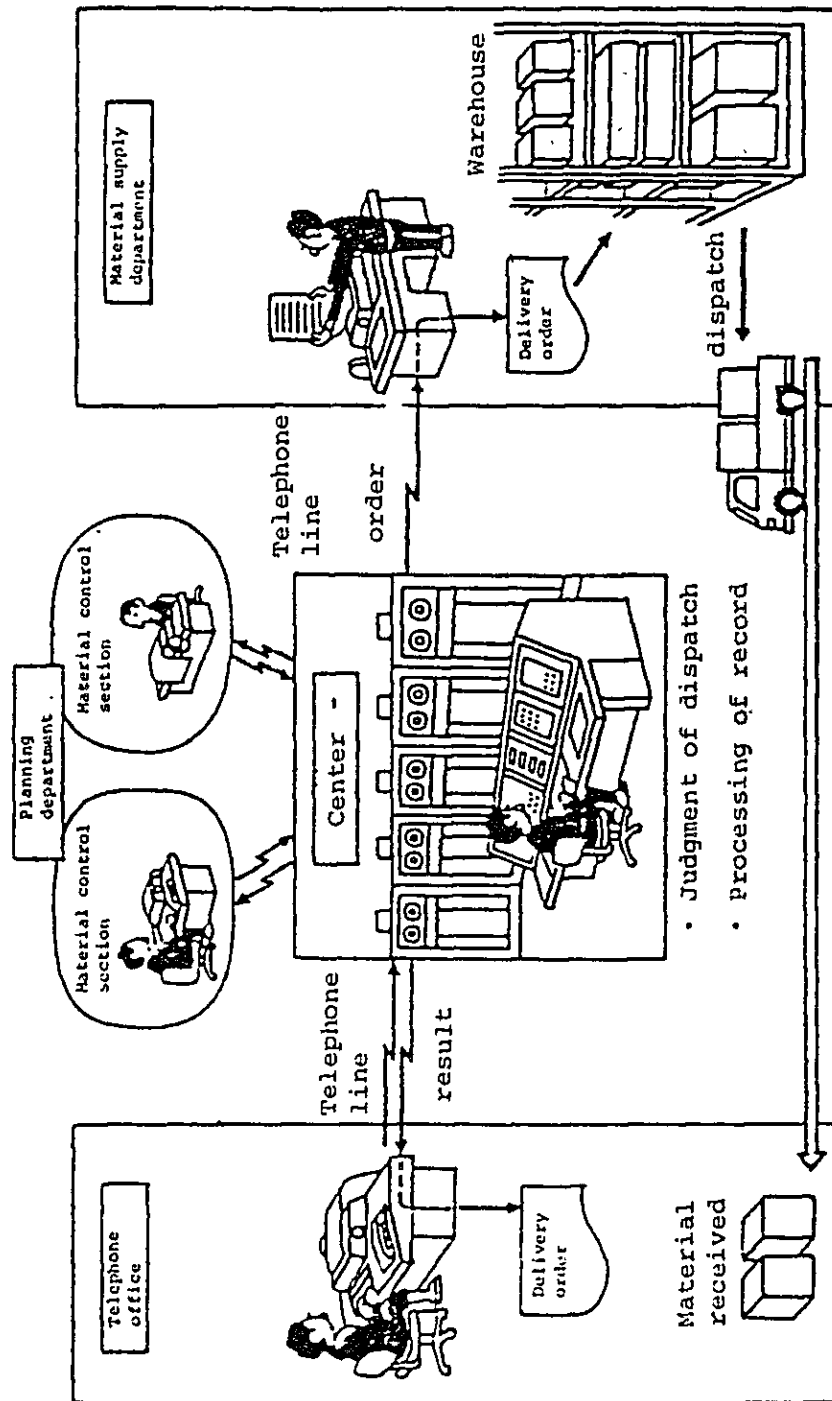
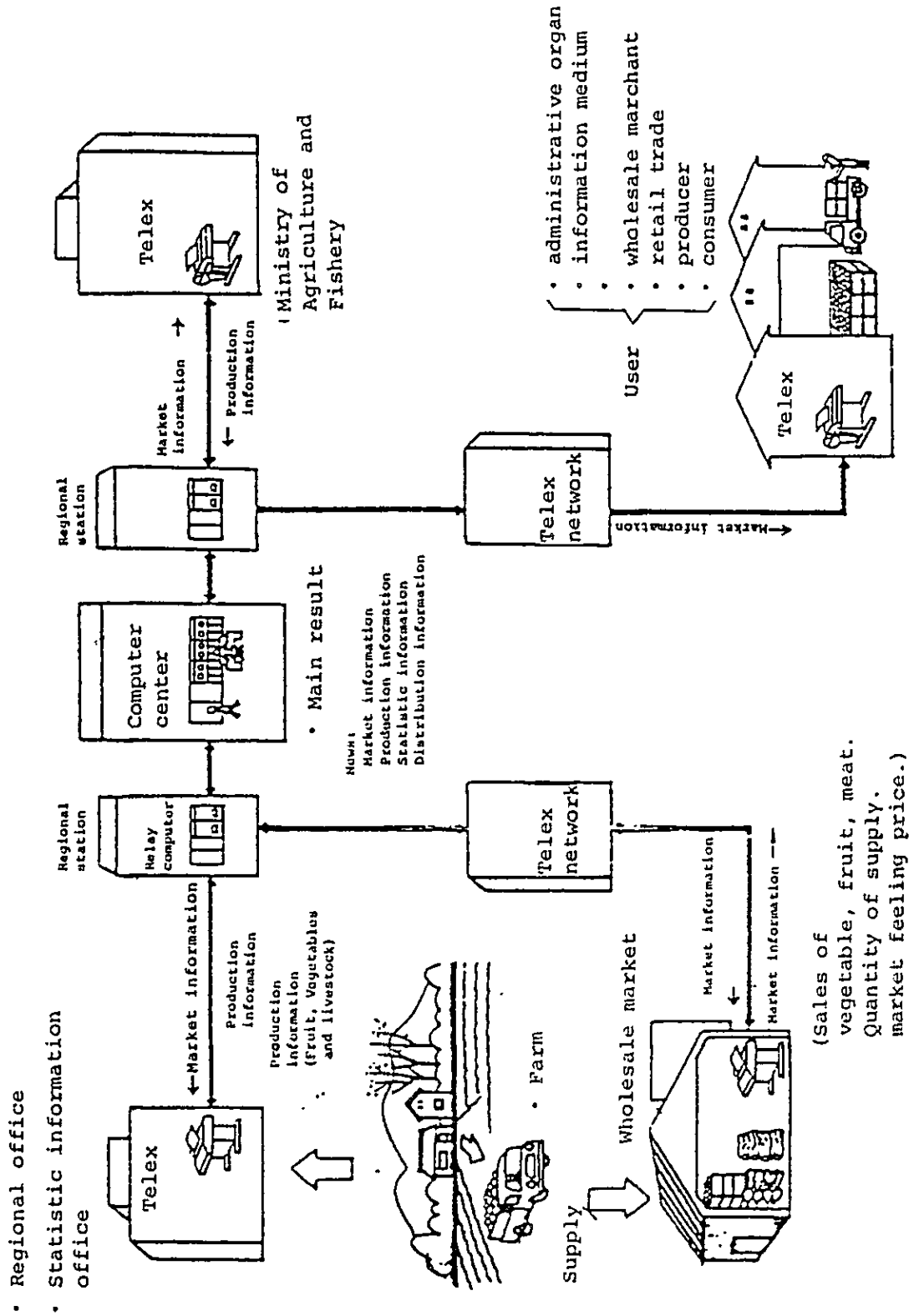


図 A I - 12 救急医療情報データ通信システムの構成



図A1-13 在庫管理システムの構成



図A1-14 生鮮食料品流通情報システムの構成

表A 1-17 国内電気通信建設費の内訳

Unit: Foreign currency Million US dollars
Local currency Million guaranies

Item		Foreign currency	Local currency
Subscriber's telephone		11.99	486
Public telephone		1.70	0
Rural telephone		20.39	1,689
Local exchange	Digital	109.58	449
	EMD, Manual, etc.	56.37	1,348
	Information desk, etc.	2.11	10
	Total	168.06	1,807
Toll exchange		10.54	53
Subscriber's cable		177.89	13,015
Junction	Cable	0.38	22
	Transmission	6.69	33
	Total	7.07	55
Trunk transmission line	Trunk circuits	42.17	619
	TV transmission	1.80	25
	Total	43.97	644
Mobile radio communication	Land mobile	15.50	34
	Ship comm.	2.58	7
	Total	18.08	41
Telegraph, telex & data communication		25.22	124
Total		484.91	17,914

Note: This table does not include the construction cost of the authorized plans (contracted plans and DTS, Rural telephone introduction plan).

I - 5 無線呼出に関する参考資料

無線呼出サービスは ANTELCO の方針により、直営サービスとしないこととしているが、参考までに Asunción 地域及び Cdad. Pte. Stroessner 地域のサービスを直営で行う場合の計画案を以下に示す。

(1) 需要予測

無線呼出の需要予測に当っては、次の産業の従業員を需要母体と見做す。

建設業、製造業、卸小売業、不動産業、サービス業。

パラグアイ国における産業構造の比率は過去 10 年間でほぼ一定している。この傾向は今後も変わらないものと想定される。

従って、無線呼出の需要母体の増加率は人口の増加率に等しいものと仮定する。

1978 年の統計データから得られた需要母体数を基礎として、将来の需要母体の大きさを予測した結果を表 A1-18 に示す。

需要の算出に当っては Asunción 市及び Central 県の需要母体の合計を Asunción 地域の需要母体とし、Cdad. pte. Stroessner を含む Alts Paraná 県の需要母体を Cdad. pte. Stroessner 地域の需要母体とする。

需要率（需要母体 100 人当りの需要数）を、外国の例を参考にして 6.77 としサービス開始後次に示す修正指数曲線に沿って増加するものとする。

$$y = 6.77 - 8.10 \times 0.498^t$$

但し y : 需要率

t : サービス開始後の年数

サービス開始年度を 1989 年とした場合（1989 年： $t = 1$ ）の需要予測結果を表 A1-19 に示す。

(2) 充足画計

各年度のすべての需要に応ずるように計画する。計画期末（1997 年）の加入数は Asunción 地域で約 6,000 加入、Cdad. pte. Stroessner 地域で約 800 加入となる予定である。

(3) 設備画計

需要の大きさを勘案して、Asunción 地域では自動式無線呼出方式を、Cdad. pte. Stroessner 地域では手動式無線呼出方式を計画する。

Asunción地域には、自動式無線呼出中央局1局及び無線基地局4局を、Cdad.pte. Stroessner地域には、手動式無線呼出中央局1局と無線基地局1局を設置する。

無線呼出中央局及び無線基地局の局舎、鉄塔、電力設備の計画を表AI-20に示す。

(4) 運用・保全体制と要員養成計画

Asunción及びCdad.pte. Stroessnerのそれぞれに保守センターを設け、交換部門と無線部門の職員を配置する。職員の配置計画案を表AI-21に示す。

要員の訓練は、ANTELCO学園(IPT)における基礎理論訓練、契約ベースによる工場での訓練、同じく契約ベースによる国内での訓練及び保守運用業務に従事しながら行われる職場訓練を組合せたものとし、その1案を表AI-22に示す。

(5) 建設費

建設費は表AI-23に示す通りである。

この経費の算出に当って用いた条件は、報告書本文第Ⅳ編に述べた条件と同じである。

(6) 料金

本サービスを実施する場合の料金の試案を表AI-24に示す。

表 A I - 18 無線呼出サービスの需要母体数予測

(単位：1000)

Year Service area	1978	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Asunción & Central	54.2	63.4	65.3	67.2	69.2	71.2	73.2	75.2	77.3	79.3	81.4	83.5	85.7	87.8	90.0	92.2
Alto Paraná	7.4	8.6	8.9	9.1	9.4	9.7	9.9	10.2	10.5	10.8	11.1	11.3	11.6	11.9	12.2	12.5
Total	61.6	72.0	74.2	76.3	78.6	80.9	83.1	85.4	87.8	90.1	92.5	94.8	97.3	99.7	102.2	104.7

表 A I - 19 無線呼出サービスの需要予測

Year Service area	1989	1990	1991	1992	1993	1994	1995	1996	1997
Asunción	2,060	3,678	4,578	5,106	5,447	5,696	5,891	6,064	6,222
Cdad Pte Strossner	280	499	621	693	740	773	800	823	845
Total	2,340	4,177	5,199	5,799	6,187	6,469	6,691	6,887	7,067

表 A I - 20 無線呼出方式の設備計画 (局舎, 鉄塔及び電力設備)

Station	Facilities			
	Building	Tower	Power supply	
Automatic radio-paging center	CENTRAL I	Existing	-	○
Base station	CENTRAL II	Existing	Existing	○
	SAN LORENZO	Existing	Existing	○
	M.R. ALONSO	Existing	Existing	○
	LAMBARE	Existing	○	○
Manual radio-paging center	CDAD. PTE. STROESSNER	Existing	Existing	○
Base station	CDAD. PTE. STROESSNER	Existing	Existing	○

○ : To be installed

表 A 1 - 21 無線呼出方式の保守運用要員数

Staff			Asunción	Cdad. Pte. Stroessner	Total
Switching	Work administration	I	1	1	2
	Maintenance administration	I	1		1
		II	1	* 1	2
	Work instruction	I	1		1
	Claim handling	II	1	1	2
	Maintenance & operation	II	2	1	3
	Sub-total	I	3	1	4
		II	4	3	7
Transmission	Work administration	I	1		1
	Maintenance administration	I	1		1
		II	1		1
	Work instruction	I	1	1	2
	Maintenance & operation	II	4	2	6
	Sub-total	I	3	1	4
II		5	2	7	
Total	I	6	2	8	
	II	9	5	14	

Example: I Engineer

II High level technician

* Concurrent with transmission maintenance
administration

表A 1 - 22 無線呼出方式の要員養成計画

Maintenance personnel		1987	1988	1989
Switching	Engineer	(2) \xrightarrow{E}	(4) \xrightarrow{G}	
	High level technician	(3) $\xrightarrow{B} \xrightarrow{E}$	(7) \xrightarrow{G}	
Radio	Engineer	(2) \xrightarrow{E}	(4) \xrightarrow{G}	
	High level technician	(3) $\xrightarrow{B} \xrightarrow{E}$	(7) \xrightarrow{G}	

Note: B - In-country training (IPT)

E - Training at manufacturer's plant
under construction contract

G - On-the-job training

The figures with parentheses show the numbers
of trainees.

表 A 1 - 23 無線呼出方式建設費

Unit: Foreign currency : million U.S. Dollars
 Local currency : million Guaranies

Year	1987		1988		1989		1990		Total	
	Foreign currency	Local currency	Foreign currency	Local currency	Foreign currency	Local currency	Foreign currency	Local currency	Foreign currency	Local currency
Construction cost	2.74	3	0.91	11			0.78	1	4.43	15

表 A 1 - 24 無線呼出方式料金制度試案

Unit: Guaranies

Service	Tariff
Personal radio-paging	Monthly charge 2,000

