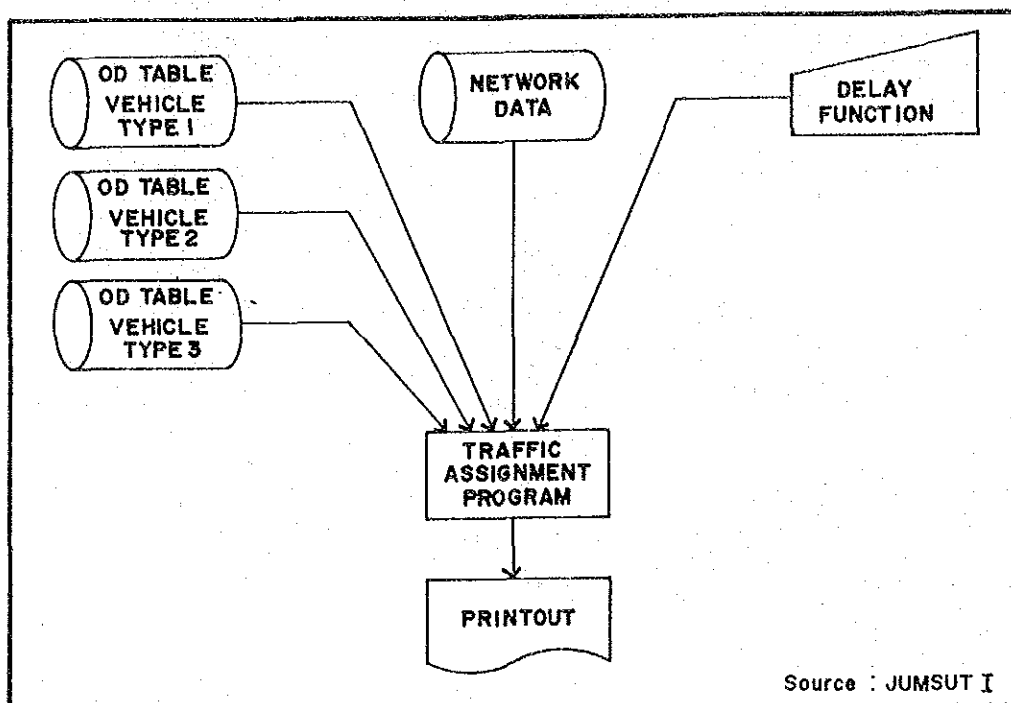


4.3.3 NEAP

The basic structure of the program is illustrated in Figure 4.11. The program requires two data files on a diskette, i.e., files it can accommodate at a time is three (3). In principle, other data are to be inputted manually from the keyboard.

Figure 4.11
Basic Structure of Traffic Assignment
Program for the Microcomputer



The program has the following limitations (computer memory size is 256K Bytes):

- Maximum number of zones : 100
- Maximum number of nodes : 350
- Maximum number of links (one-way) : 1000
- Maximum number of OD tables assigned at a time : 3
- Maximum number of OD table divisions : 10

a) Input Data

The input data required are:

- number of zones
- number of links
- number of nodes
- number of OD tables
- PCU pertaining to OD tables
- number of OD table divisions

- share of each division
- node number for each zone centroid
- number of delay functions
- delay functions
- link data
- OD tables

The file for OD tables should be created and stored on a diskette. The user can put any name to the file. Data are stored as statements of BASIC according to the following format:

```
1000 DATA 11, 12, 16, 38, 9, ---, 87
1010 DATA 13, 0, 3, 29, 32, ---, 137
```

(One row of OD table should be written as one statement)

Likewise, the network or link data are also stored on a diskette under a name according to the user's choice. The format is:

```
2000 DATA 1, 101, 102, 0.5, 3, 2000, 2
           ↑   ↑   ↑   ↑   ↑   ↑   ↑
           Link Node Node Dis- Delay Pre- One-
           No.  No.  No.  tance Func- Deter- Way
                               (kms) tion Deter- or
                               No.   mined Traffic Two-
                               in PCU Volume Way
```

As mentioned earlier, other data are to be entered manually from the keyboard according to the instructions which appear on the CRT. However, in order to facilitate faster and efficient data input, an option to create a control file was prepared. If the user chooses this option, the microcomputer will not ask the user to input manually on the keyboard but will read the necessary data from the control file (in this case, trasmt.cnt). If an iterative operation of this program is required, it would be advisable to use a control file.

A sample control file is shown below:

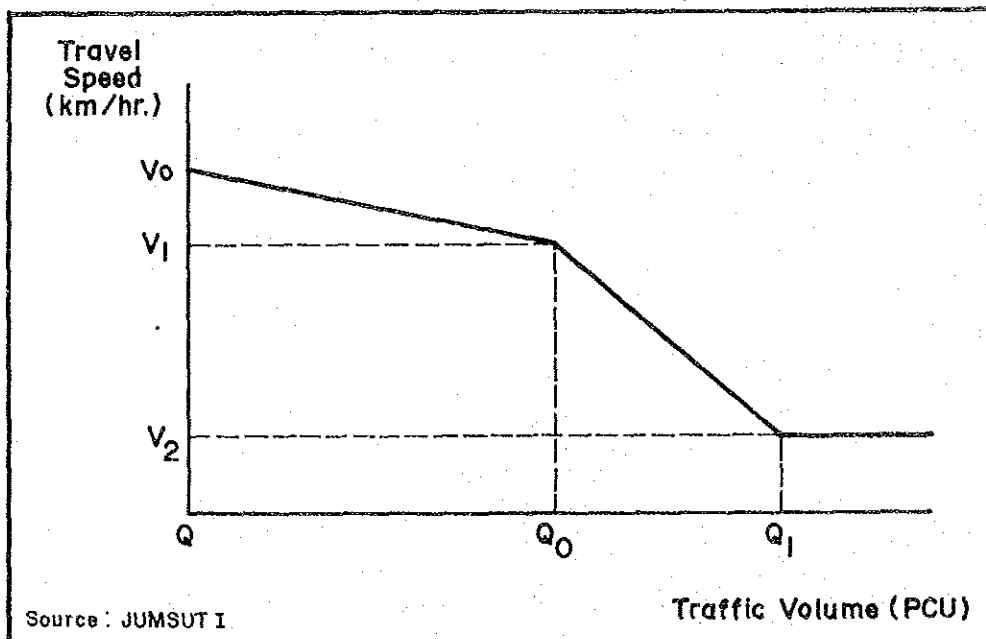
```
10 DATA"*** (27 traffic assignment zones)***" Title
20 DATA 27,244 No. of Zones, No. of Links
30 DATA 220, 1 No. of Nodes, No. of OD Tables
40 DATA 1 PCU pertaining to the OD Table (to be repeated
the same time as the No. of OD Tables)
50 DATA 1 No. of OD Table Divisions
60 DATA 1 Share of each OD Table Division (to be repeated
the same time as the No. of OD Table Divisions)
70 DATA 0 Switch showing correspondence between Zone Nos.
and Node Nos.
0: indicates that Zone Nos. are the same as
Node Nos.
1: indicates that Zone Nos. are to be specified
by the user (followed by data of Node Nos. in
sequence of Zone Nos.)
```

80	DATA 5	No. of Delay Functions
90	DATA 60,40,20,1000,2000	V_0, V_1, V_2, Q_0, Q_1 ; Delay Function No. 1
100	DATA 60,40,20,2000,4000	V_0, V_1, V_2, Q_0, Q_1 ; Delay Function No. 2
110	DATA 60,40,10,100,200	V_0, V_1, V_2, Q_0, Q_1 ; Delay Function No. 3
120	DATA 40,20,10,1000,2000	V_0, V_1, V_2, Q_0, Q_1 ; Delay Function No. 4
130	DATA 40,20,5,100,200	V_0, V_1, V_2, Q_0, Q_1 ; Delay Function No. 5
140	DATA "link27.dat"	File Name of Link Data
150	DATA "odt27.dat"	File Name of OD Tables (to be repeated the same time as the No. of OD Tables)

Delay function parameters are illustrated in Figure 4.12 and defined as follows:

V_0 :	Initial Speed	Q_0 :	Road Capacity
V_1 :	Travel Speed at Road Capacity	Q_1 :	Road Capacity at Critical Point

Figure 4.12
Speed-Flow Relationship
(Delay Function)

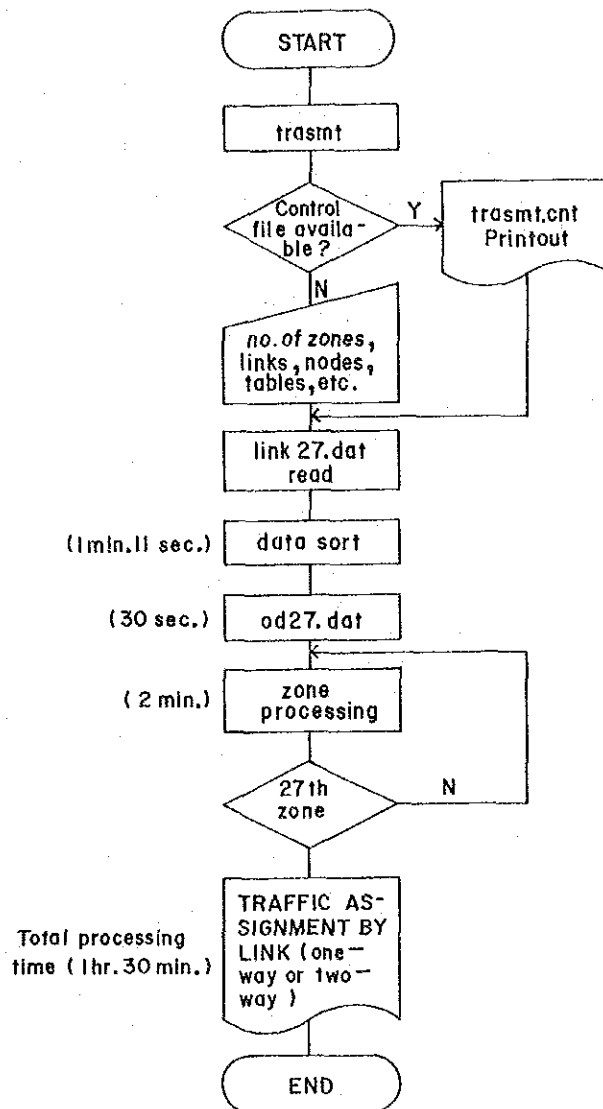


b) Program Operation

In order to run the program, the user has to create and store two (2) data files on the diskette beforehand, namely: link data and OD tables. The OD table file might be segregated depending on the number of vehicle types to be assigned at the same time. Likewise, if the user wants to utilize the control file, it must be created prior to operation.

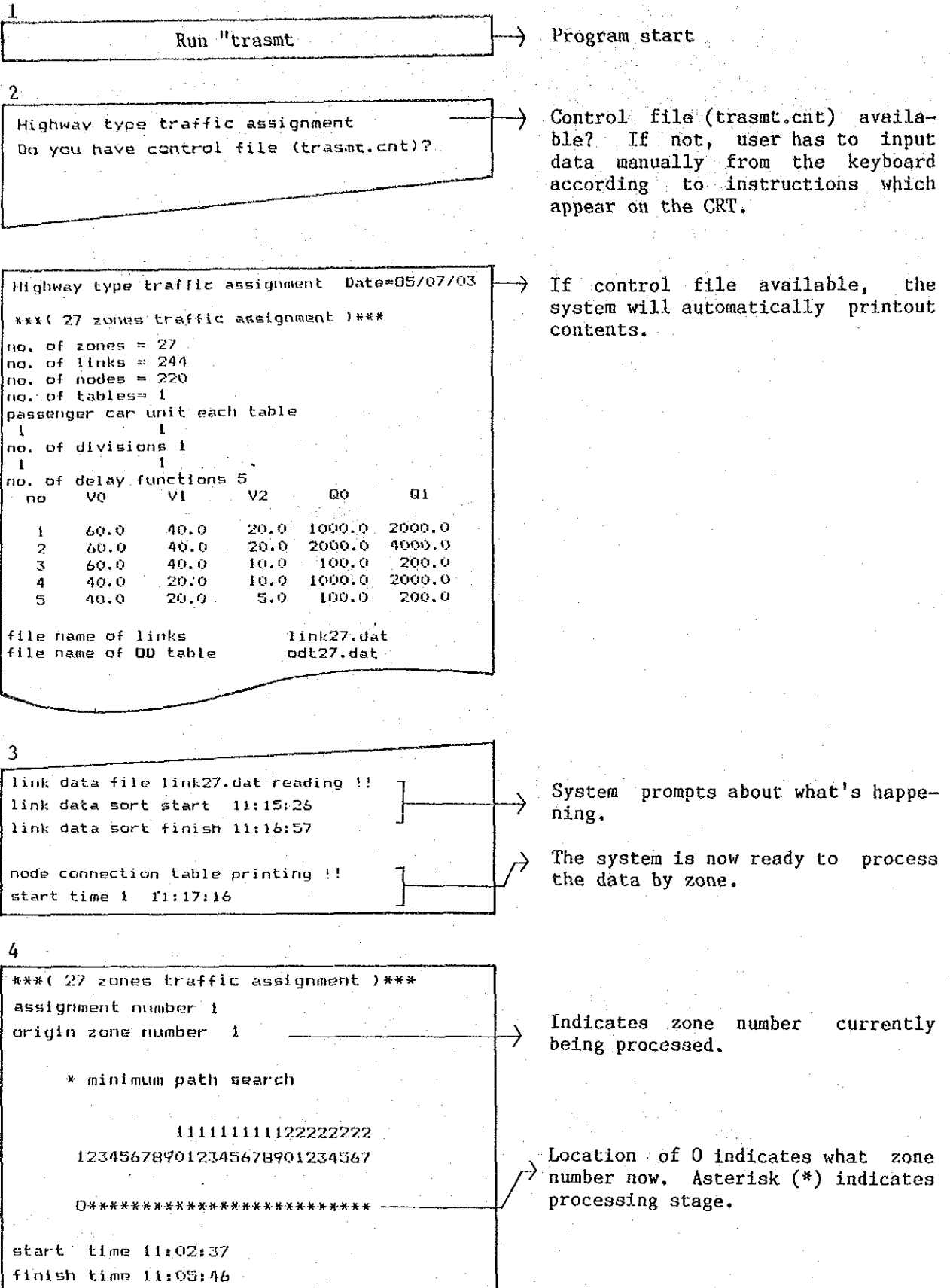
The flowchart of NEAP is shown below:

Figure 4.13
Flowchart of the Network Assignment Program



Operation of NEAP

Remarks



c) Output

The results are two-fold:

- 1) one-way link loadings
- 2) two-way link loadings

The former is useful for traffic analyses by direction.

For both printouts, the output format is the same as shown below.

Traffic assignment by link (one way)

*** (27 zones traffic assignment) ***

seq.	A-E	B-E	dist	QV	KQ	pcu	total	1
1	1	101	0.5	3	20000	8299	8299	8299
2	1	147	0.9	3	10000	25685	25685	25685
3	1	148	1.6	5	5000	0	0	0
4	1	149	1.2	3	5000	2404	2404	2404
5	2	144	0.3	3	20000	45261	45261	45261
6	2	146	0.2	2	20000	0	0	0
7	2	147	0.3	3	10000	21912	21912	21912
8	2	148	1.2	4	20000	0	0	0
9	2	141	1.2	3	4900	0	0	0
10	3	142	0.9	4	0	27504	27504	27504
11	3	145	0.7	2	46100	18333	18333	18333
12	3	167	0.7	4	4900	3074	3074	3074
13	3	173	1.4	2	46100	28936	28936	28936
14	4	120	0.4	4	0	67066	67066	67066
15	4	122	0.3	2	45900	0	0	0
16	4	148	0.6	2	45900	4063	4063	4063
17	5	117	0.5	4	8000	24693	24693	24693
18	5	127	0.9	4	20000	0	0	0
19	5	125	0.8	4	20000	6249	6249	6249
20	5	134	1.0	4	8000	0	0	0
21	6	177	1.3	2	8000	0	0	0
22	6	178	0.6	3	0	67727	67727	67727
23	6	180	0.8	2	8000	0	0	0
24	6	182	0.8	3	0	24074	24074	24074
25	7	185	3.7	4	10000	0	0	0
26	7	200	1.4	2	12200	34962	34962	34962
27	7	201	1.5	2	12200	27777	27777	27777
28	7	208	1.1	3	7000	0	0	0
29	8	186	0.7	5	0	21322	21322	21322
30	8	195	1.1	4	11700	0	0	0
31	8	197	0.6	3	11700	1954	1954	1954
32	9	189	1.2	4	0	7682	7682	7682
33	9	191	0.3	4	0	29907	29907	29907
34	10	168	5.6	5	0	5896	5896	5896
35	10	209	4.0	5	0	25160	25160	25160
36	10	210	10.0	5	0	26114	26114	26114
37	10	217	2.3	3	5000	31601	31601	31601
38	11	194	1.3	4	27900	15779	15779	15779
39	11	199	2.9	5	0	15021	15021	15021
40	11	209	1.6	5	27900	8364	8364	8364
41	12	187	2.0	4	20000	0	0	0
42	12	194	1.8	4	20000	0	0	0
43	12	218	0.5	3	0	31002	31002	31002
44	13	153	1.4	4	12200	2808	2808	2808
45	13	154	5.0	4	20800	0	0	0

→ Automatic printout of output (one-way and two-way)

Total processing time for 27 zones is about 1 hour and 30 minutes.

Link No. Node Node Dis- Delay Pre- Assigned Assigned Assigned
 No. tance func- Deter- Total Total Traffic
 (kms.) tion mined Traffic Traffic Volume
 No. Traffic Volume of Vehicle
 Volume in PCU Volume Type 1
 in PCU

APPENDICES

Appendix 2.1
Summary of Surveyed Microcomputer Programs

Application	Computer	Memory	Disks	System	Operating Conditions	Distribution	Developer
Sketch Planning and Innovative Methods							
EXTRA: Express bus corridors	IBM	64K	1	DOS	Proprietary	W.G. Barker and Associates	
Transit systems analysis (DODOTRANS II subsystem)	Apple	64K	-	UCSD	Public	MIT	
PVT: Impacts of service changes on transit line	Apple	64K	1	UCSD	Public	MIT	
FARE PROG: Transit fare policies	Apple	64K	1	DOS	Public	Berkshire Company Planning	
Transit fare policies	Commodore	32K	2	DOS	Public	Old Colony Planning	
Transit service analysis	Apple	-	-	USCD	Public	Dartmouth University	
UMOI: Travel budget analysis (4 programs)	Apple	64K	1	DOS	Licensed	Mobility Systems, Inc.	
AGGREGTN: Pivot-point mode choice	Apple	64K	1	USCD	Public	MIT	
Pivot-point mode choice	Ohio Scientific	4K	0	-	Public	Little Rock Metroplan	
PIVOT: Pivot-point mode choice	Apple	64K	2	UCSD	Proprietary	Schimpeler-Corradino	
Paratransit planning	Apple	-	-	UCSD	Public	Dartmouth University	
SAMPLENUM: Sample enumeration mode choice analysis	Apple	48K	2	UCSD	Licensed	Cambridge Systematics, Inc.	
Quick-response methods	Apple, IBM	64K	2	UCSD	Public	COMSIS	
IMPAX: Quick-response prediction and evaluation	Apple, IBM, Intertec, TRS-80	64K	2	CP/M	Sold	PRC Voorhees	
Traditional Urban Planning Methods							
MicroTRIPS	Apple, IBM Intertec, TRS-80	64K	2	CP/M	Sold	PRC Voorhees	
TMODEL	Apple, IBM	-	-	CP/M	Proprietary	Professional Solutions, Inc.	
POP ITER, RIZ POP	Apple	64K	1	DOS	Public	Berkshire Company Planning	
MINUTP	Molecular, IBM	-	-	CP/M	Sold	COMSIS	
TRIPGEN	Apple	64K	2	UCSD	Sold	Garmen Associates	
ASSIGN	Apple	48K	1	DOS	Proprietary	CH 2M Hill	
EMME	Pixel	-	-	UNIX	Licensed	University of Montreal	
TRANPLAN	Momentum	512K	20M	UNIX	Licensed	Vista Systems	

(Cont. Appendix 2.1.)

Application	Computer	Memory	Disks	Operating System	Distribution Conditions	Developer
Aids for Providing Transportation Services						
Carpool matching	TI99	16K	1	Ext. Basic	Public	Little Rock Metropolitan
Carpool matching	Altos	1024K	Hard	Xenix	Proprietary	K. Roberts and Associates
MicroCRIS: Ridesharing support	Molecular	64K	Hard	CP/M	Proprietary	COMSIS
Ridesharing matching	TRS-80	-	Hard	-	Public	University of Tennessee
COMPOOL: Carpool and vanpool matching	Altos	512K	Hard	UNIX	Licensed	Crain and Associates
Dial-a-ride elderly and handicapped service support	Altos	1024K	Hard	Xenix	Proprietary	K. Roberts and Associates
PSP: Paratransit scheduling	Northstar	64K	2	-	Proprietary	W.C. Barker and Associates
Transportation-Related Impacts						
AQ ROADWAYS and AQ INTERS:						
Air quality impacts	Apple	64K	1	DOS	Public	Berkshire Company Planning
URBEMIS: Air quality impacts	Apple	-	-	-	Public	California Air Resources Board
PROLEV: Energy requirements	Apple	48K	1	-	Public	New York State Department of Transportation
PROLEV-HICOND: Energy related to highway conditions	Apple	48K	1	-	Public	New York State Department of Transportation
Programming and Budgeting Aids						
MFS: Multimodal Priority System (DODOTRANS II subsystem)	Apple	64K	2	UCSD	Public	MIT
Priority ordering of street segment improvements	Apple	64K	2	DOS	Public	District of Columbia Department of Transportation
Local allocations of federal aid	Apple	64K	2	DOS	Public	District of Columbia Department of Transportation
REKEN: National transit budgeting	Apple	48K	2	CP/M	Licensed	Cambridge Systematics, Inc.

(Cont. Appendix 2.1)

Application	Computer	Memory	Disks	Operating System	Distribution Conditions	Developer
Interface Programs						
TTY: Micro-mainframe communications	Apple, IBM Intertec, TRS-80	64K	2	CP/M	Sale	PRC Voorhees
ACCESS: Micro-UUPS interface Digitizer interface Graphics system	Apple TI99 Apple	16K 48K	1 2	UCSD Ext. Basic	Proprietary Public Public	Carmen Associates Little Rock Metroplan North Central Florida Planning
Travel Surveying Aids						
COMPARK: License plate survey matching	TRS-80 Apple	48K 64K	2 2	DOS UCSD	Sold Proprietary	ADA Computer Services Schimpeler-Corradino
VISTA: Data collection via video recorders	Apple	-	-	-	Proprietary	Wootton, Jeffreys and Partners, England
Statistical and Data Processing System						
MICROSURVEY: Editing, tabulating, regression	Apple, IBM Intertec, TRS-80	64K	2	CP/M	Sold	PRC Voorhees
MDA: Statistics, regression, logit estimation	IBM, Apple, Data General, TRS-80 Northstar, Osborne	64K	2	MP/OS, CP/M various DOSS	Licensed	Cambridge Systematics, Inc.
OCTAGON: Census data processing	Apple	-	Hard	CP/M	Proprietary	Vistar Enterprises
System Development and Programming Aids						
DODOTRANS II: Analysis environment system Utility programs Function graphing utilities	Apple (PASCAL) Apple	64K - 64K	2 - 2	UCSD - UCSD	Public Sold Public	MIT Carmen Associates MIT

Source: Microcomputer Software for Transportation Planning, Earl R. Ruiter and Mike Waller, Transportation Research Board 932, 1983.

- 1/ Proprietary denotes a program that must be paid for, but the arrangements (license or sale) are either unknown or unspecified. Public denotes a program that is not proprietary but may require a payment to cover transmittal costs.
- 2/ Urban Mass Transportation Administration.

Appendix 2.2
 Program for the Microcomputer Seminar
 held in Australia (February 1984)

MICROCOMPUTER APPLICATIONS FOR THE TRANSPORT INDUSTRY

Arising from the successful 3 day workshop — Microcomputers in Transport and Traffic Planning — by the Department of CIVIL Engineering at Monash University in February, 1984, the demand was evident for further specific information and hands-on experience. This Seminar and Exhibition is intended to meet this demand through:

- Displays of state of the art applications software specially imported from the USA and UK.
- Displays of applications software developed in Australia.
- Small group workshop seminars for hands-on experience on selected systems (of your choice) for specialists.
- Displays of microprocessor based equipment for use in the transportation industry.
- Displays of a wide range of microcomputer equipment.
- Seminars with inspections of operating displays for Managers and those with general interests.

Hands-on seminars of half day duration will each deal with one or more applications in a particular specialised field. Groups of 3 will receive instruction and then hands-on experience.

For those with wider and management interests, a series of seminars will be held each including inspections of operating systems for familiarisation with the capability of the systems and equipment.

Participants who wish to display equipment or software systems need to register their interests before 30th April, on the attached form, so that the detailed programme can be finalised before the end of June.

Others who wish to reserve a ticket for one of the venues should register their interest now, so that they may be included on the mailing list, without obligation at this stage.

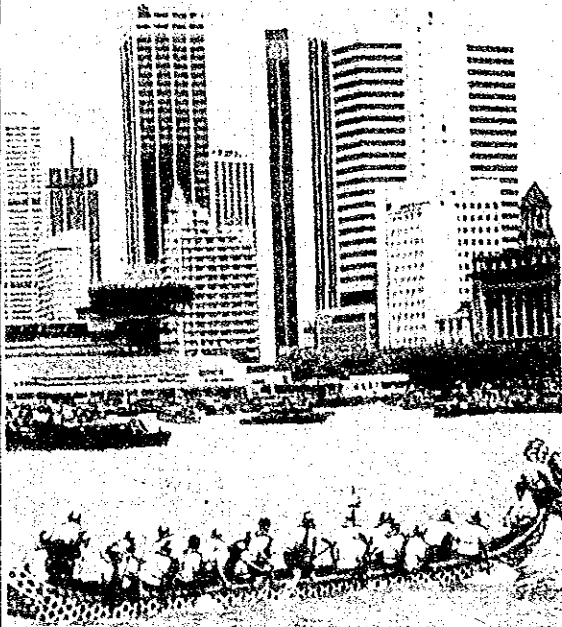
PROVISIONAL PROGRAMME

	Day 1		Day 2		Day 3	
Session 1	Workshop Registration and Opening	Seminar	Workshop Hands-on Session 2	Seminar Traffic Engineering	Workshop Hands-on Session 4	Seminar Freight Forwarding
2	Introduction to Workshops	Field data acquisition		Traffic Control and guidance systems		Engineering Design and CAD
Lunch						
3	Hands-on Session 1	Survey analysis	Hands-on Session 3	Transit scheduling and operations	Hands-on Session 5	Revenue/ Expenditure Control.
4		Transport Planning		Fleet and Vehicle Management		Summing up and close.
	Reception Cocktails		Dinner			

Registration fees: \$400 Includes lunches, morning and afternoon teas, Reception, Dinner and handbook.

Appendix 2.3
 Program for the Microcomputer Seminar
 held in Singapore (July 1985)

<p>Venue</p> <p>The workshop will be held at the Hyatt Regency Hotel, Scott Road, Singapore.</p> <p>Accommodation:</p> <p>This should be arranged personally.</p> <p>Registration Fee</p> <p>A registration fee of \$A50 will cover attendance at the workshop, catering as indicated in the program and one copy of the Workshop papers.</p> <p>Complete and return the Registration Form (over page) if you wish to attend.</p>	<p>Workshop Program</p> <p>Wednesday 24th July</p> <p>1800-2100 Welcome Reception</p> <p>Thursday 25th July</p> <p>0900-1000 Overview of micro development and applications.</p> <p>1000-1230 Urban Traffic Control</p> <ul style="list-style-type: none"> • signal networks • isolated signals <p>1230-1330 Lunch</p> <p>1330-1530 Area Traffic Management</p> <ul style="list-style-type: none"> • interactive analysis techniques • demand estimation from traffic counts <p>1530-1630 Public Transport</p> <ul style="list-style-type: none"> • bus network planning <p>1630-1800 'Hands-On' Session</p> <p>Friday 26th July</p> <p>0900-1030 Public Transport</p> <ul style="list-style-type: none"> • operational management <p>1030-1130 Transport Information Systems</p> <p>1130-1300 Future Directions</p> <p>Consideration of likely developments in micro - technology and desirable techniques for traffic and transport.</p> <p>1300-1315 Closure</p> <p>Saturday 27th July</p> <p>0800-1100 Inspection of traffic control and Mass Rapid Transit Systems.</p>
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Dragon boat race - Singapore

Appendix 3.1
JUMSUT Data Base

Category	Title	Form ^{1/}
Primary Data Base	A. <u>HIS Data</u>	
	1. 1980 HIS Sample Master	MT (JUMSUT 06, 07)
	2. 1983 HIS Sample Master	MT (JUMSUT 08)
	3. 1980 HIS Expanded Sample Master	
	1) Household Information	MT (JUMSUT 09)
	2) Household Member Information	MT (JUMSUT 10)
	3) Trip Information	MT (JUMSUT 11)
	4. 1983 HIS Expanded Sample Master	
	1) Household Information	MT (JUMSUT 12)
	2) Household Member Information	MT (JUMSUT 13)
	3) Trip Information	MT (JUMSUT 14)
	5. 1980 HIS Revised Trip Information (1980 and 1983 merged)	MT (JUMSUT 15)
	6. 1980 Cordonline Data	
	1) All Vehicle Information	MT (JUMSUT 22)
2) Public Transport Passenger Information	MT (JUMSUT 23)	
7. 1980 Screenline Data	Original Survey Sheets	
8. 1980 OD Tables (217 Zones)		
-1) Person Base for Daily and Peak Hour	MT (JUMSUT 16-19)	
2) Vehicle Base for Daily and Peak Hour	MT (JUMSUT 19-21)	
	B. <u>Public Transport Data</u>	
	1. 1983 Bus/Jeepney Route List	SD-No. 5
	2. 1983 Bus/Jeepney Route Frequency	MT (JUMSUT 03) & SD-No. 6
	3. 1983 Bus/Jeepney Operation Characteristics Sample Master	MT (JUMSUT 02)
Planning Data Base	1. 1980 Metro Manila Socio-economic Data (202-Zone base)	Diskette
	2. Metro Manila Road Network	
	1) EDP Network (1,687 sections)	CD/SD-No. 6
	2) Road Inventory (major roads)	SD-No. 7
	3. Metro Manila Road Traffic Data (1978-1981)	
	1) Traffic Volume by Vehicle Type	SD-No. 7
	2) Traffic Characteristics	SD-No. 7
	4. Metro Manila Public Transport Data	
	1) Operation/Passenger Demand Characteristics (by route)	MT (JUMSUT 04, 05) & SD-No.6
	2) Operation/Passenger Demand Characteristics (by section)	SD-No. 6
3) Terminal Inventory (all buses, jeepneys, tricycles)	SD-No. 7	
5. Summarized Metro Manila Jeepney Route Information (on simplified road network)	Diskette	
Program	1. TRANSTEP (JUMSUT Version)	
	1) PTEDIT	MT (JUMSUT 01)
	2) PTPATH	with Manual (SD-No. 4)
	3) PTLOAD	
	2. Highway Traffic Assignment Program	Diskette with Manual (SD-No. 3)
	3. Jeepney Route Information Management System (PT MANAGE) including Relevant Data	Diskette with Manual (SD-No.3)

^{1/} MT: Magnetic Tape (code number) Diskette: for Micro-computer
SD: JUMSUT Supporting Document CD: Card Deck

Appendix 3.2
Seminar 10
Understanding Microcomputers

Date	:	8 September 1984	
Time	:	9 a.m. - 5 p.m.	
Place	:	U.P. TTC Audio-Visual Room	
Rationale	:	Designed for the professionals without any prior background in microcomputers nor programming, this first seminar aims to provide full understanding of the technology. After the seminar, participants should be able to appreciate the uses and limitations of micros in transportation, learn the terminologies, and take the next steps toward using them as tools. This seminar is a prerequisite to all subsequent sessions.	
Morning Session	:	MICROCOMPUTER FUNDAMENTALS	Resource Persons
9:00 - 9:15		Introduction to the Seminar	S. Iwata
9:15 - 10:30		What is a Micro? Components and Architecture Hardware. Software	H.A. Felias, Jr.
10:30 - 10:45		Coffee Break	
10:45 - 11:45		Operating Systems and Languages	M.A. Alcuaz, Jr.
11:45 - 12:15		General Purpose Softwares	M.A. Alcuaz, Jr.
12:15 - 1:30		Lunch Break	
Afternoon Session:		APPLICATIONS OVERVIEW	
1:30 - 2:00		Applications in Transportation	R.S. Santiago
2:00 - 3:30		Laboratory Work/Demonstration (Fujitsu 8, NEC, Apple IIs, HPs)	H.A. Felias, Jr.
3:30 - 3:45		Coffee Break	
3:45 - 4:30		Technology Trends	M.A. Alcuaz, Jr.
4:30 - 5:00		Organizational Response to the Micro Revolution	

Appendix 3.3
Seminar 20
Spreadsheet Applications

Date : 29 September 1984
 Time : 9 a.m. - 5 p.m.
 Place : U.P. TTC Microcomputer Room
 Rationale : This course is designed for participants to gain a working familiarity with one of the simplest but important planning tools for most managers and professionals-the electronic spreadsheet. Even without prior programming experience, the user can use this productivity or general-purpose software for financial projections, traffic capacity planning, bus scheduling, economic evaluation, etc.

Because of availability and ease-of-use, the SUPERCALC software will be taught through a combination of lectures, hand-outs and simple problem exercises.

Morning Session :		Resource Persons
9:00 - 10:30	Spreadsheet Fundamentals Table Formats of Rows/Columns SUPERCALC's Structure and Display	H.A. Felias, Jr.
10:30 - 10:45	Coffee Break	
10:45 - 11:15	Simple Commands, Formulas	J.F. Mortero
11:15 - 12:15	Hands-on Exercise I	
12:15 - 1:30	Lunch Break	
 Afternoon Session:		
1:30 - 2:00	Discussions of Exercise I	
2:00 - 2:30	Other Commands in SUPERCALC	
2:30 - 3:30	Applications in Transportation	J.F. Mortero
3:30 - 3:45	Coffee Break	
3:45 - 4:15	Discussions	
4:15 - 5:00	Evolution of Spreadsheets and Summary of Course	R.S. Santiago

Appendix 3.4
Seminar 30
An Introduction to
Basic Programming on a Micro

Date : 17 November 1984
Time : 9 a.m. - 4:30 p.m.
Place : U.P. TTC Microcomputer Room
Rationale : This is the fourth in a series of seminars and tutorials sponsored by JUMSUT II for MOTC and other government planning staff. It assumes a basic understanding of microcomputer fundamentals and concepts. Designed for the non-EDP person, it aims to introduce participants to one of the simplest and most popular computer languages called BASIC. At the end of the day, participants should be able to create programs to solve their own problems, run and understand the logic of other programs and softwares using BASIC (e.g. the SECODABAS, JERIMAS, and NEAP application softwares developed in JUMSUT I). It is not meant to produce instant expert programmers, although such a result could not be discounted.

Morning Session

1. Overview of the Programming Process
2. Fundamental Concepts of the BASIC Language
 - 2.1 BASIC as an Interactive Language
 - 2.2 Symbols used in the Language
 - 2.3 Data Representation in BASIC
 - 2.4 Commands or Statements in BASIC

BASIC Editor Commands
Input/Output Commands
Arithmetic Statements
Program Flow Control Statements

3. BASIC Variables and Arithmetic Expressions
4. LET, PRINT and REM Statements
5. INPUT Statement
6. Relational and Logical Expressions
7. GO TO and IF-THEN-ELSE Statements
8. READ, DATA, and RESTORE Statements
9. Graphic Commands

Afternoon Session

1. Hands-on Workshop

Appendix 3.5
Seminar 40
Project Management

Date	: 16 February 1985	
Time	: 9 a.m. - 5 p.m.	
Place	: 5th Floor, Davao Room, MOTC	
Rationale	: The course seeks to develop among participants an appreciation of the value of mic. computers in project management. An introduction to the use of an available software called Harvard Project Manager (HPM) will be made after a review of project management concepts, tools of scheduling and control.	
Morning Session :		Resource Persons
9:00 - 10:30	Fundamentals of Project Management Review of PERT/CPM Evolution of computer applications Overview of MacProject	R.S. Santiago
10:30 - 10:45	Coffee Break	
10:45 - 11:15	Structure of the HPM Functions and Commands Building the project roadmap	
11:15 - 12:00	DEMO I (Hands-on)	R.V. Gonzales
12:00 - 1:30	Lunch Break	
Afternoon Session:		
1:30 - 2:00	Revising the Roadmap Calendar	
2:00 - 3:00	DEMO II (Hands-on)	M.F. Alejandro
3:00 - 3:30	Scheduling and Tracking Printing	
3:30 - 3:45	Coffee Break	
3:45 - 4:30	DEMO III (Hands-on)	J.S. Ticatic
4:30 - 5:00	Summary	R.S. Santiago

Appendix 4.1
Exercises on SECODABAS

Given the following socio-economic data organized on both 24 and 202 zoning systems:

No.	Abbrv.	Data Item
1	S	Area (ha.)
2	H	Number of Households
3	PN	Population
4	HI	Household Income
5	HCO	Number of Car-Owning Households
6	P7N	Population (6 years old)
7	EN	Employment
8	E1N	Employment (Primary)
9	E2N	Employment (Secondary)
10	E3N	Employment (Tertiary)
11	STN	Number of Students
12	P7D	Daytime Population (6 years old)
13	ED	Daytime Employment
14	E1D	Daytime Employment (Primary)
15	E2D	Daytime Employment (Secondary)
16	E3D	Daytime Employment (Tertiary)
17	STD	Number of Students in Daytime

Compute for the following by using the Data Transformation Program (TRNDAT.NAK).

1. Household size (HHSIZE) - persons/household
2. Population density (PDEN) - persons/hectare
3. Ratio of daytime employment to nighttime employment (ED:EN)
4. Ratio of daytime students to nighttime students (STD:STN)

Appendix 4.2
Character Formats of JERIMAS Data Items

Data	Format
<u>ROUTE FILES</u>	
1. Mode Number	i1
2. JUMSUT Route Number	i3
3. MOTC Route Code	A5
4. BOT Route Code	3A8
5. JUMSUT Route Code	A60
6. Terminal Code	2A5
7. Terminal Zone Code	2i3
8. Route Length	F4.1
9. Route Type	i1
10. Number of Units Running/Operating	2i4
11. Number of Units Authorized	i4
12. Average Travel Speed by Time Period	4F4.1
13. Average Seating Capacity	i3
14. Frequency by Hour	16i3 + 14
15. Daily Average Travel Time (min.)	i4
16. Daily Average Terminal Time (min.)	i4
17. Average Turn-around Time by Time Period	4i4
18. Vehicle-Kilometers	i6
19. Vehicle-Hours	i5
20. Average Number of Round trips/day/vehicle	i3
21. Average Daily Kilometerage/vehicle	i3
22. Average Load Factor by Time Period	4i3
23. Corridor Numbers Passed	3i2
24. Node (Section) Numbers Passed	25i3
25. Number of Pass/day/Route	i7
26. Passenger-Kilometers/Day/Route	i8
27. Average Trip Length	F4.1
<u>CORRIDOR FILES</u>	
1. Corridor Number	i2
2. Number of Lanes	i2
3. Capacity (pcu's/day)	i6
4. Traffic Volume (car/taxi)	i6
5. Traffic Volume (van/truck)	i5
6. Traffic Volume (jeepney)	i6
7. Traffic Volume (total)	i7
8. Volume/Capacity Ratio	F4.2
<u>TERMINAL</u>	
1. Terminal Code	A5
2. Number of Passengers Boarding/Alighting	3i7 + 18
3. Terminal Type (through/terminating)	A8
4. Intermodal Relations	6A9
5. Number of Routes	i3
6. Number of Units Operating	i4

Appendix 4.3
Area Code List (RTINFO AND FREQSC)

Area Code	Coverage ^{1/}
1	Metro Manila
2	Northern Metro Manila
3	Inside EDSA
4	Eastern Metro Manila
5	Southern Metro Manila
6	Malabon/Valenzuela
7	Valenzuela
8	Novaliches
9	Fairview/UP
10	Cubao/Marikina
11	Pasig/Pateros/Taguig
12	Parañaque
13	Las Piñas/Muntinlupa
14	Manila North/Caloocan/Monumento
15	Quezon City South
16	San Juan/Mandaluyong
17	Makati
18	Pasay City
19	Within C-2
20	Monumento (corner Project 8/Roosevelt)
21	Blumentritt
22	Divisoria
23	Sta. Cruz/Quiapo
24	España Rotonda
25	Cubao
26	Stop and Shop
27	Crossing
28	Ermita
29	Guadalupe
30	Ayala
31	Libertad
32	Baclaran/Pasay Rotonda
33	User's Specification

This will be used later in order to determine the scale of the graphic display. It is advisable to use the above listed codes, until the user gets accustomed to the display. (Refer to Figure 1 for their respective location)

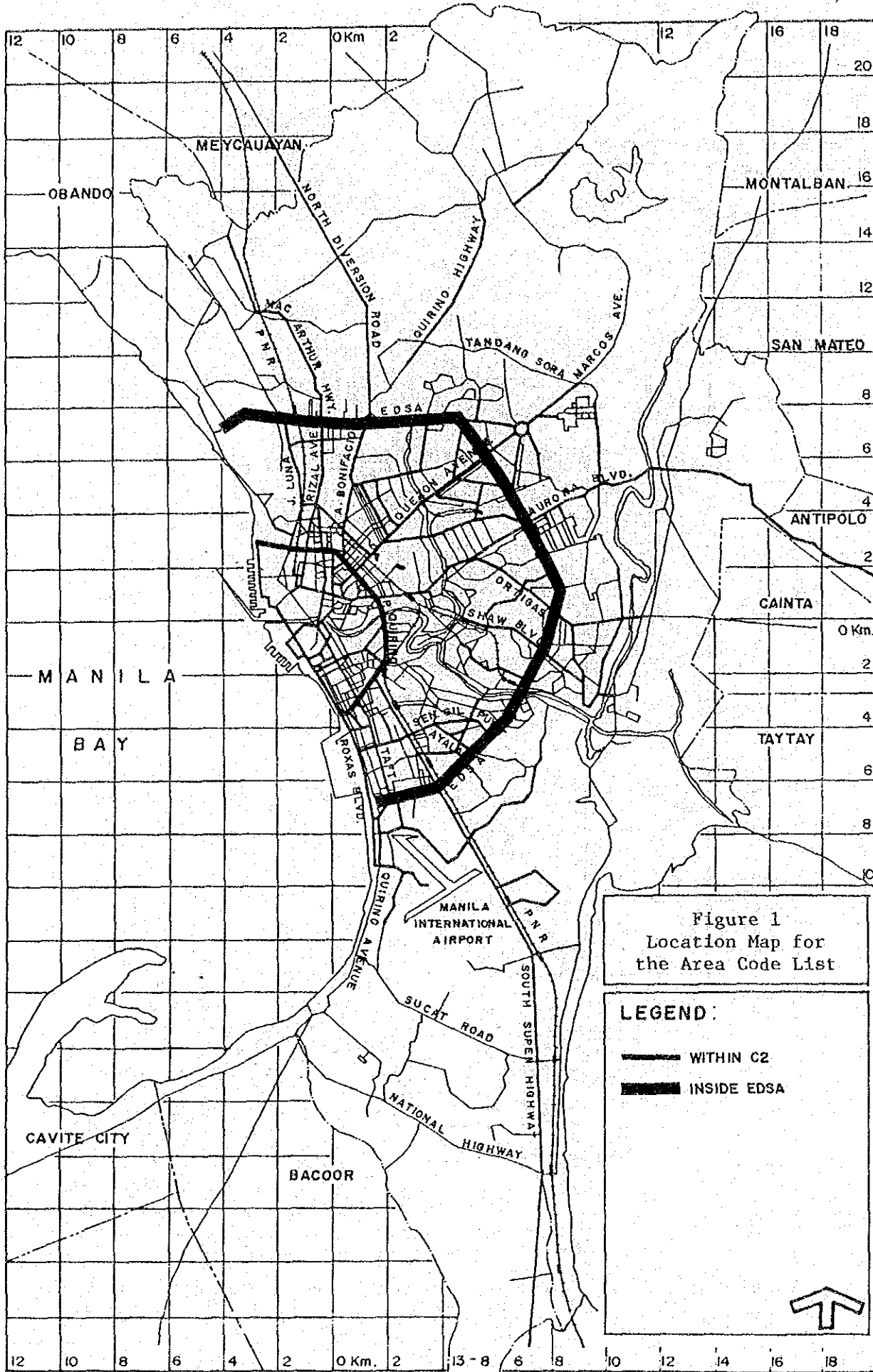


Figure 1
 Location Map for
 the Area Code List

LEGEND:

— WITHIN C2

— INSIDE EDSA

Appendix 4.4
Exercise on JERIMAS

1. Obtain a list of jeepney routes competing with Cubao - Divisoria via Sta. Mesa (Route No. 223) by doing the following:
 - a) Get a printout of "route5.dat" using the "Data Printout" function.
 - b) Note down the corridor numbers passed by Route Number 223.
 - c) Call "Data Retrieval"; select "corridor numbers" as your key item and input corridor number passed.

2. Obtain a list of jeepney routes feeding Divisoria (Juan Luna) terminal by following these steps:
 - a) Get a printout of "term.dat" using the "Data Printout" function.
 - b) Note down the terminal code of Divisoria (Juan Luna). (Refer to Table 1).
 - c) Call "Data Retrieval"; select terminal code as your key item and input the code.

3. Obtain a graphic display of the jeepney traffic flow (morning peak) within C-2 by using the "Frequency calculation" function.
 - a) Call "Frequency calculation".
 - b) Select "Frequency morning peak (7:00-8:00 a.m.)" as your key item.
 - c) Obtain a copy of the area code list; note down the area code within C-2 and input the code.
 - d) Input the map scale desired.
 - e) After the map is drawn in the screen, press "COPY" key to obtain a hard copy.

Table 1
Terminal Code List

Terminal Code	Name	Terminal Code	Name
BP	Bulacan	NV	Navotas
CC	Caloocan City	PC	Pasay City
CP	Cavite Province	PQ	Parañaque
LG	Laguna	PS	Pasig
LP	Las Piñas	PT	Pateros
MB	Malabon	QC	Quezon City
MD	Mandaluyong	RP	Rizal Province
MK	Makati	SJ	San Juan
ML	Manila	TG	Taguig
MR	Marikina	VL	Valenzuela
MT	Muntinlupa		

JICA

