

NO.	N R P	STUDENT	TITLE	SUPERVISOR
42	5885720052	INDRASENA	SIMULASI PENGATURAN LAMPU LALU LINTAS DENGAN MEMANFAATKAN KOMPUTER IBM PC XT	SON
43	5885720054	AGUNG SANTOSO	SIMULASI PENGATURAN LAMPU LALU LINTAS DENGAN MEMANFAATKAN KOMPUTER IBM PC XT	SON
44	5885720057	SUPRIYONO	REPETER DALAM SISTEM KOMUNIKASI OPTIK DENGAN NINIMUM SISTEM Z80	YOEDY
45	5885720058	A A G DHARMAWANGSA	PERENCANAAN & PEMBUATAN SISTEM MODULASI PULSA DENGAN TRANSMISI INFRA MERAH	YOEDY
46	5885720059	BANBANG J H	PERANCANGAN & PEMBUATAN INTERFASE ANTARA FIELD STRENGTH METER ML5084 DENGAN IBM PC UNTUK PENG-UKURAN POLA RADIASI ANTENA	MILCHAN
47	5885720060	N. AINUL ROFIQ	PERENCANAAN & PEMBUATAN OPTICAL POWER METER	YOEDY
48	5885720062	IHAM ADRI H	PERENCANAAN & PEMBUATAN ANTENA MICROSTRIP BUNDAK	MILCHAN
49	5885720063	ERJUNIANTO	RANCANG BANGUN SISTEM TRANSCIEVER PADA KRA IBM PC	JOKE
50	5885720064	HASAN BARAJA	RANCANG BANGUN PROGRAM KOMUNIKASI PADA KOMUNIKASI RADIO AMATIR ANTAR IBM PC (KRA IBM) VER 1.00	M. NUH
51	5885720065	NOVAL ARIF	PENGUKURAN BIT ERROR RATE DALAM MODUL SISTEM PCM 30 DENGAN SUATU ATTENUATOR SEBAGAI SIMULASI REDAMAN KABEL	ENDRA GATOT
52	5885720066	DWI HANDRI N	PEMBUATAN VIDEO SENDER DUA WATT	M. NUH
53	5885720068	YUDI WINARNO	PEMBUATAN PENANCAR 3.5 MHZ MENGGUNAKAN KRISTAL	DJOKO SR



4 - No. 6 機械とローカルコスト

## E E P I S プロジェクト供与機材リスト

1990年9月現在

1988年度	A4 FORM No. 5560/PT12.H.G/ 88:5DEC88	数量	備考
1	HEWLETT-PACKARD TRAINING VIDEO TAPE SERIES	28	
2	ADVANTEST SPECTRUM ANALYZER (TR 4131)	1	
3	ADVANTEST TRACKING GENERATOR (TR 4153-B)	1	
1989年度	A4 FORM No. 0674/PT12.H.G/ 89:16FEB89 / 1597/PT12.H/G/89	数量	備考
1	FLOPPY DISK DRIVE (GFD-535)	1	
2	IMAGE SENSOR (PC-9801TYPE)	1	
3	WORD PROCESSOR (BUNGOU-MINI)	1	
4	HEADPHONE (EAH-F40)	7	
5	OUTPUT TRANSFORMER (MX-61)	12	
6	OUTPUT TRANSFORMER (MX-59)	12	
7	ULTRA LOW FREQUENCY OSCILLATOR (KG-561)	7	
8	NOISE GENERATOR (WG-721A)	1	
9	VARIABLE BANDPASS FILTER (FV-665)	1	
10	OUTPUT BOOSTER AMPLIFIER (VCA-5400)	1	
11	DC. POWER SUPPLY (PSC-4100)	1	
12	PLANK'S CONSTANT APPARATUS (HA-4N)	1	
13	FRANCK-HERTZ APPARATUS (FH-200N)	1	
14	HALL EFFECT EXPERIMENT APPARATUS (KHE-5)	1	
15	PT. THIN FILM TEMPERATURE SENSOR (PLATE-100Ω)	5	
16	PT. THIN FILM TEMPERATURE SENSOR (PLATE-500Ω)	5	
17	PT. THIN FILM TEMPERATURE SENSOR (POLE-100Ω)	5	
18	PT. THIN FILM TEMPERATURE SENSOR (POLE-500Ω)	5	
19	HUMIDITY SENSOR (2S6A)	5	
20	HUMIDITY SENSOR (OR5FH01)	5	
21	HUMIDITY SENSOR (H104R)	5	
22	GAS SENSOR (TGS#812)	5	
23	GAS SENSOR (TGS#813)	5	
24	INFRA RED SENSOR (IRA-F001P)	5	
25	INFRA RED SENSOR (IRA-F001S)	5	
26	INFRA RED SENSOR (IRA-F001SX)	5	
27	PYROELECTRIC INFRARED SENSOR MODULE	5	
28	ULTRASONIC SENSOR (MA40S2R)	5	
29	ULTRASONIC SENSOR (MA40S2S)	5	
30	ULTRASONIC SENSOR (MA40E1R)	5	
31	ULTRASONIC SENSOR (MA40E1S)	5	
32	ULTRASONIC DISTANCE SENSOR MODULE (DK-4012-AD)	5	
33	ULTRASONIC DISTANCE SENSOR MODULE (DK-4012-C)	5	
34	PRESSURE MICRO SENSOR (2S5M)	5	
35	PRESSURE SENSOR (FPS-53F-10A)	5	
36	PRESSURE SENSOR (FPS-53F-03G)	5	

1989年度 追加分	A4 FORM No. ① 0902/PT12.H.G/'89:4MAR89	数量	備考
1	AC SURVO BOARD(TA15N32)	3	
2	RESOLVER TRAINING SYSTEM(TA266N1)	3	
3	DIGITAL STORAGE SCOPE(SS-5802)	3	
4	PROCESS CONTROL TRAINING SYSTEM	3	
5	LINEAR-CORDER MARK-II(WTR331)	3	
6	AIR CONTROL TRINING SYSTEM	3	
7	FILTER TRAINING SET (VF-17)	3	
8	SWITCH UNIT(SH-IB)	3	
9	RES5TANCE ATTEN4AT6R8A3/2-59	3	
10	AC mV ELECTRONIC VOLT METER(165A)	3	
11	DC SWITCHING POWER SUPPLY(EMR101)	12	
12	HF RADIO RECEIVER(NRD-92)	1	
13	HF AMATURE TRANSCEIVER(JST-135)	2	
14	ELECTRIC MAGNETIC WAVE ABSOBER(0.8-9 GHz 280mm)	28	
15	OSCILLOSCOPE CIRCUITS TRAINER(ITF-04)	20	
16	FM/AM STANDARD SIGNAL GENERATOR(3215,100k-140MHz)	2	
17	PCM TERMINAL TEST EQUIPMENT(AP9601.PCM30ch)	1	
18	FUNCTION GENERATOR(LFG-1300)	3	
19	X-Y RECORDER(3025)	1	
20	PEN RECORDER(3056)	1	
21	NOISE LEVEL METER(LMV-1817)	1	
22	FEED BACK(DCS-297)	1	
23	BREAD BOARD(PP-2727)	6	
24	PERSONAL COMPUTER(IBM-AT)	4	
25	MOUSE(MICROSOFT)	35	
26	MOUSE DRIVER	3	
27	MICRO PROCESSOR BOARD(KENTAC-800Z)	10	
28	LOGIC PROBE(545A)	12	
29	LOGIC PULSER(546A)	12	
30	PLANK' S CONSTANT APPARATUS(HA-4N)	3	
31	FRANCK-HERTS APARATUS(FH-200N)	3	
32	HALL EFFECT EXPERIMENT APPARATUS (KHE-5)	3	
33	REGULATED DC POWER SUPPLY(5244A)	6	
34	CONSTANT TEMPERATURE BOX(TO-19)	2	
35	VOLT-METER(2051-06)	12	
36	STANDARD PRESSURE GENERATOR(2656-23E)	3	
37	PORTABLE DOUBLE BRIDGE(2769-10)	3	
38	ELECTRICRESISTANCE COMPARISION APPARATUS(11802)	3	
39	ELECTRODE(SE-1000,SE-72)	3	
40	RESISTANCE of INSULATOR MEASUREMENT(VMG13B)	3	
41	THREE-PHASE VOLTAGE REGULATOR(KVR-305-1)	3	
42	SINGLE PHASE VOLTAGE REGULATOR(2410M)	2	
43	THREE-PHASE RCL LAOD EQUIPMENT(30L-200-6B)	3	
44	SINGLE PHASE TRANSFORMER(220V,2KVA)	3	
45	SINGLE PHASE TRANSFORMER(380V,2KVA)	9	
46	SINGLE PHASE LOAD RESISTOR(RZ-200-2C)	3	
47	THREE-PHSE WATTMETER(1/5/25AMP)	6	
48	AC AMMETER(6/12 AMP)	4	
49	AC AMMETER(2/5/10/20AMP)	4	
50	AC VOLTMETYER(30/60/120V)	3	

1989年度 追加分	A4 FORM No. 0902/PT12. II. G/ 89:4MAR89	数量	備考
51	VOLT METER (150/300/600/V)	9	
52	AC VOLT METER (15/30/75/150/V)	4	
53	POWER FACTOR METER (5/25AMP)	4	
54	SINGLE PHASE INDUCTION MOTOR (1/2AMP)	2	
55	SLIDE RESISTOR (DW-3-5)	3	
56	SLIDE RESISTOR (DW-3-8)	3	
57	SLIDE RESISTOR (DW-5-8)	3	
58	SLIDE RESISTOR (DW-4-10)	3	
59	SLIDE RESISTOR (DI-16)	3	
60	ELECTROMAGNETIC CONTACTOR (SC-IN)	2	
61	TIME RELAY (PKH-30M)	2	
62	PUSH BUTTON (1A1B, 250V)	3	
63	LAMP (220V/PC225)	6	
64	LAMP w/SOCKET (220V/200W)	6	
65	CURRENT TRANSFORMER (10-30A/5A)	2	
66	POTENTIAL TRANSFORMER (220-440/100V)	2	
67	EDDY CURRENT TYPE DYNAMOMETER (3KW)	1	
68	THREE PHASE INDUCTION MOTOR (2.2KW, 380V)	1	
69	THREE PHASE TRANSFORMER (3KVA)	3	
70	SPECTRUM ANALYZER SYSTEM (TR4131, TR4153A)	1	
71	FEED BACK (PCM COMM. SYSTEM) (DC-296)	1	
72	FEED BACK (TELECOMM. SYSTEM) (TST-298)	1	
73	CURVE TRACER (TCT-2001C)	1	
74	LOGIC ANALYSER (VP-3621A)	1	
75	PARABOLA & RECEIVER SET	1	
76	LAP TOP COMPUTER (T-5100)	4	
77	PRINTER (LX-800 EPSON)	2	
78	DICONIX 150 COMPACT (KODAK)	2	

1990年度	A4 FORM No. 3683/PT12. II. G/ 90	数量	備考
1	COLOUR TV TRAINER (PAL) (FT212P)	3	
2	ROBOT TRAINING EQUIPMENT (PZ-AH1, PZ-AD1, CRT-N5913L)	3	
3	SENSOR CHARACTERISTIC EXPERIMENT (SEE-200)	1	
4	FM LINEAR DETECTOR (AK-5507B)	4	
5	AIR BAND RECEIVER (R-535)	3	
6	SAMPLING OSCILLOSCOPE 12.4GHz (SAS601B)	1	
7	MICROWAVE EXPERIMENT SET (14T100A)	2	
8	STEPPING MOTOR EXPERIMENT SET (PZ-AS1)	6	
9	COLOR TV (PAL) (KV2083GA)	10	
10	VIDEO DECK (SL-S33)	10	
11	WORKSTATION LUNA (DT300/DT350)	1	
12	PULS GENERATOR (HP-8161A)	1	
13	SPECTRUM ANALYZER (R-4136+OPT)	1	
14	FA MODEL EXPERIMENT SET (SFA-2210S)	1	
15	ELECTRICAL MACHINE TUTOR (EMT-180)	1	
16	FLOPPY DISC DRIVE (FD1157)	6	
17	PRINTER (VP-550PC)	3	
18	RADIO TRANCEIVER UNIT SET (JST135, NVT57, NVA88, NEG9)	6	
19	OSCILLO SCOPE 500MHz (SS6521)	1	
20	MOBIL KIJANG SUPER	1	

## 2、④-1 ローカルコスト負担状況

1991年6月現在

現地業務費	繰越	入金	支払	残高
1987	0.00	2,269.95	1,878.37	391.58
1988	391.58	13,496.31	10,401.54	3,486.35
1989	3,486.35	14,420.48	14,250.00	3,656.83
1990	3,656.83	17,073.39	18,800.00	1,930.22
1991	1,930.22	4,037.77	2,500.00	3,467.99
合計	0.00	51,297.90	47,829.91	3,467.99
臨時現地業務費	繰越	入金	支払	残高
1987	0.00	0.00	0.00	0.00
1988	0.00	8,689.60	8,689.60	0.00
1989	0.00	7,846.17	7,846.17	0.00
1990(\$)	3,250.00	8,800.00	12,050.00	0.00
1990(Rp)	238,186.00	1,168,354.00	1,406,540.00	0.00
1991(\$)				
1991(Rp)				
合計(\$)	3,250.00	25,335.77	28,585.77	0.00
合計(Rp)	238,186.00	1,168,354.00	1,406,540.00	0.00
貧困国対策費	繰越	入金	支払	残高
1987	0.00	4,300.23	3,821.63	478.60
1988	478.60	9,297.22	6,050.00	3,725.82
1989	3,725.82	9,092.17	11,700.00	1,117.99
1990	1,117.99	7,695.88	7,850.00	963.87
1991	963.87	2,164.61	1,500.00	1,628.48
合計	0.00	32,550.11	30,921.63	1,628.48

## 2、④-2 ローカルコスト負担状況

1991年6月現在

現地研究費	繰越	入金	支払	残高
1987	0.00	0.00	0.00	0.00
1988	0.00	8,265.01	8,265.01	0.00
1989	0.00	10,471.71	10,471.71	0.00
1990(\$)	2,055.57	19,500.00	21,555.57	0.00
1990(Rp)	500,000.00	2,400,000.00	238,186.00	2,661,814.00
1991(\$)	0.00	3,200.00	4,350.00	-1,150.00
1991(Rp)				
合計(\$)	2,055.57	41,436.72	44,642.29	-1,150.00
合計(Rp)	500,000.00	2,400,000.00	238,186.00	2,661,814.00
技術普及広報費	繰越	入金	支払	残高
1987	0.00	0.00	0.00	0.00
1988	0.00	5,344.07	5,344.07	0.00
1989	0.00	17,221.37	17,221.37	0.00
1990(\$)	-628.59	9,000.00	8,371.41	0.00
1990(Rp)	0.00	2,500,000.00	2,500,000.00	0.00
1991(\$)	0.00	0.00	0.00	0.00
1991(Rp)	0.00	0.00	0.00	0.00
合計(\$)	-628.59	31,565.44	30,936.85	0.00
合計(Rp)	0.00	2,500,000.00	2,500,000.00	0.00
セミナー開催費	繰越	入金	支払	残高
1987	0.00	0.00	0.00	0.00
1988	0.00	0.00	0.00	0.00
1989	0.00	6,201.55	6,201.55	0.00
1990(\$)	-2,300.00	18,650.00	16,350.00	0.00
1990(Rp)	0.00	0.00	0.00	0.00
1991(\$)	0.00	0.00	0.00	0.00
1991(Rp)	0.00	0.00	0.00	0.00
合計(\$)	-2,300.00	24,851.55	22,551.55	0.00
合計(Rp)	0.00	0.00	0.00	0.00
現地語教科書作成	繰越	入金	支払	残高
1987	0.00	0.00	0.00	0.00
1988	0.00	2,049.78	2,049.78	0.00
1989	0.00	22,198.32	22,198.32	0.00
1990(\$)	3,000.00	7,800.00	10,800.00	0.00
1990(Rp)	200,000.00	3,750,000.00	3,950,000.00	0.00
1991(\$)	0.00	1,049.63	1,626.78	-577.15
1991(Rp)	0.00	0.00	0.00	0.00
合計(\$)	3,000.00	33,097.73	36,674.88	0.00
合計(Rp)	200,000.00	3,750,000.00	3,950,000.00	0.00



4 - No. 7 専門家派遣関連団体名

1991年度評価調査団用資料

〔国内関連団体名〕

プロジェクト名： 和名 = 「スラバヤ電子工学ポリテクニク」  
(THE ELECTRONIC ENGINEERING POLYTECHNIC INSTITUTE SURABAYA)

所在地： インドネシア共和国 東ジャワ州 スラバヤ市

援助形態： 無償供与 + 技術協力プロジェクト

担当窓口： 国際協力事業団 社会開発事業部 第一課 担当  
教育関連「人作りプロジェクト」

国内支援団体： 国立工業高等専門学校協会  
(国際交流特別委員会)  
(海外協力専門部会)  
国際協力事業団  
(E E P I S 国内委員会)

長期専門家  
派遣元

学校 / 団体名	研修員受入	専門家派遣	備考
長岡工業高等専門学校	-	87-89	チームリーダー
熊本電波工業高等専門学校	87/8/9/91	88/89/90	3名
詫間電波工業高等専門学校	87/91	88	1名
仙台電波工業高等専門学校	87/9	88/90/	3名
沼津工業高等専門学校	87/91	88/89	1名
奈良工業高等専門学校	88/90	89/91	3名
茨城工業高等専門学校	88//91	89	1名
長野工業高等専門学校	-	89-92	チームリーダー
東京工業高等専門学校	88/91	90	1名
久留米工業高等専門学校	89	90	1名
木更津工業高等専門学校	90	91	1名
北九州工業高等専門学校	90	91	1名
大阪府立工業高等専門学校	90	91	1名
国際協力総合研修所	-	87-90/90-2	2名
国際協力サービスセンター	-	87-8/88-92	2名

短期専門家  
派遣元

学校 / 団体名	研修員受入	専門家派遣	備考
茨城工業高等専門学校	同上	88	1名
筑波大学	-	88	1名
明石工業高等専門学校	-	89	1名
熊本電波工業高等専門学校	同上	89/90	2名
大阪大学	-	89	1名
仙台電波工業高等専門学校	同上	89/91	2名
奈良工業高等専門学校	同上	90	1名
神戸市立工業高等専門学校	-	90	1名
和歌山工業高等専門学校	-	90	1名
東京工業高等専門学校	同上	90	1名
東京工業大学	-	90/91	2名
千葉工業大学	-	90	1名
福島工業高等専門学校	-	91	1名
木更津工業高等専門学校	同上	91	1名
国際協力総合研修所	同上	88/89/91	3名

#### 4 - No. 8 専門家の実績

1991年度評価調査団資料  
スラバヤ電子工学ポリテクニクプロジェクト  
(専門家の業績)

A、過去の実績と現状

第1期専門家の業績

予測及びそれに基づいた計画と現実との差	: 事前・長期調査報告書等
他のポリテクニク校調査	: PMS, ITB, UI等
PEDCの教材について	: 教科書内容、レベル等
当初の無償供与機材について	: 要請機器と納入機器の相違
不備・補足資機材選定について	: 周辺補足機器の不足等
カリキュラム見直しについて	: 40:60%から60:40%へ
理論及び実験・実習用教材開発について(第I, II学期)	: 電子デバイス、電気計測、電磁気学、 電気通信一般、電子回路、応用通信機器、 情報工学(C, FORTRAN, BASIC)
学生実験の為の不足資機材の調査と選定について	: ¥20,000,000.- ¥50,000,000.-
初年度学生受け入れについて	: 年度行事計画など

第2期専門家の業績

移行期におけるカリキュラムについて	: CURRICULUM REVISION
2年度学生受け入れについて	: 教室、実験室配分等
理論及び実験・実習用教材開発について(第III, IV学期)	: 通信システムと回路、伝送線路及び高周波計測、 ディジタル回路、電気材料、自動制御、電力システム工学 コンピュータ言語I, コンピュータ言語II, コンピュータエイジッド・プログラミング
実験資機材の見直しと補足資機材選定について	: ¥20,000,000.- ¥10,000,000.- ¥75,000,000.-
教官のグレードアップについて	: 文部省留学制度、民間奨学金制度等
第1回全国ポリテク教育会議開催について	: ポリテクニクのカリキュラムについて

第3期専門家の業績

理論及び実験・実習用教材開発について(第III, IV学期)	: ネットワーク・スイッチング、保守管理工学、マイクロ波工学、 アンテナ工学、高周波計測、工業電子工学、ディジタル 回路、自動制御工学、高周波伝送、応用電子工学、 マイクロプロセッサ&インターフェイス
レベル設定の見直しについて	: カリキュラム、シラバスの見直し
専門応用科目の取扱について	: 時間配分と実習内容
第2回全国ポリテク教育会議について	: INPLANT TRAINING, FINAL PROJECT, DLL
資機材の管理・保守について	: MAINTENANCE & REPAIR CENTER の設立
企業内実習について	: 受入企業調査、実施状況調査、事後調査
ファイナルプロジェクトについて	: テーマの設定、担当教育等
PP-30による新ポリテクニク制度と独立問題について	: 独立による影響等

第4期専門家の業務

ポリテク教官の業務・役割について	: 教育者とは
ポリテクニク校の組織運営について	: 委員会制度、各種会議等
卒業予定者の為の就職斡旋業務について	: 企業訪問、学生指導要項
ファイナルプロジェクト評価法について	: 採点基準作り等
第3回全国ポリテク教育会議について	: 卒業生の就職問題
今後の産業界ニーズと教育目標について	: 企業との意見交換、及びカリキュラムへの反映
教授方法、学生指導方法、科目評価方法等の教育教育	: 対教官用特別講座の開設
資機材、諸設備の管理保守について	: 機材の根本的調査、使用状況、整備状況等
補助教材としての演習問題集開発	: 基礎科目(電気、数学、物理)、専門基礎、

October 1, 1991

Answers to Questionnaire

JICA expert  
Osamu Makino

The interview was carried out individually from September 3 to 30, 1991. The number of EEPIS teachers interviewed is 20, and 18 of them have had teacher's training in Japan.

1. Teacher training

1) The teacher training program was long enough?

Enough for teacher training	9
Too long for the given topics	3
Not enough	6

Additional comments on teacher training in Japan

Not enough because of inefficiency	
Training plan was not good and inefficient. (The purpose and goals should be clear).	2
The length was enough but schedule was not so organized.	2
Training program was not so organized.	1
For the teacher training enough but not enough for Japanese language	1
For teaching methodology two months are enough. To study new technology industries are preferable.	1
Have little time with an expert for technology transfer, and have to study alone.	1

2) Please describe relation between training programs and current activities at EEPIS.

The program is very useful for current teaching subjects.	10
Some parts of program is useful for current teaching.	3
Little relation, but teaching methodology is useful.	3
Little relation, but for management the training is useful.	1
Little relation	1

3) What do you want to study now?

Computer hardware, Computer Communication, Automatic Control (2),  
Robotics, Numerical Analysis, Electronic Circuits, Signal Processing (3)  
Microwave, RF transmission Line, Electric Machinery, Electronic Devices  
Motor Control, Network and Switching, Computer Science, Microwave Antenna,  
Data Communication, Digital Electronic.

2. Teaching materials development

1) Which subject(s) were you given to work with your experts for teaching materials development?

2) Could you complete to develop the teaching materials?

Yes, the materials completed	17
Not yet	3

3) Is there still anything which should be revised in the teaching materials (theory and practice)?

Automatic Control, Signal Processing, Computer Language,  
 Radiowave Measurement and Instrumentation, Antenna, Microwave,  
 Digital Electronics, Electronic Devices, RF Transmission Line,  
 Electronic Circuits, Electronic Workshop, Quality Control,  
 Applied Communication, Applied Electronics,

4) During the activities with your expert(s) in Japan or in Indonesia, which language did you usually use for technology transfer? Did you have difficulty in the communication with your experts?

in English	16
in Indonesia	0
in Japanese	4
No difficulty in English	12
No difficulty in Japanese	1
a little difficult in English	3
difficult in English	1
a little difficult in Japanese	1
difficult in Japanese	2

### 3. EEPIS project

1) How do you evaluate EEPIS students compared with D3 students?

Better skill	5
More qualified	1
Competitive with S1	1
More active in study	1
Better raw quality	1
Lack of independent spirit	2
Poor motivation to study	4
Overprotected	1
Take easy way due to better condition	1
Too busy, no time to relax	3
Poor English ability because no need to study in English	1
Poorer raw quality	1
No difference	3

3) What do you think of the EEPIS management system?

Indonesian standard system, no problem	10
Academic affairs are no problem, but general affairs to be discussed more	1
Less meeting among teachers for operation	1
Structure is OK, but operation to be improved	1
Administration is weak	1
Structure is OK but each responsibility to be clear	1
Lab. management to be improved	1
There are misunderstanding among teachers after meeting records to be taken	1
Department administration to be strengthen	1

Information from director to be conveyed to teachers more quickly 1

4) Do you think the EEPIS still need Japan's technical cooperation? If so, why and in which area?

Yes, 20

Reasons:

Technical assistance not yet sufficient	1
Research and cooperation with society not attained	1
To have study motivation and active attitude	1
Still need technical knowledge	2
All subjects to be revised and to be made easier	1
Objectives of Electric power not clear in EEPIS	1
EEPIS teachers still young	1

Fields

All fields	1
Applied technology, applied subjects	3
New technology in Automatic Control	2
Electrical materials	
Numerical Analysis	1
Electronic Circuits, IC	1
Electronic Devices	2
Signal Processing	4
Opt-communication	1
Applied Communication	1
Management	1
Fundamental principles	1
Job arrangement	1
Electric Power engineering	2
Education system	1
Network and Switching	1
Microwave	1
Management of lab. and spareparts	1

5) What is your idea about job arrangement in EEPIS?

Good idea 20

Comments:

To improve teachers ability feeling responsibility to society.	1
I also want to participate the activity.	2
I want to know job arrangement more.	1
Good for students but overload for teachers	2
Parents are pleased	1
Some students take it too easy, easygoing way, active attitude and challenging spirit required	4
Class teachers have to take initiative to challenge	1
Good to know industry's requirements and situations.	2
Due to the arrangement, better students can be expected.	1
Able to have better relation with industry.	2
Have to offer high quality students. Some students not consider the job itself, but only salary.	1
It will work to enhance the EEPIS prestige.	1

6) After the independence from ITS, do you still want to stay in EEPIS?

Yes	20
No	0

#### 4. Equipment

1) Do you think the lab. equipment is already enough? If not, what kind of items should be provided for which subject(s)?

Yes, enough	8
No, still need	8

Equipment is enough but some modules to be produced in Electronic Lab.  
Pneumatic control trainer in Automatic Control Lab.  
Hole punch machine, steel shearing machine in Mechanical workshop  
Personal computer (IBM fully compatible) in Computer Lab.  
Some equipment related Optical Communication in Opt. Lab.  
Telecomm. network trainer in Telecomm. Lab.  
Memory for computer network system  
Components in Microwave Lab.

2) Do you think the lab. equipment and instruments are fully maintained?

Not yet fully maintained	9
Not yet and no idea how to carry out maintenance	1
Cleaning after use carried out in Mechanical workshop	1
Not fully maintained, need more guidance needed	1
Not fully maintained but calibration required	1
Not all items because of so many items	1
Maintenance skill not enough	1

3) Do you think the most of the lab. equipment and instruments are utilized?  
Please list up items not utilized if any.

Yes	19
-----	----

Position Control in Automatic Lab.  
Mouse in Computer Lab. (because not suitable for NEC computer)  
Some equipment in Opt Lab.  
PABX in Telecomm. Lab.  
FFT analyzer in Electronic Lab.  
DC-AC inverter, DC-DC converter in Electric Power Lab.



#### 4-No.9 プロジェクト計画と実績

## 1. GENERAL IMPRESSION

According to the masterplan, the objective of the project is as seen in Annex I.

Simply looking over the achievement of EEPIS, it is quite easy to recognize that the objective is basically realized. That is

: EEPIS was opened in 1988 as it was expected, each year over 120 students entered the school, and this September first graduates had completed the course of study.

: Beside most part of the graduates had decided their jobs before graduation, and this is the case that has not been anticipated in Indonesia before.

## 2. Academic Affairs

The members of Japanese Evaluation Team( hereinafter referred to as "the Team") surveyed the present situation in academic affairs at EEPIS. Here, in principle, the Team has concentrated itself on examining the frame of curriculum and syllabus, the equipment used for education and educational environment through all history at EEPIS Project.

After the implementation of series of survey during three days, the Team has found that the Academic affairs at EEPIS is now running satisfactorily under the cooperation between EEPIS staff and Japanese Experts.

Needless to say, the Team recognize that there are a lot of difficulties while running EEPIS in this country. But the Team should like to indicate following problems as some of the conclusion of survey, hoping that EEPIS would improve and evolve itself toward the best polytechnic in order that EEPIS contributes to this country, providing qualified graduates in electronic and telecommunication engineering field.

As pointed out by both EEPIS staff and Japanese experts:

- 1) As for syllabus, the contents about teaching materials of some subjects should be reviewed and adjusted in order that students should be able to understand basic engineering theory more easily and deeply. To do so, supplemental work for teaching materials

should be necessary.

2) As for educational environment, especially for maintaining good condition of equipment, training and advice for the staff concerning maintenance repair technology should be carried out ,because, when considering the long term usage of many kinds of equipment for experiment in each laboratory, there will be some difficulties to maintain good condition.

Also, for special high level measurement equipment, in order to utilize it more effectively and more widely in many kinds of field, training for the teaching staff should be necessary.

Since some equipment may be applied for high level measurement and experiment, the Team would like to ask EEPIS staff for finding new interesting topics concerning teaching materials( experimental circuits) and researches, utilizing these kind of equipment.

3) Since the most important factor in educational task depends on the abilities of teaching staff, the Team hopes sincerely that teaching staff at EEPIS encourage themselves to improve their abilities, aiming at, for example, Master course or finally at the best teacher in some engineering field.

At the end on evaluation of academic affairs, the Team would like to emphasize that the education is never-ending-task.

### 3. ADMINISTRATION AFFAIRS

#### 1. ORGANIZATION

Being one of the institutions of ITS, EEPIS has its own infrastructure for decision making, budget, personnel affairs and there did not seem to be any critical case in running the Project.

With regard to the independence of Politechnic, it is appreciated to learn that the preparation work has started for smooth shift.

In the future, considering the rearrangement of the organization, the clarification of the duty of each section, establishment of specified section for job arrangement, student affairs and community service will be deliberately considered among others.

#### 2. JOB ARRANGEMENT

The achievement of the graduates this year is highly admirable.

Being the first experience, continuous activities to approach and develop the better communication with private and state corporations are required in succession.

#### 3. BUDGET

Every year required budget has been mostly secured.

After the completion of Japanese cooperation, the allotment of necessary development budget is expected.

#### 4. PERSONNEL

Required personnel according to the R/D and Joint Committee has been almost secured. It is wise to point out that the qualification of lecturers is far beyond the average.

It is pointed that not a few senior administrative staffs are double assigned and total number of assistant is a bit less than expected, and further endeavor will be appreciated in this regards.

On the independence of EEPIS, there may arise a rather important problem.

There are several EEPIS counterparts whose mother organization is ITS. So their future belongings are to be deliberately considered in the light of smooth implementation of EEPIS.

#### 5. MANAGEMENT AND MAINTENANCE OF EQUIPMENT

There are number of educational equipment in EEPIS and further effort to establish a management and maintenance system is required in order to secure efficiency and effectiveness. And placement of some equipments are in due course and budget allocation in this regards will be considered.

#### 6. EXTENTION OF THE FACILITIES

In accordance with the commencement of social service, more space and facilities become required so necessary measure should be taken in order that academic affairs and social service of EEPIS will be well coordinated.

ANNEX I.

I. MASTER PLAN

1. Objective of the Project

The objective of the project is to provide following engineering educational courses in EEPIS to graduate students of senior high schools/ SMA-s and/ or technical high schools/STM-s for the purpose of developing their engineering level (Diploma III level) and thus contributing to the promotion of the increasing of skilled and professional manpower in the fields of electronic engineering and electronic communication engineering in the Republic of Indonesia.

The following engineering educational courses will be implemented by the Indonesian side including preparation of the educational personnel, curricula and teaching materials.

Title of Course	Electronic Engineering	Electronic Communication Engineering
Entry Requirement	Graduate from senior High School (SMA) and/or Technical High School (STM)	
Education Period	Three years/full time 38 hours/week, 22 weeks/semester 2 semester = 1,672 hours/per year	
Intake	30 students x 2 intakes	30 students x 2 intakes
	60 students / per year (Total 120 students/per years)	60 students / per year
Education Curricula	A. General Subjects B. Basic Science & Engineering C. Engineering	

J.K.



DEPARTEMEN PENDIDIKAN DAN KEBUDAYAAN  
DIREKTORAT JENDERAL PENDIDIKAN TINGGI

Jln. Raya Jenderal Soedirman Pintu I. Senayan, Tromolpos 190. Jakarta 10002  
Telp. 581436, 581982, 581466, 581903, 581843, 581805, 581988, 581846, 582481, 582468.

Nomor : 4298/D/T/91

Jakarta, 4 Oktober 1991

Lampiran : 3 (tiga) lembar

Perihal : Undangan Pertemuan Joint Committee

Kepada : Yth. Prof. Mitsuo Sekikawa  
JICA Team Leader  
Jl. M.H. Thamrin  
Jakarta

Mohon kehadiran Saudara dalam pertemuan Joint Committee Politeknik  
Elektronika ITS, pada :

H a r i : K a m i s

Tanggal : 10 Oktober 1991

J a m : 08.00 - 15.30 WIB /

Tempat : Kampus Politeknik Elektronika ITS, Surabaya

dengan A c a r a terlampir.

Atas perhatian dan kehadiran Saudara, kami ucapkan terima kasih.



Departemen Pendidikan dan Kebudayaan  
Direktori Jenderal Pendidikan Tinggi

*Sukadji Ranuwihardjo*

Dr. Sukadji Ranuwihardjo



SCHEDULE OF THE JOINT MEETING

OCTOBER 10th 1991

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1. 08.00 Opening the Fourth Joint Committee
2. 10.00 Cofee break
3. 12.00 Lunch
4. 13.00 Evaluation Committee Meeting
5. 14.00 Business hours
6. 15.30 Exchange of minutes of the Joint Committee  
and new Record of Discussions.

Participants :

Joint Committee Chaired by : Director General of Higher Education

Indonesian Side

ITS Rector  
EEPIS Director  
Ass. Director  
Head Of Telecomm Dept  
BAPPENAS

Japanese Side

JICA Team Leader  
JICA Sub Leader  
JICA Experts  
JICA Coordinator  
JICA Office

Observers :

JICA Evaluation Team

Evaluation Committee Meeting

Indonesian Side

Direktor HEG & Staff  
BAPPENAS

Japanese Side

JICA Evaluation Team

3. JOINT COMMITTEE  
POLITEKNIK ELEKTRONIKA SURABAYA  
ITS  
SURABAYA OCTOBER 10, 1991

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Chairman of the committee : Prof.Dr. Sukadji Ranuwihardjo  
Direktur Jenderal Pendidikan Tinggi

From Depdikbud : 1. Prof.Dr. Bambang Soehendro  
Direktur Pembinaan Sarana Akademis  
2. Ir. Oetomo Djajanegara  
Sekretaris Direktorat Jenderal  
Pendidikan Tinggi

From Secretariate Cabinet : Moh. Widodo Gondowardoyo, SH  
Kepala Biro Kerjasama Tehnik Luar  
Negeri

From BAPPENAS : Prof.Dr. H.R. Tilaar  
Kepala Biro Pendidikan dan Kebudayaan  
BAPPENAS

---

MEMBER OF COMMITTEE

- |   |  |
|---|--|
| 1. Prof.Dr. Oedjoe Djoeriaman<br>Rektor ITS   | 1. Prof. Mitsuo Sekikawa<br>JICA Team Leader |
| 2. Ir. Susanto<br>Direktur Politeknik<br>Elektronika Surabaya<br>Institut Teknologi Sepuluh<br>Nopember | 2. Mr. Yasuo Suzuki<br>JICA Sub Leader       |
| 3. Ir. Henny Utami<br>Assisten Direktur Bidang<br>Administrasi & Keuangan                               | 3. Mr. Osamu Makino<br>JICA Expert           |
| 4. Dr.Ir. M. N u h<br>Assisten Direktur Bidang<br>Kemahasiswaan   | 4. Mr. Yutaro Hasuda<br>JICA Coordinator     |
| 5. Ir. M. Milchan<br>Ketua Jurusan Telekomunikasi   | 5. Dr. Haruo Takahashi<br>JICA Expert        |
| 6. Ir. Son Kuswadi<br>Ketua Jurusan Elektronika   | 6. Prof.Dr. Yukitoshi Tsunoda<br>JICA Expert |
|   | 7. Ass.Prof. Masakuni Taki<br>JICA Expert    |
|   | 8. Prof. Takashi Madachi<br>JICA Expert      |
|   | 9. Dr. Mitsuteru Inoue<br>JICA Expert        |

JICA