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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

DIRECTORATE GENERAL OF POSTS AND TELECOMMUNICATIONS
DEPARTMENT OF TOURISM, POSTS AND TELECOMMUNICATIONS

THE REPUBLIC OF INDONESIA

THE STUDY ON TELECOMMUNICATIONS NETWORK DEVELOPMENT PLAN FOR REPELITA–VI

FINAL REPORT

(VOLUME III)

FEBRUARY 1993

NIPPON TELECOMMUNICATIONS CONSULTING CO., LTD.
TOKYO, JAPAN

THE REPUBLIC OF INDONESIA
THE STUDY ON TELECOMMUNICATIONS NETWORK DEVELOPMENT PLAN FOR REPELITA–VI
FINAL REPORT (VOLUME III)
FEBRUARY 1993
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VOLUME III

PROJECT LIST & DIGEST

VOLUME III

PROJECT LIST AND DIGEST FOR REPELITA-VI

1. Composition of VOLUME-III

VOLUME-III consists of Project List and Project Digest. The Project List and Digest for REPELITA-VI are made on project by project basis. The Project list and Digest include the following items:

(1) Project List

- Project Name
- Objective Area
- Implementation Period
- Total Project Cost
- Financial IRR
- Outline of Implementation Plan by Sub-system

(2) Project Digest

- Project Title
- Project Name
- Location
- Executing Agency
- Objectives
- Project Description
- Implementation Time Schedule
- Project Cost
- Amount Proposed for Commitment
- Related to Technical Assistance
- Stage of Project Preparation
- Additional Information such as Objective Exchange, Related Projects and Project Financial IRR

2. Explanation of the Project List

The tables of the project list are composed as follows:

(1) A table shows outline of one project package proposed.

(2) Facility items

a) Supporting(Land, Building)
b) Switch (TS / TLS / LS / MS / MLS)
c) Transmission (SLJJ / Junction)
d) Local (Cable / RSS: Radio Subscriber System)

(3) Units to be used

a) M2 : square meter
b) TRK: the number of trunks
c) LU : the number of line units
d) CCT: the number of transmission circuits
e) SYS: the number of 2Mbit/s streams
f) SSP: the number of primary cable pairs
g) SUB: the number of subscribers

(4) Implementation Unit No.

New implementation program by exchange during REPELITA-VI is given "Implementation Unit No." by facility item as follows:

a) "Implementation Unit No." outside Jakarta area

AAA-BB-C (total 8 characters)

where,

AAA: abbreviations of primary centers
(refer to the list of abbreviation)

BB : abbreviations of sub-systems

SW: switching facility in primary areas
SC: trunk switch for secondary centers
TR: transmission facility in secondary areas
JC: junction transmission facility
CA: subscriber cable facility
RS: radio subscriber system
SF: supporting facilities(land, building)
MT: mobile telephone
RP: radio paging

C : expansion or removal

1 : new installation
(or expansion in the first half)
2 : expansion of the existing facilities
R : removal

b) "Implementation Unit No." in Jakarta area

JKT-K-BB-C (total 10 characters)

where,

JKT: Jakarta area

K : Kandatel area

T: Timur (East)
B: Barat (West)
S: Selatan (South)
U: Utara (North)
P: Pusat (Central)

BB : abbreviations of sub-systems

C : expansion or removal

ABBREVIATIONS OF EXCHANGES

TABLE II LIST OF ABBREVIATION AND EXCHANGE CODE

WITEL	EXCHANGE NAME		ABBREVI-ATION	EXCHANGE CODE
	S C	P C		
WITEL-1	MEDAN	MEDAN CEN	MDN	61
		TEBING TINGGI	TBT	621
		P. SIANTAR	PMS	622
		KISARAN	KIS	623
		RANTAU PRAPAT	RAP	624
		PARAPAT	PPT	625
		PANGURURAN	PGR	626
		SIDIKALANG	SDK	627
		KABANJAE	KBJ	628
		KUTACANE	KTN	629
		PANGKALAN BRANDAN	PKB	620
	SIBOLGA	SIBOLGA	SBG	631
		BALIGE	BLG	632
		TARUTUNG	TRT	633
		PADANG SIDEMPUAN	PSP	634
		PENYABUNGAN	PYB	636
		NATAL	NTL	637
		GUNUNG SITOLI	GST	639
	LHOKSEUMAWE	LANGSA	LGS	641
		BLANGKAJEREN	BKJ	642
		TAKENGON	TKN	643
		BIREUN	BIR	644
		LHOKSEUMAWE	LSM	645
		IDI	ID	646
	BANDA ACEH	BANDA ACEH	BNA	651
		SEBANG	SAB	652
		SIGLI	SGI	653
		CALANG	CAG	654
		MEULABOH	MBO	655
		TAPAK TUAN	TTN	656
		BAKUNGAN	BAK	657
		SINGKIL	SKL	658
		BLANG PIDIE	BPD	659
		SINABANG	SNB	650
WITEL-2	PADANG	PADANG	PD	751
		BUKIT TINGGI	BKT	752
		LUBUK SIKAPING	LBS	753
		SAWAH LUNTO	SWL	754
		SOLOK	SLK	755
		PAINAN	PAI	756
		BALAI SALASA	BLS	757
		MUARA SIBEURAT	MAR	759
	PAKANBARU	PAKANBARU CEN.	PBR	761
		BANGKINANG	BGK	762
		SELAT PANJANG	SLP	763
		SIAK SRI INDRAPURA	SAK	764
		DUMAI	DUM	765
		BENGKALIS	BS	766
		BAGAN SIAPI-API	BAG	767
		TEMBILAHAN	TBN	768
		RENGAT	RGT	769
		TALUKKUANTAN	TLK	760
	BATAM SEKUPANG	TANJUNG PINANG	TPI	771
		RANAI	RAI	773
		DABO SINGKEP	DBS	776
		TJ. BALAI KARIMUH	TJB	777
		SEKUPANG	SKP	778
		TJ. BATU	TJT	779

TABLE 11 LIST OF ABBREVIATION AND EXCHANGE CODE

WITEL	EXCHANGE NAME		ABBREVI-ATION	EXCHANGE CODE
	S C	P C		
WITEL-3	PALEMBANG CEN.	PALEMBANG CEN.	PG	711
		KAYU AGUNG	KAY	712
		PRABUMULIH	PBM	713
		SEKAYU	SKY	714
		PANGKAL PINANG	PGP	717
		TJ. PANDAN	TJN	719
	TJ. KARANG CEN.	TJ. KARANG CEN.	TJK	721
		KOTA AGUNG	KTA	722
		LIWA	LIW	723
		KOTA BUMI	KB	724
		METRO	MET	725
		KALIANDA	KLA	727
	LAHAT	LAHAT	LT	731
		CURUP	CRP	732
		LUBUK LINGGAU	LLG	733
		MUARA ENIM	MAE	734
		BATURAJA	BTA	735
		BENGKULU	BN	736
		ARGAMAKMUR	AGM	737
		MUARA AMAN	MAM	738
		MANNA	MNA	739
		PAGARALAM	PGL	730
	JAMBI CEN.	JAMBI CEN.	JB	741
		KUALA TUNGKAL	KTL	742
		MUARA BULIAN	MBN	743
		MUARATEBO	MRT	744
		SAROLANGUN	SLG	745
		BANGKO	BKO	746
		MUARA BUNGO	MAB	747
		SUNGAI PENUH	SPN	748
WITEL-4	JAKARTA	JAKARTA	JKT	21
WITEL-5	BANDUNG CEN.	BANDUNG CEN.	BD	22
		SUMEDANG	SMD	261
		GARUT	GRT	262
		CIANJUR	CJ	263
		PURWAKARTA	PWK	264
		TASIKMALAYA	TSM	265
		SUKABUMI	SI	266
		KARAWANG	KRW	267
		PAMEUNGPEUK	PMP	269
	CIREBON CEN.	CIREBON CEN.	CBN	231
		KUNINGAN	KNG	232
		MAJALENGKA	MJL	233
		INDRAMAYU	IM	234
	BOGOR	BOGOR	BOO	251
		RANGKAS BITUNG	RK	252
		PANDEGLANG	PDG	253
		SERANG	SG	254
		SINDANGLAYA	SDL	255

TABLE II LIST OF ABBREVIATION AND EXCHANGE CODE

WITEL	EXCHANGE NAME		ABBREVI-ATION	EXCHANGE CODE
	S C	P C		
WITEL-6	SEMARANG	SEMARANG	SM	24
		KUDUS	KS	291
		PURWODADI	PWD	292
		MAGELANG	MG	293
		KENDAL	KL	294
		PATI	PT	295
		BLORA	BLA	296
		KARIMUNJAWA	KMJ	297
		SALATIGA	SA	298
	YOGYAKARTA	SOLO	SLO	271
		KLATEN	KT	272
		WONOGIRI	WNG	273
		YOGYAKARTA	YG	274
		PURWOREJO	PWJ	275
		BOYOLALI	BYL	276
	PURWOKERTO	PURWOKERTO	PWT	281
		CILACAP	CP	282
		TEGAL	TG	283
		PEMALANG	PML	284
		PEKALONGAN	PK	285
		WONOSOBO	WS	286
		KEBUMEN	KM	287
		REMBANG	REM	288
		BUMIAYU	BMY	289
		MAJENANG	MJG	280
WITEL-7	SURABAYA	SURABAYA	SB	31
		MOJOKERTO	MR	321
		LAMONGAN	LMG	322
		SAMPANG	SMP	323
		PAMEKASAN	PM	324
		SUMENEP	SMN	328
	JEMBER	JEMBER	JR	331
		BONDOWOSO	BO	332
		BANYUWANGI	BW	333
		LUMAJANG	LN	334
		PROBOLINGGO	PB	335
		BESUKI	BSK	336
		SITUBONDO	SIT	338
	MALANG	MALANG	ML	341
		BLITAR	BL	342
		PASURUAN	PR	343
	MADIUN	MADIUN	MN	351
		PONOROGO	PO	352
		BOJONEGORO	BJ	353
		KEDIRI	KD	354
		TULUNG AGUNG	TA	355
		TUBAN	TN	356
		PACITAN	PN	357
		NGANJUK	NGJ	358

TABLE II LIST OF ABBREVIATION AND EXCHANGE CODE

WITEL	EXCHANGE NAME		ABBREVI-ATION	EXCHANGE CODE
	S C	P C		
WITEL-8	DENPASAR KALIASEM	DENPASAR KAL.	DPR	361
		SINGARAJA	SGR	362
		AMLAPURA	APR	363
		MATARAM	MTR	364
		NEGARA	NGR	365
		KLUNGKUNG	KLK	366
		SELONG	SLN	367
	SUMBAWA BESAR	SUMBAWA BESAR	SBW	371
		ALAS	ALS	372
		DOMPU	DPU	373
		BIMA	BIM	374
		VIKEKE	VQQ	377
	ENDE	ENDE	END	381
		MAUMERE	MME	382
		LARANTUKA	LRT	383
		BAJAWA	BJW	384
		RUTENG	RTG	385
		WAINGAPU	WGP	386
		WAIKABUBAK	WKB	387
	KUPANG	KUPANG	KP	391
		SOE	SE	392
		KEFAMENANU	KEF	393
		ATAMBUA	ATB	394
		BAA	BAA	395
		KALABAHI	KAI	397
		ERMERA	ERM	398
		BAUCAU	BCU	399
		DILLI	DLI	390
WITEL-9	BANJARMASIN	BANJARMASIN	BJM	511
		PLEIHARI	PLH	512
		KUALA KAPUAS	KKP	513
		PALANGKARAYA	PLK	514
		BUNTOK	BNT	515
		TJ. TABALONG	TBL	516
		KANDANGAN	KDG	517
		KOTA BARU	KTB	518
		MUARATEWEH	MAT	519
	SAMPIT	SAMPIT	SPT	531
		PANGKALAN BUN	PBU	532
		KETAPANG	KTP	534
		SUKADANA	SAN	535
		KUALA KURUN	KKN	537
		PURUK CAB	PKC	538
	SAMARINDA	SAMARINDA	SMR	541
		BALIKPAPAN	BPP	542
		TANAH GROGOT	TGT	543
		TANJUNG REDEP	TNR	544
		MALAK	MLK	545
		BONTANG	BOT	548
	TARAKAN	TARAKAN	TAR	551
		TANJUNG SELOR	TJS	552
		MALINAU	MLN	553

		SAMBAS	SMB	556
	PONTIANAK	PONTIANAK	PTK	561
		SINGKAWANG	SW	562
		NGABANG	NGB	563
		SANGGAU	SAG	564
		SINTANG	STG	565
		PUTUSABAU	PTA	567
		NANGAIPINOH	NGP	568
		P. KARIMATA	PKM	569

TABLE II LIST OF ABBREVIATION AND EXCHANGE CODE

WITEL	EXCHANGE NAME		ABBREVI-ATION	EXCHANGE CODE
	S C	P C		
WITEL-10	UJUNG PANDANG	UJUNG PANDANG	UP	411
		WATAMPONE	WTP	481
		SINJAI	SNJ	482
		WATANSOPENG	WTS	484
		SENGKANG	SKG	485
		BANTAENG	BTE	413
		BENTENG	BEN	414
		TAKALAR	TKL	418
		JENEPONTO	JNP	419
		PANGKAJENE	PKJ	410
	PARE-PARE	PARE-PARE	PRE	421
		MAJENE	MJN	422
		RANTEPAO	RTP	423
		MALILI	MLL	424
		MAMUJU	MMJ	426
		BARRU	BRR	427
		POLEWALI	PLW	428
		ENREKANG	ERK	429
	MANADO	MANADO	MO	431
		TAHUNA	THN	432
		KOTAMOBAGU	KTG	434
		GORONTALO	GT	435
		KAWANGKOAN	KWK	436
		BITUNG	BTG	438
		AMURANG	AMR	430
	PALU	PALU	PAL	451
		POSO	PSO	452
		TOLI TOLI	TLI	453
		PARIGI	PRG	450
		LUWUK	LUK	461
		BANGGAI	BGG	462
	KENDARI	KENDARI	KDI	401
		BAU-BAU	BAU	402
		RAHA	RHA	403
		KOLAKA	KKA	405
WITEL-11	AMBON	AMBON	AB	911
		PIRU	PIR	912
		NAMLEA	NLA	913
		MASOHI	MSH	914
		BULA	BUL	915
		TUAL	TUL	916
		DOBO	DOB	917
		SAUMLAKI	SML	918
		BANDANEIRA	NRA	910
	TERNATE	TERNATE	TT	921
		JAIOLOLO	JLL	922
		TOBELO	TOB	924
		WEDA	WDA	925
		LABUHA	LBH	927
		LAIWUI	LAW	928
		SANANA	SNN	929
		SOASIU	SAS	920
WITEL-12	SORONG	SORONG	SON	951
		FAKFAK	FF	956
		KAIMANA	KMN	957

	JAYAPURA	BIAK	BIA	961
		MANOKWARI	MW	962
		SERUI	SRU	963
		NABIRE	NAB	964
		SARMI	SMI	966
		JAYAPURA	JAP	967
		WAMENA	WMN	969
	MERAUKE	MERAUKE	MRK	971
		TANAH MERAH	TNM	975
		TIMIKA	TMK	979

PROJECT LIST

Table Project List (1 /)

Project Name	VI/I/01
Objective Area	MEDAN MEA
Implementation Period	1996/97 – 24Months
Total Project Cost	M$ 34.62
Financial IRR	41.46%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW–R	L.Switch	–37,200	LU	0.00	
2	–1		20,860	LU	7.94	
3	–2		61,520	LU	16.04	
4	SC–R	T.Switch	–101	CCT	0.00	
5	–1		0	CCT	0.00	
6	–2		1,460	CCT	0.32	
7	CA	L.Cable	21,000	SSP	7.35	
8	RS	Radio Sub	44	SUB	0.41	
9	MDN–JC–2	Junction	6+5	SYS	2.56	5 Sections

Table Project List (2 /)

Project Name	VI/I/02
Objective Area	MEDAN MEA
Implementation Period	1997/98 – 12Months
Total Project Cost	M$ 50.36
Financial IRR	20.15%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW–R	L.Switch	0	LU	0.00	
2	–1		25,000	LU	7.76	
3	–2		27,150	LU	7.08	
4	SC–R	T.Switch	0	CCT	0.00	
5	–1		0	CCT	0.00	
6	–2		0	CCT	0.00	
7	CA	L.Cable	93,900	SSP	32.87	
8	RS	Radio Sub	63	SUB	0.86	
9	MDN–JC–1/2	Junction	2+1	SYS	1.12	2 Sections
						Unit: 1000RP
10	SF	Land	2,000	M2	0.52	(RP 1,050,000*1)
11	SF	Building	DE–5*1	PC	0.15	(RP 299,804*1)

Table Project List (3 /)

Project Name	VI/I/03
Objective Area	PKB,TBT PGR,KBJ,BLG,TRT,PYB,GST,LSM,Others
Implementation Period	1995/96 – 24Months
Total Project Cost	M$ 105.25
Financial IRR	7.93%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW–R	L.Switch	5,896	LU	0.00	
2	–1		12,356	LU	23.22	
3	–2		57,550	LU	16.26	
4	SC–R	T.Switch	468	CCT	0.00	
5	–1		1,781	CCT	1.45	
6	–2		260	CCT	0.21	
7	CA	L.Cable	88,510	SSP	30.98	
8	RS	Radio Sub	3,658	SUB	26.31	
9	TR–1/2	FO, M/W	18+18	SYS	5.90	15Sect, 15Hops
11	SF	Land	3	SITE	0.78	Repeater
12	SF	Building	3	SITE	0.07	Repeater
						Unit: 1000RP
13	SF	Land	240	M2	0.06	(RP 126,000*1)
14	SF	Building	DLU*1	PC	0.01	(RP 26,520*1)

Table Project List (4 /)

Project Name	VI/I/04
Objective Area	PMS,KIS,RAP,SBG,BIR,IDI,BNA,SGI,Others
Implementation Period	1997/98 – 24Months
Total Project Cost	M$ 74.09
Financial IRR	5.28%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW–R	L.Switch	8,718	LU	0.00	
2	–1		18,140	LU	30.97	
3	–2		25,503	LU	6.67	
4	SC–R	T.Switch	174	CCT	0.00	
5	–1		1,499	CCT	0.69	
6	–2		14	CCT	0.05	
7	CA	L.Cable	21,090	SSP	7.38	
8	RS	Radio Sub	2,952	SUB	20.91	
9	TR–1/2	FO,M/W	21+19	SYS	6.22	17Sect, 18Hops
10	SF	Land	4	SITE	1.04	Repeater
11	SF	Building	4	SITE	0.10	Repeater
						Unit: 1000RP
12	SF	Land	960	M2	0.03	(RP 54,150*4)
13	SF	Building	DLU*4	PC	0.03	(RP 61,880*4)

Table Project List (5/)

Project Name	VI/II/01
Objective Area	PD,LBS,SWL,SLK,BGD,SLP,SAK,DUM,Others
Implementation Period	1995/96 -- 24Months
Total Project Cost	M$ 74.81
Financial IRR	4.99%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	-2,552	LU	0.00	
2	-1		19,482	LU	10.18	
3	-2		19,890	LU	6.46	
4	SC-R	T.Switch	-5,678	CCT	0.00	
5	-1		3,350	CCT	1.48	
6	-2		410	CCT	0.06	
7	CA	L.Cable	59,490	SSP	20.82	
8	RS	Radio Sub	4,537	SUB	25.47	
9	TR-1/2	FO, M/W	19+19	SYS	5.97	11Sect, 19Hops
10	PD-JC-1	FO-155M	3+3	SYS	1.45	2Sections
11	SF	Land	7	SITE	1.83	Repeater
12	SF	Building	7	SITE	0.17	Repeater
						Unit: 1000RP
13	SF	Land	2,000	M2	0.79	(RP 1,600,000*1)
14	SF	Building	DE-5*1	PC	0.13	(RP 265,594*1)

Table Project List (6/)

Project Name	VI/II/02
Objective Area	BKT, PBR, BAG, SKN, Others
Implementation Period	1996/97 – 36Months
Total Project Cost	M$ 85.72
Financial IRR	15.02%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW–R	L.Switch	–6,776	LU	0.00	
2	–1		32,556	LU	17.23	
3	–2		45,450	LU	11.86	
4	SC–R	T.Switch	–1,166	CCT	0.00	
5	–1		3,455	CCT	1.99	
6	–2		52	CCT	0.00	
7	CA	L.Cable	81,730	SSP	28.61	
8	RS	Radio Sub	4,338	SUB	21.72	
9	TR–1/2	FO, M/W	10+5	SYS	2.40	8Sect,10Hops
10	PBR–JC–1	FO–155M	2+2	SYS	1.12	2Sections
11	SF	Land	2	SITE	0.26	Repeater
12	SF	Building	2	SITE	0.05	Repeater
						Unit: 1000RP
						(RP 560,000*1)
13	SF	Land	2,480	M2	0.34	(RP 67,200*2)
14	SF	Building	DE–5*1	PC	0.02	(RP 236,992*1)
15	SF	Building	DLU*2	PC	0.12	(RP 23,520*1)

Table Project List (7 /)

Project Name	VI/III/01
Objective Area	KAY,SKY,PGP,KTA,MET,MAE,BTA,BKO,Others
Implementation Period	1995/96 – 24Months
Total Project Cost	M$ 100.11
Financial IRR	–1.02%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW–R	L.Switch	–10,728	LU	0.00	
2	–1		18,548	LU	27.36	
3	–2		23,830	LU	6.23	
4	SC–R	T.Switch	–198	CCT	0.00	
5	–1		224	CCT	0.45	
6	–2		294	CCT	0.59	
7	CA	L.Cable	64,659	SSP	22.63	
8	RS	Radio Sub	5,463	SUB	34.17	
9	TR–1/2	FO, M/W	21+19	SYS	6.46	14Sect,16Hops
10	SF	Land	7	SITE	1.83	Repeater
11	SF	Building	7	SITE	0.17	Repeater
						Unit: 1000RP
12	SF	Land	960	M2	0.17	(RP 84,000*4)
13	SF	Building	DLU*4	PC	0.05	(RP 24,840*4)

Table Project List (8 /)

Project Name	VI/III/02
Objective Area	PG,TJK,LLG,LT
Implementation Period	1996/97 – 24Months
Total Project Cost	M$ 84.40
Financial IRR	18.93%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW–R	L.Switch	–11,320	LU	0.00	
2	–1		690	LU	5.29	
3	–2		91,180	LU	23.77	
4	SC–R	T.Switch	–58	CCT	0.00	
5	–1		5,408	CCT	3.23	
6	–2		0	CCT	0.00	
7	CA	L.Cable	114,640	SSP	40.12	
8	RS	Radio Sub	1,128	SUB	6.67	
9	TR–1/2	FO, M/W	7+6	SYS	2.15	5Sect,6Hops
10	PG–JC–2	11G–140M	1	SYS	0.50	1Section
11	TJK–JC–2	FO, M/W	3+2	SYS	2.18	3Sect,4Hops
12	SF	Land	2	SITE	0.52	Repeater
13	SF	Building	2	SITE	0.05	Repeater

Table Project List (9 /)

Project Name	VI/III/03
Objective Area	LIW, KB, KLA, BN, MNA, JB, Others
Implementation Period	1998/99 – 12Months
Total Project Cost	M$ 75.97
Financial IRR	9.73%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW–R	L.Switch	–2,200	LU	0.00	
2	–1		35,540	LU	20.51	
3	–2		16,560	LU	4.33	
4	SC–R	T.Switch	–90	CCT	0.00	
5	–1		885	CCT	1.77	
6	–2		20	CCT	0.00	
7	CA	L.Cable	88,590	SSP	31.00	
8	RS	Radio Sub	1,583	SUB	9.25	
9	TR–1/2	FO, M/W	14+14	SYS	4.49	10Sect,11Hops
10	JB–JC–2	FO–155M	2+2	SYS	1.12	2Sections
11	BN–JC–2	FO–155M	2+2	SYS	1.24	2Sections
12	SF	Land	4	SITE	1.04	Repeater
13	SF	Building	4	SITE	0.10	Repeater
						Unit: 1000RP
						(RP 280,000*2)
14	SF	Land	2,800	M2	0.97	(RP 84,000*5)
15	SF	Building	DE–3*2	PC	0.09	(RP 86,940*2)
16	SF	Building	DLU*5	PC	0.06	(RP 24,840*5)

Table Project List (10/)

Project Name	VI/IV/U/01
Objective Area	JKT MEA (UTARA)
Implementation Period	1996, 12Months
Total Project Cost	M$ 36.41
Financial IRR	50.28%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−69,632	LU	0.00	
2	−1		40,000	LU	12.92	
3	−2		38,000	LU	11.99	
4	SC−R	T.Switch	0	CCT	0.00	
5	−1		0	CCT	0.00	
6	−2		0	CCT	0.00	
7	SM−2	M−Switch	8,000	CCT	2.08	
8	CA	L.Cable	26,900	SSP	9.42	

Table Project List (11 /)

Project Name	VI/IV/U/02
Objective Area	JKT MEA (UTARA)
Implementation Period	1996, 12Months
Total Project Cost	M$ 67.71
Financial IRR	21.0%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	0			
2	−1		63,000	LU	20.16	
3	−2		0	LU		
4	SC−R	T.Switch	0	CCT		
5	−1		0	CCT		
6	−2		0	CCT		
7	CA	L.Cable	92,250	SSP	32.28	
						Unit: 1000RP
8	SF	Land	6,000	M2	14.85	(RP10,000,000*3)
9	SF	Building	DE−5*3	PC	0.42	(RP 280,522*3)

Table Project List (12 /)

Project Name	VI/IV/U/03
Objective Area	JKT MEA (UTARA)
Implementation Period	1996, 36Months
Total Project Cost	M$ 25.16
Financial IRR	34.14%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−9,216	LU	0.00	
2	−1		50,000	LU	15.53	
3	−2		0	LU	0.00	
4	SC−R	T.Switch	0	CCT	0.00	
5	−1		0	CCT	0.00	
6	−2		0	CCT	0.00	
7	CA	L.Cable	27,500	SSP	9.63	

Table Project List (13/)

Project Name	VI/IV/P/01
Objective Area	JKT MEA (PUSAT)
Implementation Period	1995, 12Months
Total Project Cost	M$ 55.02
Financial IRR	35.13%
Fund Source	

No.	Implementation Unit No.	Supply System	Supply Volume	Supply Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	0	LU		
2	-1		50,000	LU	14.28	
3	-2		30,000	LU	2.82	
4	SC-R	T.Switch	0	CCT	0.00	
5	-1		0	CCT	0.00	
6	-2		0	CCT	0.00	
7	CA	L.Cable	108,340	SSP	37.92	

Table Project List (14 /)

Project Name	VI/IV/P/02
Objective Area	JKT MEA (PUSAT)
Implementation Period	1996, 36Months
Total Project Cost	M$ 58.32
Financial IRR	31.93%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	0	LU		
2	−1		40,000	LU	11.67	
3	−2		66,000	LU	17.20	
4	SC−R	T.Switch	0	CCT	0.00	
5	−1		0	CCT	0.00	
6	−2		0	CCT	0.00	
7	SM−2	M.Switch	2,000	CCT	0.52	
8	CA	L.Cable	82,670	SSP	28.93	

Table Project List (15/)

Project Name	VI/IV/S/01
Objective Area	JKT MEA (SELATAN)
Implementation Period	1995, 36Months
Total Project Cost	M$ 83.08
Financial IRR	11.88%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	1,024	LU	0.00	
2	-1		37,000	LU	14.64	
3	-2		25,000	LU	6.52	
4	SC-R	T.Switch	0	CCT	0.00	
5	-1		0	CCT	0.00	
6	-2		0	CCT	0.00	
7	CA	L.Cable	169,490	SSP	59.32	
						Unit: 1000RP
						(RP2,000,000*1)
						(RP 800,000*2)
8	SF	Land	4,170	M2	2.35	(RP 570,000*2)
9	SF	Building	DLU-GS-	PC	0.03	(RP 56,560*2)
10	SF	Building	DE-3*2	PC	0.08	(RP 84,840*2)
11	SF	Building	DE-5*1	PC	0.14	(RP 280,522*1)

Table Project List (16/)

Project Name	VI/IV/S/02
Objective Area	JKT MEA (SELATAN)
Implementation Period	1996, 12Months
Total Project Cost	M$ 62.64
Financial IRR	34.17%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	5,120	LU	0.00	
2	-1		58,000	LU	17.61	
3	-2		30,000	LU	7.82	
4	SC-R	T.Switch	0	CCT		
5	-1		0	CCT		
6	-2		0	CCT		
7	CA	L.Cable	102,680	SSP	35.94	
						Unit: 1000RP
8	SF	Land	2,000	M2	0.99	(RP2,000,000RP*1)
9	SF	Building	DE-5*2	PC	0.28	(RP 280,522*2)

Table Project List (17 /)

Project Name	VI/IV/S/03
Objective Area	JKT MEA (SELATAN)
Implementation Period	1995, 48Months
Total Project Cost	M$ 57.58
Financial IRR	50.28%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−28,600	LU	0.00	
2	−1		25,000	LU	9.01	
3	−2		95,000	LU	26.07	
4	SC−R	T.Switch	0	CCT	0.00	
5	−1		0	CCT	0.00	
6	−2		0	CCT	0.00	
7	SM−2	M.Switch	8,000	CCT	2.08	
8	CA	L.Cable	57,120	SSP	19.99	
						Unit: 1000RP
9	SF	Land	800	M2	0.39	(RP 800,000*1)
10	SF	Building	DE−3*1	PC	0.04	(RP 84,840*1)

Table Project List (18 /)

Project Name	VI/IV/B/01
Objective Area	JKT MEA (BARAT)
Implementation Period	1995, 24Months
Total Project Cost	M$ 83.21
Financial IRR	21.73%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	-13,076	LU	0.00	
2	-1		53,256	LU	23.88	
3	-2		35,900	LU	9.36	
4	SC-R	T.Switch	0	CCT	0.00	
5	-1		0	CCT	0.00	
6	-2		0	CCT	0.00	
7	CA	L.Cable	139,370	SSP	48.78	
						Unit: 1000RP
						(RP 570,000*3)
8	SF	Land	2,190	M2	1.08	(RP 240,000*2)
9	SF	Building	DLU*2	PC	0.02	(RP 24,240*2)
10	SF	Building	DLU-GS-	PC	0.06	(RP 56,560*2)
11	SF	Building	DLU-GS-	PC	0.03	(RP 65,448*1)

Table Project List (19/)

Project Name	VI/IV/B/02
Objective Area	JKT MEA (BARAT)
Implementation Period	1996, 12Months
Total Project Cost	M$ 64.68
Financial IRR	27.52%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	-9,984	LU	0.00	
2	-1		61,000	LU	16.32	
3	-2		14,100	LU	4.93	
4	SC-R	T.Switch	0	CCT	0.00	
5	-1		0	CCT	0.00	
6	-2		0	CCT	0.00	
7	CA	L.Cable	119,800	SSP	41.93	
						Unit: 1000RP
						(RP 800,000*2)
8	SF	Land	1,600	M2	1.36	(RP 570,000*2)
9	SF	Building	DLU-GS-	PC	0.06	(RP 56,560*2)
10	SF	Building	DE-3*2	PC	0.08	(RP 84,840*2)

Table Project List (20/)

Project Name	VI/IV/B/03
Objective Area	JKT MEA (BARAT)
Implementation Period	1996, 36Months
Total Project Cost	M$ 63.93
Financial IRR	25.02%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−8,448	LU	0.00	
2	−1		12,000	LU	4.38	
3	−2		76,600	LU	19.97	
4	SC−R	T.Switch	−10,080	CCT	0.00	
5	−1		12,400	CCT	3.23	
6	−2		0	CCT	0.00	
7	CA	L.Cable	100,810	SSP	35.28	
						Unit: 1000RP
8	SF	Land	2,000	M2	0.99	(RP2,000,000*1)
9	SF	Building	DE−4*1		0.08	(RP 167,660*1)

Table Project List (21 /)

Project Name	VI/IV/T/01
Objective Area	JKT MEA (TIMUR)
Implementation Period	1995, 24Months
Total Project Cost	M$ 80.98
Financial IRR	23.16%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	-27,008	LU	0.00	
2	-1		70,300	LU	20.83	
3	-2		22,000	LU	6.99	
4	SC-R	T.Switch	0	CCT	0.00	
5	-1		0	CCT	0.00	
6	-2		0	CCT	0.00	
7	CA	L.Cable	143,550	SSP	50.24	
						Unit: 1000RP
8	SF	Land	5,560	M2	2.63	(5,320,000RP)
9	SF	Building	DLU*7	PC	0.08	(RP 24,240*7)
10	SF	Building	DLU-GS-	PC	0.03	(RP 56,560*1)
11	SF	Building	DLU-GS-	PC	0.10	(RP 65,448*3)
12	SF	Building	DE-3*2	PC	0.08	(RP 84,840*2)

Table Project List (22/)

Project Name	VI/IV/T/02
Objective Area	JKT MEA (TIMUR)
Implementation Period	1996, 12Months
Total Project Cost	M$ 53.60
Financial IRR	12.38%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	25,344	LU	0.00	
2	-1		14,000	LU	3.65	
3	-2		25,000	LU	7.77	
4	SC-R	T.Switch	0	CCT	0.00	
5	-1		0	CCT	0.00	
6	-2		0	CCT	0.00	
7	CA	L.Cable	119,620	SSP	41.87	
						Unit: 1000RP
8	SF	Land	570	M2	0.28	(RP 570,000*1)
9	SF	Building	DLU-GS-	PC	0.03	(RP 56,560*1)

Table Project List (23 /)

Project Name	VI/IV/T/03
Objective Area	JKT MEA (TIMUR)
Implementation Period	1996, 36Months
Total Project Cost	M$ 41.30
Financial IRR	7.33%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	-1,700	LU	0.00	
2	-1		1,000	LU	1.51	
3	-2		23,500	LU	13.62	
4	SC-R	T.Switch	0	CCT	0.00	
5	-1		0	CCT	0.00	
6	-2		0	CCT	0.00	
7	CA	L.Cable	74,400	SSP	26.04	
						Unit: 1000RP
8	SF	Land	240	M2	0.12	(RP 240,000*1)
9	SF	Building	DLU*1	PC	0.01	(RP 24,240*1)

Table Project List (24/)

Project Name	JKT Junction Network
Objective Area	JKT MEA
Implementation Period	1995, 48Months
Total Project Cost	M$ 49.20
Financial IRR	23.87%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	Transmission	FO-620M	100+100	SYS	49.20	38 Sections
2		FO-155M	5+5	SYS		4 Sections
3		FO-140M	10	SYS		9 Sections

Table Project List (25 /)

Project Name	VI/V/01
Objective Area	BD MEA
Implementation Period	1995, 12Months
Total Project Cost	M$ 74.09
Financial IRR	24.61%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	-200	LU	0.00	
2	-1		660	LU	1.42	
3	-2		88,040	LU	25.71	
4	SC-R	T.Switch	0	CCT		
5	-1		0	CCT		
6	-2		11,154	CCT		
7	CA	L.Cable	134,160	SSP	46.96	

Table Project List (26/)

Project Name	VI/V/02
Objective Area	BD
Implementation Period	1995, 12Months
Total Project Cost	M$ 34.90
Financial IRR	24.09%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−6,670	LU	0.00	
2	−1		23,860	LU	16.22	
3	−2		17,520	LU	4.57	
4	SC−R	T.Switch	0	CCT	0.00	
5	−1		0	CCT	0.00	
6	−2		0	CCT	0.00	
7	CA	L.Cable	32,350	SSP	11.32	
8	TR−1/2	FO, M/W	9+7	SYS	2.46	8Sect,2Hops
9	SF	Land	1	SITE	0.26	Repeater
10	SF	Building	1	SITE	0.02	Repeater
						Unit: 1000RP
11	SF	Land	240	M2	0.04	(RP 84,000*1)
12	SF	Building	DLU	PC	0.01	(RP 23,700*1)

Table Project List (27 /)

Project Name	VI/V/03
Objective Area	KNG,MJL,RK,SG,SMD,PWK,TSM,KRW,PMP
Implementation Period	1995, 12Months
Total Project Cost	M$ 89.30
Financial IRR	17.45%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	9,269	LU	0.00	
2	−1		39,040	LU	27.67	
3	−2		44,059	LU	11.49	
4	SC−R	T.Switch	−82	CCT	0.00	
5	−1		180	CCT	0.36	
6	−2		1,332	CCT	0.66	
7	CA	L.Cable	97,080	SSP	33.98	
8	RS	Radio Sub	946	SUB	10.52	
9	TR−1/2	FO, M/W	24+16	SYS	4.34	16Sect,19Hops
10	SF	Land	1	SITE	0.26	Repeater
11	SF	Building	1	SITE	0.02	Repeater

Table Project List (28 /)

Project Name	VI/V/04
Objective Area	CBN, IM, BOO, CJ
Implementation Period	1995, 24Months
Total Project Cost	M$ 94.22
Financial IRR	15.25%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	15,262	LU	0.00	
2	−1		50,422	LU	32.91	
3	−2		36,460	LU	9.55	
4	SC−R	T.Switch	0	CCT	0.00	
5	−1		0	CCT	0.00	
6	−2		1,760	CCT	3.52	
7	CA	L.Cable	113,450	SSP	39.71	
8	RS	Radio Sub	672	SUB	5.21	
9	TR−1/2	FO, M/W	11+10	SYS	3.14	14Sect, 4Hops
						Unit: 1000RP
10	SF	Land	570	M2	0.14	(RP 280,000*1)
11	SF	Building	DLUGS−2*	PC	0.04	(RP 82,950*1)

Table Project List (29/)

Project Name	VI/V/05
Objective Area	BD BARAT
Implementation Period	1997, 12Months
Total Project Cost	M$ 61.01
Financial IRR	28.80%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−10,000	LU	0.00	
2	−1		46,380	LU	13.33	
3	−2		36,380	LU	9.48	
4	SC−R	T.Switch	0	CCT	0.00	
5	−1		0	CCT	0.00	
6	−2		0	CCT	0.00	
7	CA	L.Cable	109,130	SSP	38.20	

Table Project List (30 /)

Project Name	VI/V/06
Objective Area	BD MEA
Implementation Period	1995, 36Months
Total Project Cost	M$ 73.47
Financial IRR	22.27%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	0	LU	0.00	
2	−1		24,100	LU	7.53	
3	−2		77,090	LU	18.79	
4	SC−R	T.Switch	0	CCT	0.00	
5	−1		0	CCT	0.00	
6	−2		0	CCT	0.00	
7	CA	L.Cable	134,700	SSP	47.15	

Table Project List (31 /)

Project Name	VI/V/07
Objective Area	BD
Implementation Period	1995, 36Months
Total Project Cost	M$ 50.03
Financial IRR	19.21%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−903	LU	0.00	
2	−1		1,553	LU	1.66	
3	−2		58,520	LU	15.29	
4	SC−R	T.Switch	194	CCT	0.00	
5	−1		0	CCT	0.00	
6	−2		810	CCT	1.62	
7	CA	L.Cable	89,890	SSP	31.46	

Table Project List (32 /)

Project Name	VI/V/08
Objective Area	PDG, SG, GRT, SI, SIG, KRW
Implementation Period	1997, 12Months
Total Project Cost	M$ 116.77
Financial IRR	−4.26%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−5,290	LU	0.00	
2	−1		6,830	LU	21.78	
3	−2		34,980	LU	9.12	
4	SC−R	T.Switch	0	CCT	0.00	
5	−1		0	CCT	0.00	
6	−2		492	CCT	0.98	
7	CA	L.Cable	48,090	SSP	16.83	
8	RS	Radio Sub	538	SUB	64.30	
9	TR−1	FO, M/W	14+14	SYS	3.48	13Sect,2Hops
10	SF	Land	1	SITE	0.26	Repeater
11	SF	Building	1	SITE	0.02	Repeater

Table Project List (33 /)

Project Name	BD Junction Network
Objective Area	BD MEA
Implementation Period	1995, 36Months
Total Project Cost	M$ 11.20
Financial IRR	15.40%
Fund Source	

No.	Implementation Unit No.	Supply System	Supply Volume	Supply Unit	Cost Mil US$	Remarks
1	Transmission	FO−620M	16+16	SYS	11.20	12 Sections
2		FO−155M	1+1	SYS		1 Section
3		FO−140M	1	SYS		1 Section

Table Project List (34 /)

Project Name	VI/VI/01
Objective Area	SM MEA
Implementation Period	1996, 12Months
Total Project Cost	M$ 106.0
Financial IRR	24.85%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	0	LU	0.00	
2	−1		30,540	LU	10.46	
3	−2		86,570	LU	22.79	
4	SC−R	T.Switch	0	CCT	0.00	
5	−1		0	CCT	0.00	
6	−2		2,470	CCT	0.22	
7	CA	L.Cable	158,190	SSP	55.37	
8	RS	Radio Sub	73	SUB	12.88	
9	TR−1/2	FO, M/W	2+2	SYS	0.56	2 Sections
10	SM−JC−1/2	FO	6+4	SYS	2.57	6 Sections
						Unit: 1000RP
						(RP2,000,000*1)
11	SF	Land	2,240	M2	1.03	(RP 84,000*1)
12	SF	Building	DE−5*1	PC	0.11	(RP 228,896*1)
13	SF	Building	DLU	PC	0.01	(RP 20,280*1)

Table Project List (35 /)

Project Name	VI/VI/02
Objective Area	SLO, KT, WNG, YK
Implementation Period	1995, 36Months
Total Project Cost	M$ 110.3
Financial IRR	12.42%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−18,290	LU	0.00	
2	−1		53,540	LU	36.45	
3	−2		35,120	LU	9.16	
4	SC−R	T.Switch	− 2,140	CCT	0.00	
5	−1		2,850	CCT	1.26	
6	−2		0	CCT	0.00	
7	CA	L.Cable	113,770	SSP	39.82	
8	RS	Radio Sub	73	SUB	18.01	
9	TR−1/2	FO, M/W	13+9	SYS	3.07	14Sect,9Hops
10	SLO−JC−1/2	Junction	1	SYS	0.23	1 Section
11	YK−JC−1/2	Junction	2+2	SYS	1.24	2 Sections
12	SF	Land	4,670	M2	0.81	
13	SF	Building	DLU−GS−	PC	0.05	(RP 47,320*2)
14	SF	Building	DLU−GS−	PC	0.03	(RP 54,756*1)
15	SF	Building	DE−5*1	PC	0.07	(RP 140,270*1)
16	SF	Building	DLU*4	PC	0.04	(RP 20,280*4)

Table Project List (36 /)

Project Name	VI/VI/03
Objective Area	PWR.PWT,TG,PK,KL,PT,BLA,SA
Implementation Period	1995, 12Months
Total Project Cost	M$ 128.10
Financial IRR	8.94%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−15,176	LU	0.00	
2	−1		48,216	LU	56.53	
3	−2		29,270	LU	8.90	
4	SC−R	T.Switch	−138	CCT	0.00	
5	−1		2,048	CCT	4.10	
6	−2		516	CCT	1.03	
7	CA	L.Cable	91,580	SSP	32.05	
8	RS	Radio Sub	1,938	SUB	19.22	
9	TR−1/2	FO, M/W	22+17	SYS	5.91	21Sect,7Hops
10	SF	Land	1,400	M2	0.29	
11	SF	Building	DLU*7	PC	0.07	

Table Project List (37 /)

Project Name	VI/VI/04
Objective Area	BYL, CP, PML, WS, KM, KS, PWD, MG
Implementation Period	1996, 36Months
Total Project Cost	M$ 78.28
Financial IRR	9.10%
Fund Source	

No.	Implementation Unit No.	Supply System	Supply Volume	Supply Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−17,933	LU	0.00	
2	−1		50,763	LU	44.48	
3	−2		7,150	LU	3.12	
4	SC−R	T.Switch	−308	CCT	0.00	
5	−1		872	CCT	1.74	
6	−2		42	CCT	0.10	
7	CA	L.Cable	51,680	SSP	18.09	
8	RS	Radio Sub	279	SUB	6.51	
9	TR−1/2	FO, M/W	16+15	SYS	3.96	13Sect,6Hops
10	SF	Land	1,280	M2	0.22	
11	SF	Building	DE−3*1	PC	0.04	(RP 70,980*1)
12	SF	Building	DLU*2	PC	0.02	(RP 20,280*2)

Table Project List (38 /)

Project Name	VI/VII/01
Objective Area	SB MEA
Implementation Period	1995, 12Months
Total Project Cost	M$ 48.39
Financial IRR	32.14%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−10,000	LU	0.00	
2	−1		29,590	LU	10.21	
3	−2		29,080	LU	7.58	
4	SC−R	T.Switch	4,288	CCT	0.00	
5	−1		2,738	CCT	1.74	
6	−2		2,000	CCT	0.44	
7	CA	L.Cable	81,200	SSP	28.42	

Table Project List (39 /)

Project Name	VI/VII/02
Objective Area	SB MEA
Implementation Period	1996, 12Months
Total Project Cost	M$ 50.69
Financial IRR	43.59%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	-13,072	LU	0.00	
2	-1		23,922	LU	7.48	
3	-2		57,630	LU	15.02	
4	SC-R	T.Switch	0	CCT	0.00	
5	-1		0	CCT	0.00	
6	-2		0	CCT	0.00	
7	CA	L.Cable	80,540	SSP	28.19	

Table Project List (40 /)

Project Name	VI/VII/03
Objective Area	SB MEA
Implementation Period	1996, 12Months
Total Project Cost	M$ 84.59
Financial IRR	30.99%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−10,000	LU	0.00	
2	−1		0	LU	0.00	
3	−2		98,060	LU	25.56	
4	SC−R	T.Switch	0	CCT	0.00	
5	−1		0	CCT	0.00	
6	−2		0	CCT	0.00	
7	CA	L.Switch	154,170	SSP	53.96	
8	SB−JC−2	FO	14+3	SYS	5.07	12 Sections

Table Project List (41 /)

Project Name	VI/VII/04
Objective Area	SB MEA
Implementation Period	1996, 12Months
Total Project Cost	M$ 53.83
Financial IRR	32.39%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	-670	LU	0.00	
2	-1		6,120	LU	2.84	
3	-2		58,580	LU	14.67	
4	SC-R	T.Switch	0	CCT	0.00	
5	-1		0	CCT	0.00	
6	-2		0	CCT	0.00	
7	CA	L.Cable	95,120	SSP	33.29	
8	RS	Radio Sub	490	SUB	3.03	

Table Project List (42 /)

Project Name	VI/VII/05
Objective Area	MR,LMG,JR,BO,MN,BJ,KD,TN,PN
Implementation Period	1995, 24Months
Total Project Cost	M$ 91.62
Financial IRR	20.07%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	18,100	LU	0.00	
2	−1		48,120	LU	46.29	
3	−2		34,830	LU	10.36	
4	SC−R	T.Switch	−266	CCT	0.00	
5	−1		3,117	CCT	2.88	
6	−2		262	CCT	0.26	
7	CA	L.Cable	69,410	SSP	24.29	
8	RS	Radio Sub	2,098	SUB	2.91	
9	TR−1/2	FO, M/W	18+17	SYS	5.25	17Sect,5Hops

Table Project List (43 /)

Project Name	VI/VII/06
Objective Area	BSK, SBD, ML, BL
Implementation Period	1995, 24Months
Total Project Cost	M$ 82.87
Financial IRR	18.18%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	-3,821	LU	0.00	
2	-1		43,271	LU	30.03	
3	-2		25,710	LU	7.95	
4	SC-R	T.Switch	-550	CCT	0.00	
5	-1		200	CCT	0.40	
6	-2		1,388	CCT	0.76	
7	CA	L.Cable	90,360	SSP	31.63	
8	RS	Radio Sub	2,087	SUB	6.47	
9	TR-1/2	FO, M/W	9+9	SYS	2.58	9Sect,4Hops
10	ML-JC-1/2	FO, M/W	4+2	SYS	2.04	3Sect,2Hops
11	SF	Land	1	SITE	0.53	
12	SF	Building	1	SITE	0.05	
						Unit: 1000RP
13	SF	Land	2,000	M2	0.35	(RP 700,000*1)
14	SF	Building	DE'-4*1	PC	0.08	(RP 166,000*1)

Table Project List (44/)

Project Name	VI/VII/07
Objective Area	SMP,PM,SMN,BW,LN,PB,PS,KD,TA
Implementation Period	1997, 24Months
Total Project Cost	M$ 131.80
Financial IRR	14.21%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	-14,196	LU	0.00	
2	-1		41,868	LU	34.60	
3	-2		51,448	LU	14.67	
4	SC-R	T.Switch	-176	CCT	0.00	
5	-1		536	CCT	1.07	
6	-2		1,008	CCT	2.02	
7	CA	L.Cable	126,840	SSP	44.39	
8	RS	Radio Sub	1,961	SUB	30.73	
9	TR-1/2	FO,M/W	16+10	SYS	4.16	16Sect,8Hops
						Unit: 1000RP
10	SF	Land	570	M2	0.10	(RP 199,500*1)
11	SF	Building	DLU-GS-	PC	0.06	(RP 56,000*2)

Table Project List (45 /)

Project Name	VI/VIII/01
Objective Area	DPR
Implementation Period	1995, 12Months
Total Project Cost	M$ 88.83
Financial IRR	22.68%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−14,440	LU	0.00	
2	−1		51,660	LU	18.46	
3	−2		47,550	LU	12.63	
4	SC−R	T.Switch	−500	CCT	0.00	
5	−1		0	CCT	0.00	
6	−2		1,940	CCT	0.17	
7	CA	L.Cable	125,230	SSP	48.83	
8	RS	Radio Sub	295	SUB	1.52	
9	TR−1/2	FO, M/W	8+5	SYS	1.86	7Sect,7Hops
10	DPR−JC−1/2	FO	5+2	SYS	2.11	5 Sectoions
						Unit: 1000RP
11	SF	Land	4,000	M2	2.97	(RP3,000,000*2)
12	SF	Building	DE−5*2	PC	0.28	(RP 278,034*2)

Table Project List (46 /)

Project Name	VI/VIII/02
Objective Area	SGR,APR,MTR,END,RTG,DLI,KP,Others
Implementation Period	1995, 36Months
Total Project Cost	M$ 115.31
Financial IRR	5.49%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−17,454	LU	0.00	
2	−1		20,554	LU	40.35	
3	−2		48,500	LU	14.70	
4	SC−R	T.Switch	−380	CCT	0.00	
5	−1		903	CCT	1.24	
6	−2		1,345	CCT	2.69	
7	CA	L.Cable	75,810	SSP	26.53	
8	RS	Radio Sub	3,214	SUB	25.20	
9	TR−1/2	FO, M/W	18+13	SYS	3.99	14Sect,16Hops
10	SF	Land	2	SITE	0.52	Repeater
11	SF	Building	2	SITE	0.05	Repeater
						Unit: 1000RP
12	SF	Land	240	M2	0.03	(RP 67,200*1)
13	SF	Building	DLU*1	PC	0.01	(RP 24,600*1)

Table Project List (47 /)

Project Name	VI/IX/01
Objective Area	BJM,BNT,MAT,SPT,SMR,TAR,Others
Implementation Period	1995, 12Months
Total Project Cost	M$ 131.5
Financial IRR	17.79%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−8,469	LU	0.00	
2	−1		29,629	LU	38.03	
3	−2		55,640	LU	14.66	
4	SC−R	T.Switch	−230	CCT	0.00	
5	−1		905	CCT	1.81	
6	−2		1,640	CCT	0.16	
7	CA	L.Cable	133,090	SSP	46.58	
8	RS	Radio Sub	2,211	SUB	22.61	
9	TR−1/2	M/W	18+17	SYS	5.11	11Sect,18Hops
10	SF	Land	7	SITE	1.83	Repeater
11	SF	Building	7	SITE	0.17	Repeater
						Unit: 1000RP
						(RP 67,200*6)
12	SF	Land	2,010	M2	0.28	(RP 159,600*1)
13	SF	Building	DLU−GS−	PC	0.12	(RP 63,000*4)
14	SF	Building	DLU*6	PC	0.08	(RP 27,000*6)

Table Project List (48 /)

Project Name	VI/IX/02
Objective Area	PLK,KAD,KTB,BPP,PTK,SW,Others
Implementation Period	1996, 36Months
Total Project Cost	M$ 119.43
Financial IRR	17.59%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	-5,521	LU	0.00	
2	-1		9,600	LU	11.36	
3	-2		83,101	LU	24.18	
4	SC-R	T.Switch	-26	CCT	0.00	
5	-1		1,127	CCT	1.38	
6	-2		684	CCT	1.37	
7	CA	L.Cable	132,370	SSP	46.33	
8	RS	Radio Sub	4,914	SUB	32.38	
9	TR-1	M/W	5+5	SYS	1.45	3Sect,5Hops
10	SF	Land	2	SITE	0.52	Repeater
11	SF	Building	2	SITE	0.05	Repeater
						Unit: 1000RP
						(RP 67,200*1)
12	SF	Land	2,520	M2	0.27	(RP 159,600*3)
13	SF	Building	DLU-GS-	PC	0.13	(RP 63,000*4)
14	SF	Building	DLU*1	PC	0.01	(RP 27,000*1)

Table Project List (49 /)

Project Name	VI/X/01
Objective Area	KDI,KKA,BTE,PRE,MO,GT,PSO,Others
Implementation Period	1995, 24Months
Total Project Cost	M$ 111.07
Financial IRR	9.72%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−9,986	LU	0.00	
2	−1		24,796	LU	31.51	
3	−2		56,870	LU	16.09	
4	SC−R	T.Switch	−384	CCT	0.00	
5	−1		2,481	CCT	3.03	
6	−2		672	CCT	1.34	
7	CA	L.Cable	71,260	SSP	24.94	
8	RS	Radio Sub	3,446	SUB	28.58	
9	TR−1/2	M/W	20+14	SYS	4.38	15Sect,19Hops
10	SF	Land	3	SITE	0.78	Repeater
11	SF	Building	3	SITE	0.07	Repeater
						Unit: 1000RP
12	SF	Land	1,680	M2	0.23	(RP 67,200*7)
13	SF	Building	DLU−GS−	PC	0.05	(RP 49,000*2)
14	SF	Building	DLU*7	PC	0.07	(RP 21,000*7)

Table Project List (50 /)

Project Name	VI/X/02
Objective Area	UP
Implementation Period	1996, 12Months
Total Project Cost	M$ 65.43
Financial IRR	16.35%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−9,196	LU	0.00	
2	−1		27,476	LU	13.41	
3	−2		35,510	LU	10.64	
4	SC−R	T.Switch	0	CCT	0.00	
5	−1		0	CCT	0.00	
6	−2		1,468	CCT	0.13	
7	CA	L.Cable	107,350	SSP	37.57	
8	RS	Radio Sub	3,446	SUB	1.95	
9	TR−1	M/W	2+2	SYS	0.51	2Sect,2Hops
10	UP−JC−1	M/W	2+1	SYS	1.18	1Sect,2Hops
						Unit: 1000RP
11	SF	Land	240	M2	0.03	(RP 67,000*1)
12	SF	Building	DLU*1	PC	0.01	(RP 21,000*1)

Table Project List (51 /)

Project Name	VI/X/03
Objective Area	BEN,TKL,JNP,THN,BTG,PAL,Others
Implementation Period	1998, 12Months
Total Project Cost	M$ 50.8
Financial IRR	3.75%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW−R	L.Switch	−5,728	LU	0.00	
2	−1		6,558	LU	9.21	
3	−2		20,820	LU	5.43	
4	SC−R	T.Switch	−14	CCT	0.00	
5	−1		604	CCT	3.02	
6	−2		178	CCT	0.36	
7	CA	L.Cable	62,110	SSP	21.74	
8	RS	Radio Sub	1,024	SUB	9.79	
9	TR−1/2	M/W	6+5	SYS	1.25	6Sect,6Hops

Table Project List (52 /)

Project Name	VI/XI/01
Objective Area	Throughout Witel
Implementation Period	1995, 48Months
Total Project Cost	M$ 56.66
Financial IRR	10.48%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	-9,605	LU	0.00	
2	-1		21,228	LU	23.27	
3	-2		21,557	LU	5.63	
4	SC-R	T.Switch	-270	CCT	0.00	
5	-1		1,246	CCT	1.92	
6	-2		64	CCT	0.02	
7	CA	L.Cable	26,120	SSP	9.14	
8	RS	Radio Sub	2,016	SUB	12.42	
9	TR-1	M/W	8+8	SYS	2.36	4Sect,8Hops
10	AB-JC-1	M/W	1+1	SYS	0.46	1Sect,1Hop
11	SF	Land	4	SITE	1.04	Repeater
12	SF	Building	4	SITE	0.10	Repeater
						Unit: 1000RP
13	SF	Land	1,920	M2	0.20	(RP 50,400*8)
14	SF	Building	DLU*8	PC	0.10	(RP 25,800*8)

Table Project List (53 /)

Project Name	VI/XII/01
Objective Area	Throughout Witel
Implementation Period	1995, 36Months
Total Project Cost	M$ 89.12
Financial IRR	3.58%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	SW-R	L.Switch	-8,114	LU	0.00	
2	-1		34,544	LU	35.39	
3	-2		18,680	LU	4.87	
4	SC-R	T.Switch	-332	CCT	0.00	
5	-1		1,615	CCT	6.08	
6	-2		30	CCT	0.06	
7	CA	L.Cable	58,700	SSP	20.55	
8	RS	Radio Sub	3,343	SUB	16.55	
9	TR-1	M/W	11+11	SYS	3.62	5Sect,11Hops
10	SF	Land	6	SITE	1.57	Repeater
11	SF	Building	6	SITE	0.14	Repeater
						Unit: 1000RP
12	SF	Land	1,920	M2	0.17	(RP 42,000*8)
13	SF	Building	DLU*8	PC	0.17	(RP 42,000*8)

Table Project List (54/)

Project Name	JKT−SB 2nd Optic Transmission
Objective Area	JK−BD−CBN−SM−SB
Implementation Period	1995, 12Months
Total Project Cost	M$ 52.69
Financial IRR	17.75%
Fund Source	

No.	Implementation Unit No.	Supply System	Supply Volume	Supply Unit	Cost Mil US$	Remarks
1	Optic Fiber	STM−4/1	57+57	SYS	52.69	910Km
						20 Sections

Table Project List (55 /)

Project Name	SB–UP Submarine Cable
Objective Area	SB–UP
Implementation Period	1995, 18Months
Total Project Cost	M$ 88.34
Financial IRR	18.49%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	Optic Fiber	STM–4	3	SYS	87.76	780Km
2		FO–620M	3+3	SYS		1 Section
3	Digital M/W	6G–155M	9+3	SYS		3 Hops
4		8G–140M	15	SYS		3 Hops
5	SF	Land	1	SITE	0.53	
6	SF	Building	1	SITE	0.05	

Table Project List (56 /)

Project Name	MDN--BNA Digital M/W
Objective Area	MDN--LSM--BNA
Implementation Period	1995, 12Months
Total Project Cost	M$ 16.74
Financial IRR	17.75%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	Digital M/W	6G--155M	23+15	SYS	16.74	510Km
2						10 Terminals
3						6 Repeaters

Table Project List (57 /)

Project Name	Trans–Sumatera Expansion
Objective Area	MDN,SBG,PD,PBR,SKN,PG,LHT,TJK
Implementation Period	1995, 30Months
Total Project Cost	M$ 69.95
Financial IRR	18.64%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	Digital M/W	6G–140M	165	SYS	69.70	42 Terminals
2		6G–155M	33+15	SYS		18 Repeaters
3	SF	Land	10	SITE	0.25	

Table Project List (58 /)

Project Name	PALAPA CI Launching
Objective Area	
Implementation Period	1995, 12Months
Total Project Cost	M$ 300.0
Financial IRR	17.75%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	Satellite	Satellite	2	PCS	300.00	

Table Project List (59 /)

Project Name	Jawa–Bali Digital M/W Expansion
Objective Area	JKT–BD–SB–MN–SB–DPR
Implementation Period	1996, 12Months
Total Project Cost	M$ 35.41
Financial IRR	21.40%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	Digital M/W	6G–140M	109	SYS	35.41	29 Terminals
2	Optic Fiber	FO–620M	1+1	SYS		9 Repeaters
3		FO–140M	3	SYS		

Table Project List (60 /)

Project Name	UP–BIA Submarine Cable
Objective Area	UP–AB–SON–BIA
Implementation Period	1996, 18Months
Total Project Cost	M$ 158.90
Financial IRR	21.13%
Fund Source	

No.	Implementation Unit No.	Supply System	Volume	Unit	Cost Mil US$	Remarks
1	Optic Fiber	STM–4	4	SYS	156.85	2,420Km
2		FO–620M	3+3	SYS		2 Sections
3		FO–155M	1+1	SYS		1 Section
4	Digital M/W	6G–155M	10+5	SYS		5 Hops
5	SF	Land	7	SITE	1.68	
6	SF	Building	7	SITE	0.37	