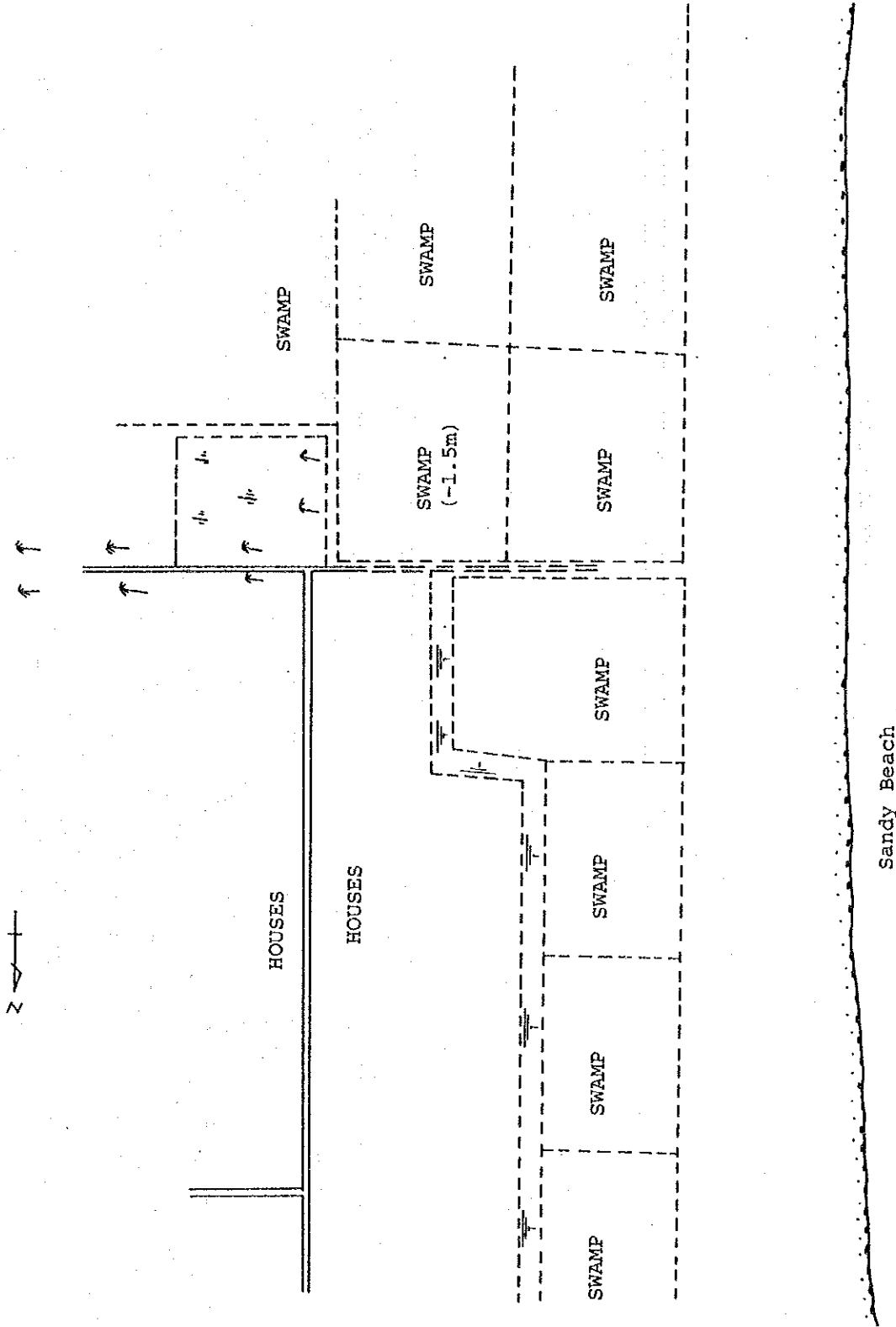
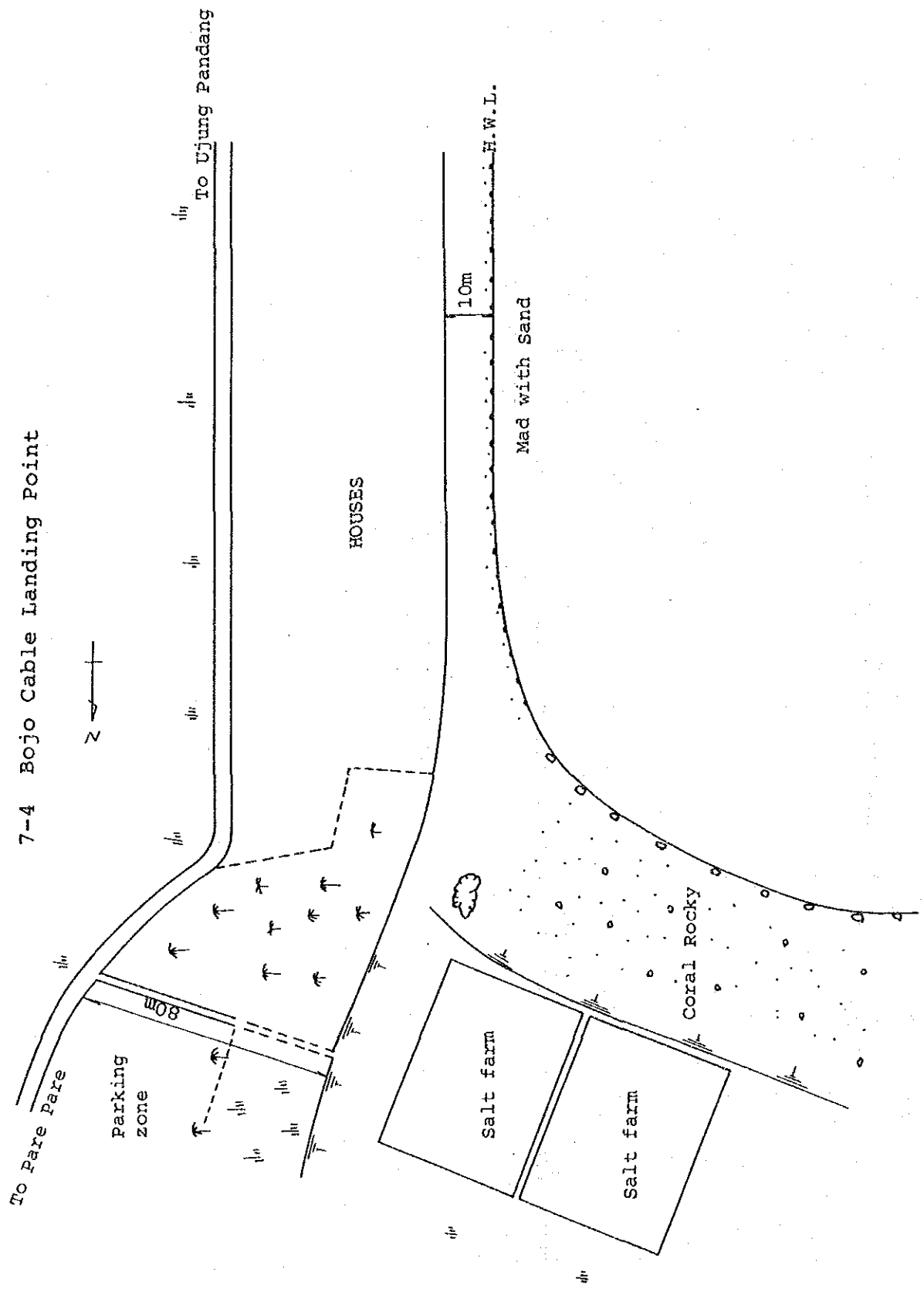


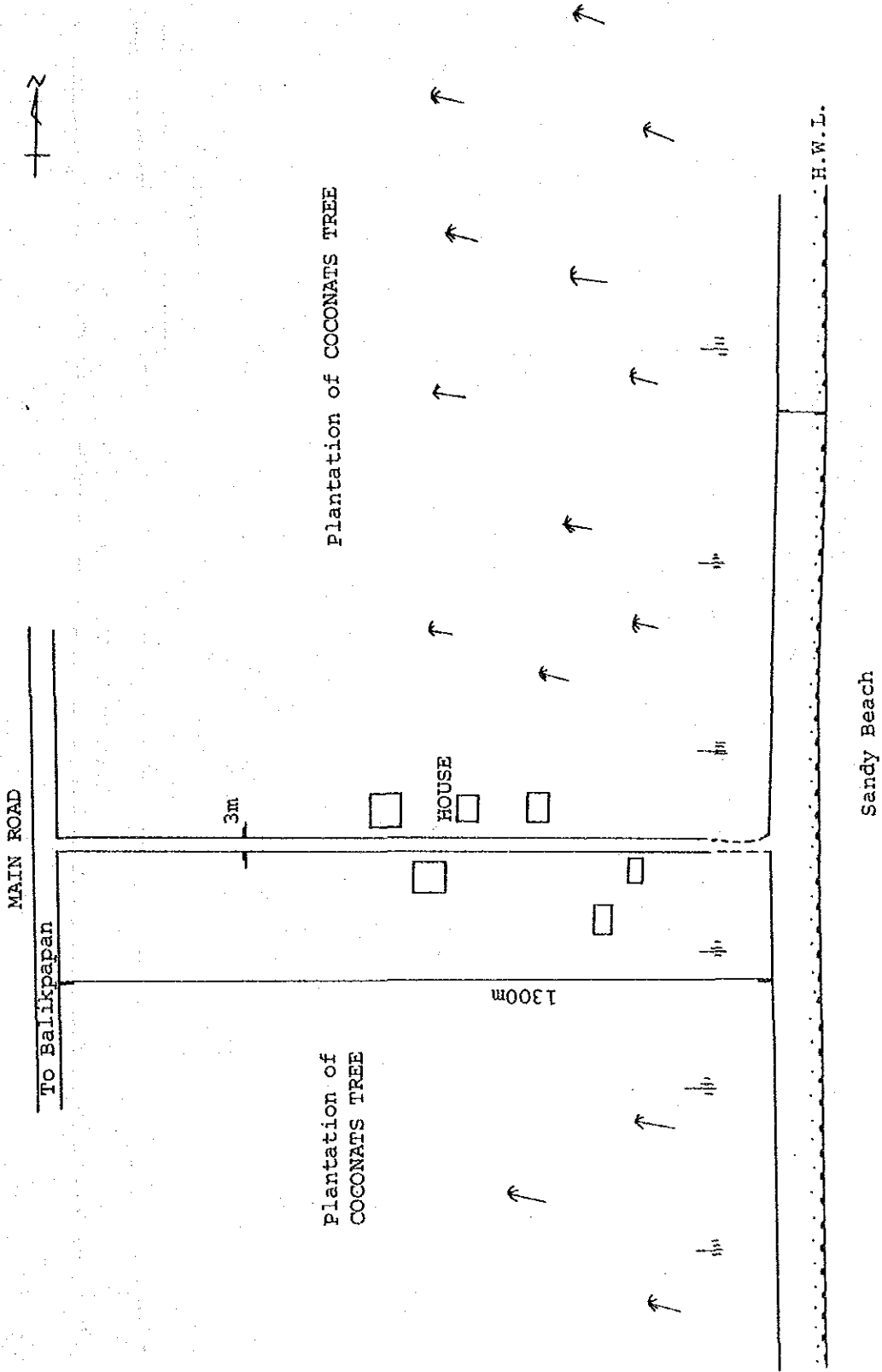
7-3 Balang Cable Landing Point



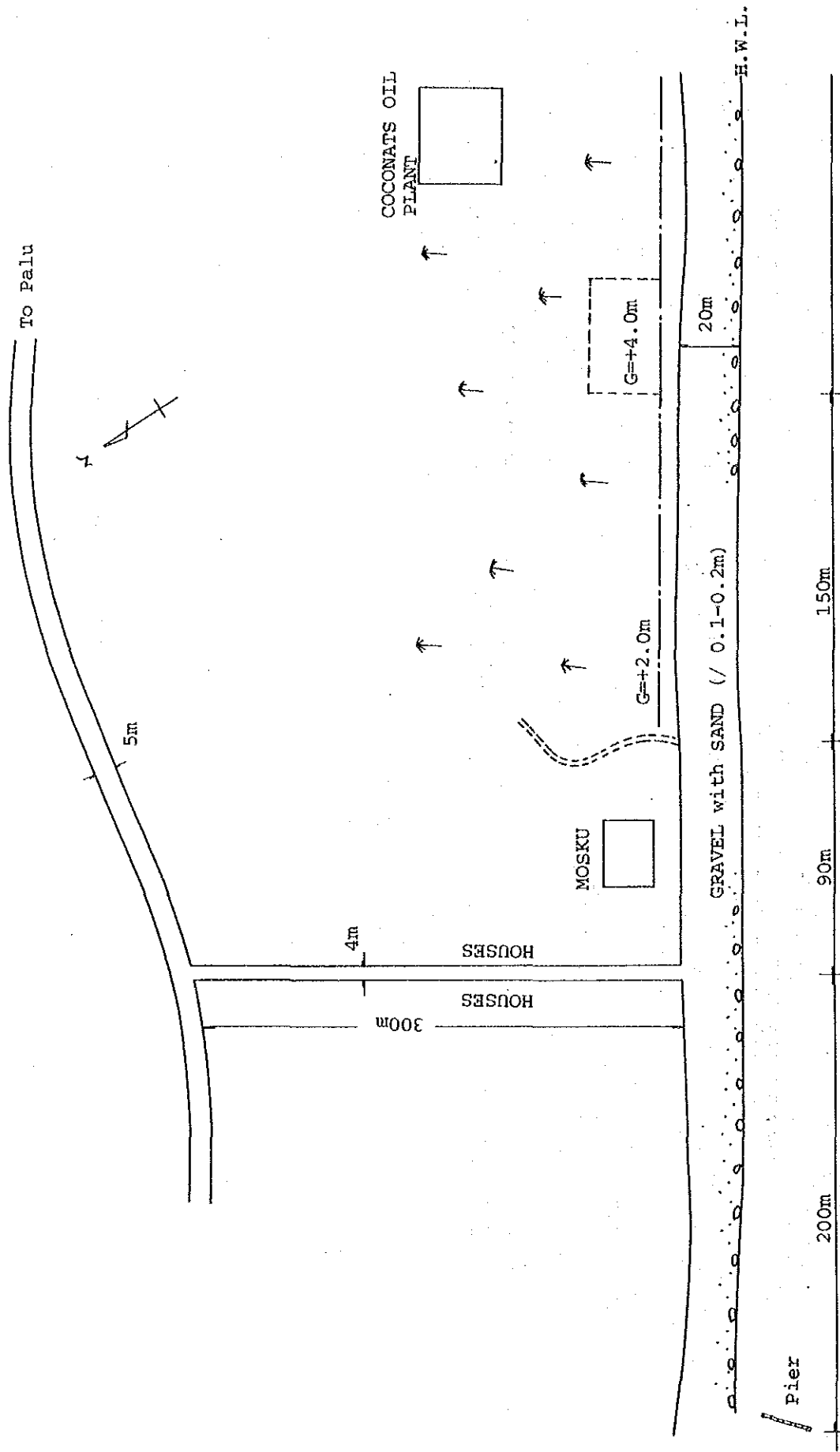
7-4 Bojo Cable Landing Point



7-5 Lemaru Cable Landing Point



7-6 Towaja Cable Landing Point



**ANNEX V**

**GENERAL DESCRIPTION OF DIGITAL  
CIRCUIT MULTIPLICATION EQUIPMENT  
(DCME)**



## General Description of Digital Circuit Multiplication Equipment (DCME)

### 1. Preface

At the moment, the advanced technics of TASI (Time Assignment Interpolation) or DSI (Digital Speech Interpolation), which is applied to Voice Circuit, is used for increasing practically the transmission capacity for the international telephone links, especially for Submarine Cable Network and Satellite Network.

On the other hand, the more effective coding method of Voice Signals, comparing with 64 Kbps PCM Coding, becomes possible to be produced by the hardware due to the rapid development of LSI technologies.

Therefore, many countries are developing DCME (Digital Circuit Multiplication Equipment) which realizes more effective circuit multiplication, by combining the conventional DSI system and ADPCM system (Adaptive Differential Pulse Code Modulation).

DCME realizes to multiple the channel at 2 to 2.5 times by DSI system, and at 2 times by ADPCM, totally 4 to 5 times to the digital primary transmission channels.

In case DCME is added to the digital transmission route, the circuit multiplication of the telephone channel becomes possible, and realizes the effective use for the planned circuit demand. However, at the moment, as DCME is developing the time of practical use, the application strategy for introducing to the national transmission network and the price of the equipment are still unknown.

These items should be checked before carrying out the detailed survey of the Kalimantan - Sulawesi Submarine Cable System.

## 2. General Description of Operation

The basic composition of DCME is shown in the Figure V-1. The digital signals multiplied according to the hierarchy of Exchange Side are put into the trunk interface and converted into 8 bit parallel signals. Afterwards, the data of detecting the existence of voice signals by a channel is sent to assignment system. The assignment system decides the allotment of voice signals for transmission channel by the data of detecting the existence of other voice signals and operating conditions of the channel, and makes the assignment message to the opposite DCME.

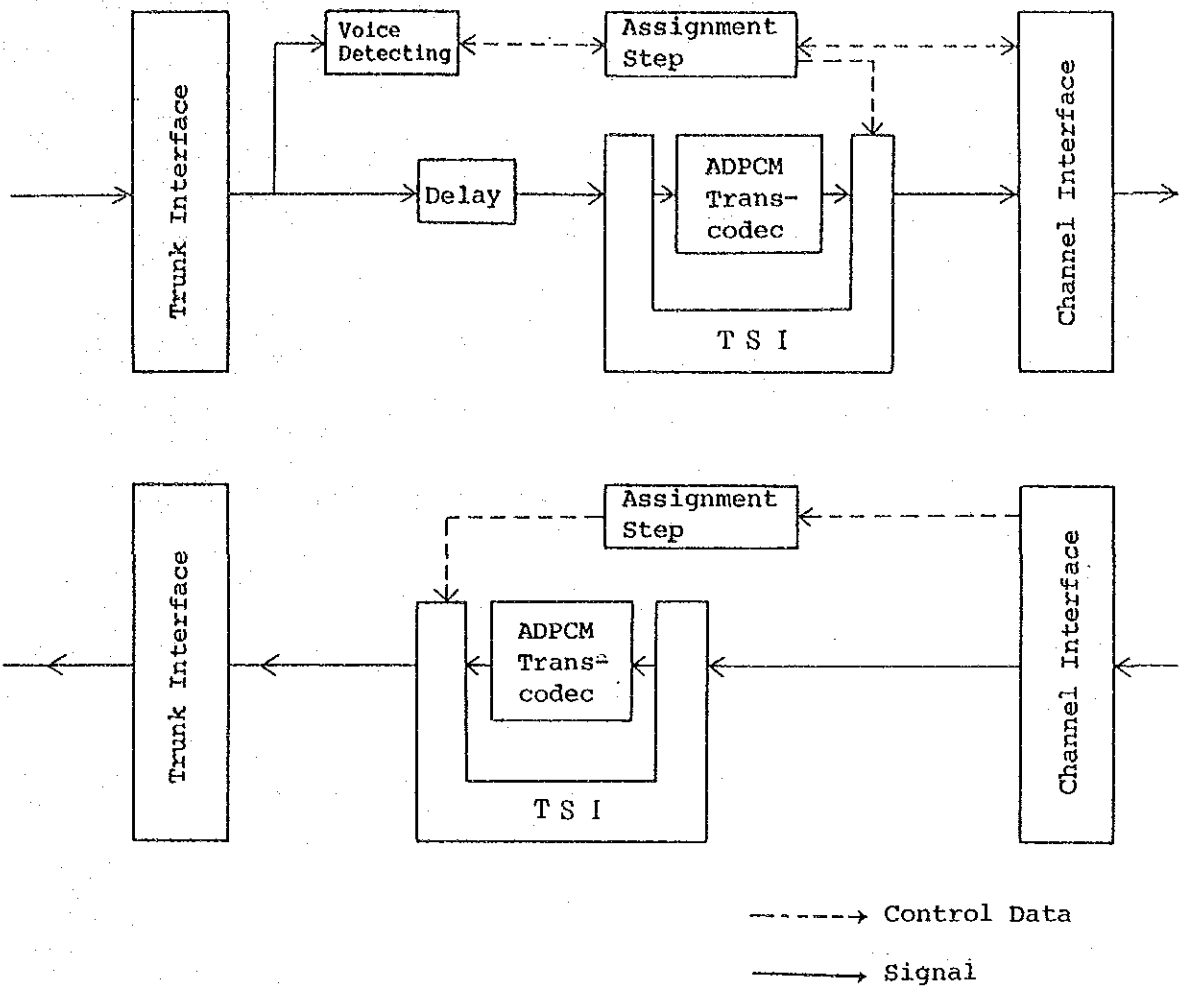
On the other hand, the sending signals are sent to TSI (Time Slot Interchange) through the delay circuit which compensates the time for assignment. TSI executes the transmission assignment for voice signals detected according to the result of assignment.

After this steps, 64 Kbps PCM signals are converted to 32 Kbps ADPCM by ADPCM Trans-Codec.

The channel interface converts the frame format, and so on, according to the interfacing conditions of the transmission network.

At the receiving side, the conversion of 32 Kbps ADPCM signals to 64 Kbps PCM signals and connection of voice signal to the trunk side are carried out.





DCME Composition

For the actual equipment, in addition to the above mentioned mechanism, the noise adjustment circuit which compensates the unnatural conversation by cutting the background noise during no talking, DLC (Dynamic Load Control) system which requests for the exchange to stop new calls in order to prevent the speech quality degeneracy during the circuit busy hour, and many systems for ease of operation and maintenance are necessary.



**ANNEX VI**  
**INFORMATION ON BASIC DESIGN FOR**  
**BACKHAUL SYSTEM**



1. Existing Telecommunications Facilities

- 1-1 Banjarmasin
- 1-2 Karamaian
- 1-3 Balikpapan
- 1-4 Ujung Pandang
- 1-5 Tino
- 1-6 Saretene

2. Status-quo of Ratio Stations on Each Route

- 2-1 Plan-1A, B and C Kalimantan side
- 2-2 Plan-1A Sulawesi side
- 2-3 Plan-1B Sulawesi side
- 2-4 Plan-1C Sulawesi side
- 2-5 Plan-2 Kalimantan side
- 2-6 Plan-2 Sulawesi side
- 2-7 Plan-2' Kalimesi side

3. Route Map of Backhaul Subsystem

- 3-1 (Takisung) Plan-1A
- 3-2 (Lamaraka) Plan-1A
- 3-3 (Balang) Plan-1B
- 3-4 (Bojo) Plan-1C
- 3-5 (Lemaru) Plan-2
- 3-6 (Towaja) Plan-2

## 1. Existing Telecommunications Facilities

### 1-1 Banjarmasin (Terminal Station)

#### 1. Location

##### a. Coordinates

Longitude: E.114°34'55"

Latitude: S.3°19'34"

##### b. Elevation 2 m ASL

#### 2. Access road

This microwave terminal station is in telephone office located in the central part of the city, No access road construction in required.

#### 3. Site condition

New tower construction space for this project is not available, because the court yard in this site has the planning of building extension.

#### 4. Propagation condition

#### 5. Existing transmission equipment

a. 4 GHz 1,260 ch 3 W FM microwave system  
(Jawa-Kalimantan Troposcatter)

b. 2 GHz 480 ch 34 Mb/s microwave system

c. Others

#### 6. Existing antenna tower and antenna

a. 40 m height tower with 4 antennas

b. UHF/VHF antenna

7. Commercial power supply  
380/220 V 50 Hz 3 $\phi$  4 W
8. Existing power supply
  - a. Engine Generator: 250 kVA 380/220 V 3 $\phi$  1 Set
  - b. AVR
  - c. Charger 40 A x 2
  - d. Battery 170 AH x 2
9. Power equipment to be installed  
Battery and Charger for this project is not available from existing power plant
10. Building to be used  
The next room to the equipment room is available to install radio and multiplex equipment for this project.

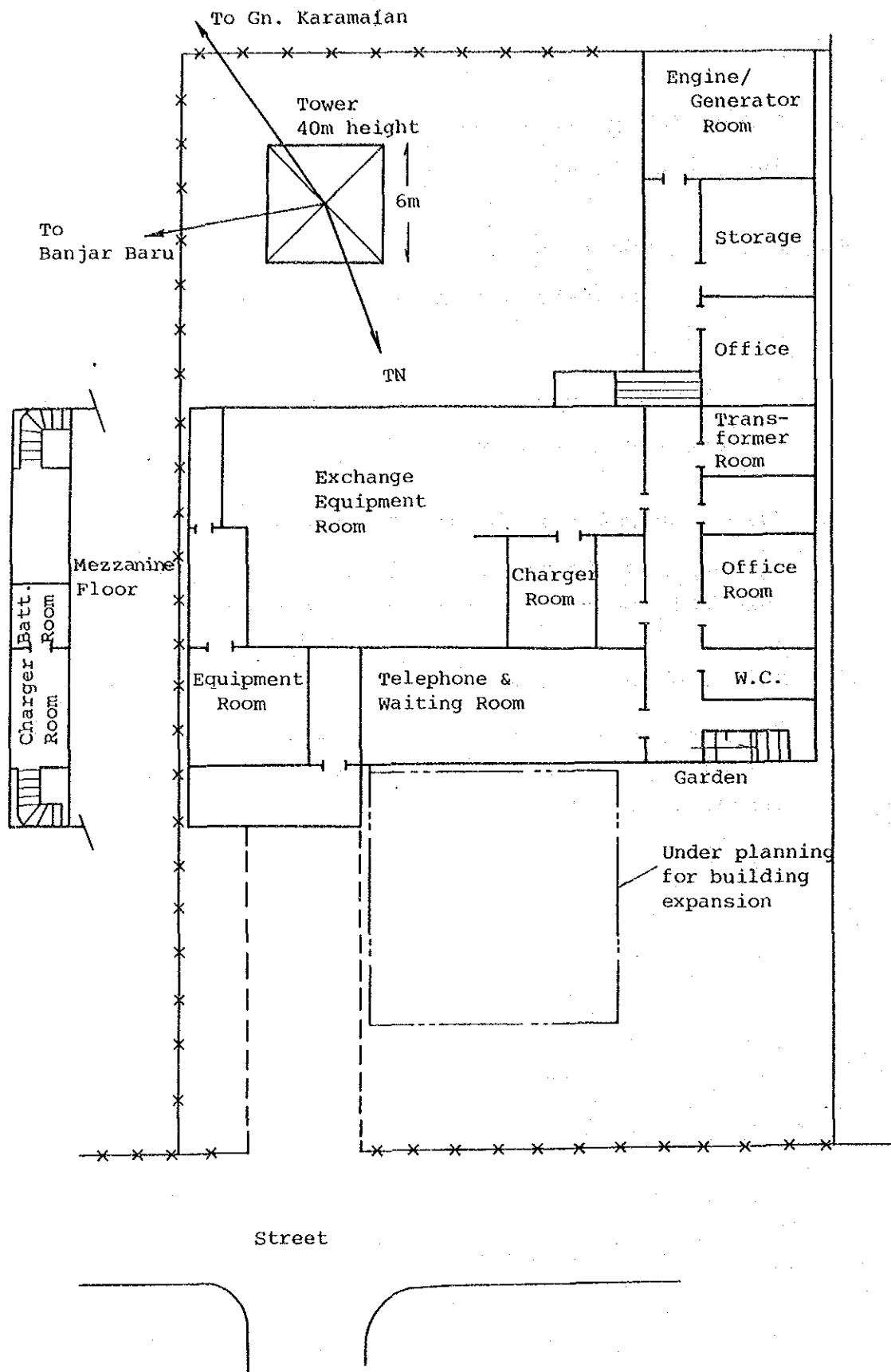


Figure 1-1 Site Layout for Banjarmasin Station



1-2 Gn. Karamaian (Repeater Station)

1. Location

a. Coordinates

Longitude: E.116°41'50"

Latitude: S.3°45'60"

b. Elevation 305 W ASL

2. Access road

The exist microwave repeater station is located on the hill top, no need to construct access road.

3. Site condition

New tower construction is available in this site.

4. Propagation condition

5. Existing transmission equipment

a. 4 GHz 1,260 ch 3 W FM microwave system

b. 2 GHz 120 ch FM microwave system  
(Jawa-Kalimantan troposcatter system)

6. Existing antenna tower and antenna

14 m height tower with 2 antennas

7. Commercial power supply

This station has not commercial power.

8. Existing power plant

a. Engine/Generator 34 kVA, 220/120 V 3 $\phi$   
4 W 50 Hz 3 sets

b. Charger 24 V x 2

c. Battery 140 V 170 AH x 2  
240 V 60 AH x 2

9. Power equipment to be installed

The power supply for this project is available from the existing power supply equipment.

10. Building to be used

Equipment room is able to be used for this project.

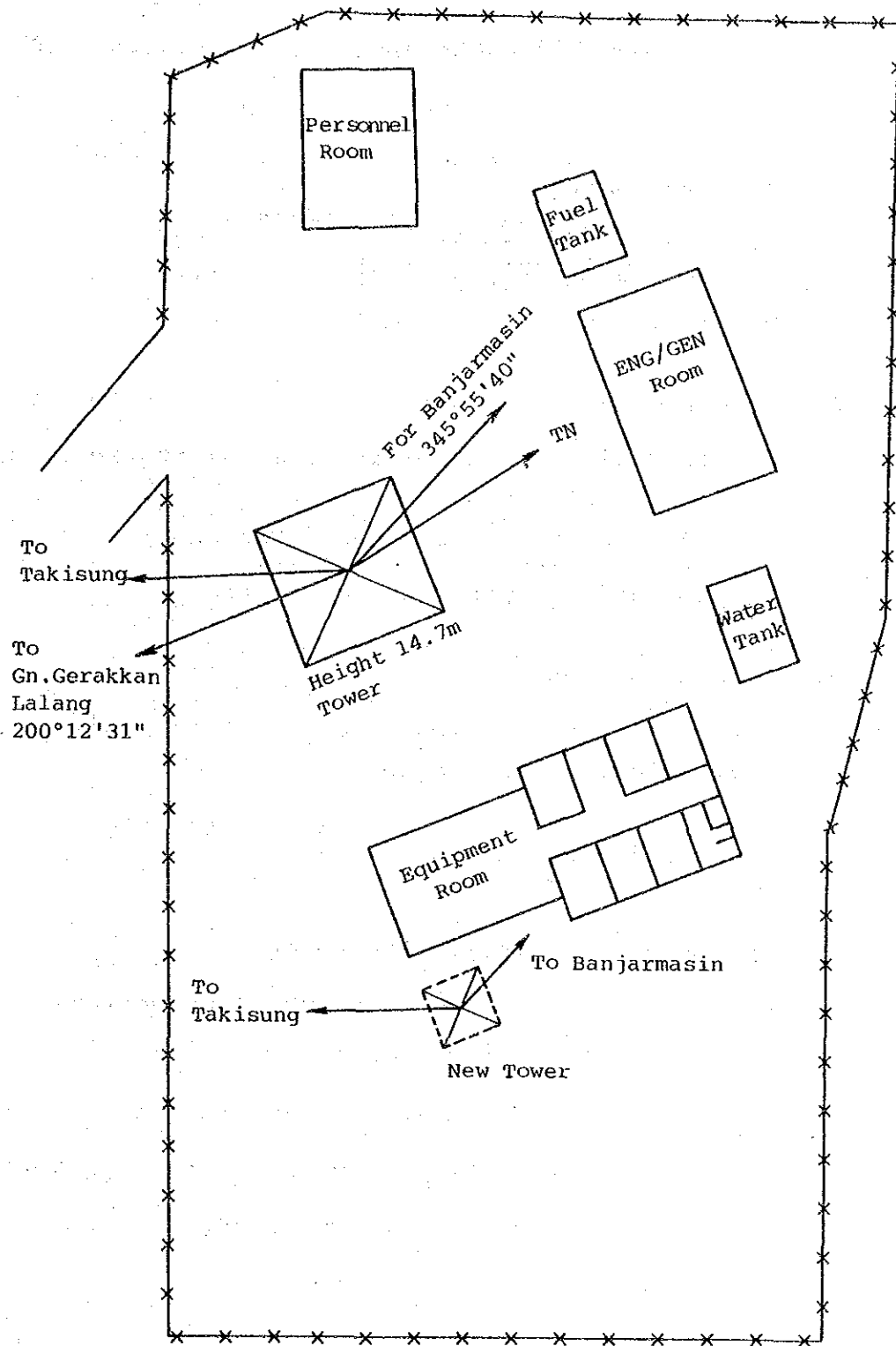


Figure 1-2 Site Layout for Gn. Karamaian Station

1-3 Balikpapan (Terminal Station)

1. Location

a. Coordinates

Longitude: E.116°51'00"

Latitude: S.1°15'31"

b. Elevation 50 m ASL

2. Access road

a. This site is microwave terminal station, located on the hill top

(Balikpapan - Samarinda 7 GHz band)

b. No need to construct access road.

3. Site condition

New tower construction space for this project is available in this project.

4. Propagation condition

5. Existing transmission equipment

a. TRT 7 GHz (analog) 360 ch for Samarinda

b. TV - TRT 7 GHz (analog) 7 GHz

c. SAT 2 GHz (digital) for Banjarmasin

d. STJJ (rural) for long distance for subscriber

e. UHF - Nec TR4PM6 for Sepinggan

6. Existing antenna tower and antenna
  - a. 42 m height triangle tower
  - b. 3 m $\phi$  Grid 2 antennas (Analog/Digital)  
3 m $\phi$  Disc 1 antenna (TV analog)  
Yagi 12 el 2 antennas (TV 0/W and Sepinggan)  
Collinear 4 antennas (POCDA, LNT, Rural and SATPAM)

7. Commercial power supply

- a. 23 kVA 3 $\phi$  380/220 V 50 Hz
- b. Engine/Generator 8 kVA 3 $\phi$  380/220 V 50 Hz
- c. Rectifier for TRT (E.BENIT) 25 A x 2  
Rectifier for STJJ (INTI) 50 A x 1  
Rectifier DC power supply for UHF TR4PM6
- d. Battery 4 x 12 V 172 AH (TRT)  
2 x 48 V (SAT)

8. Power equipment to be installed

Besides these existing equipment, soon 2 GHz 34 Mb/s equipment will be installed. Therefore, the power supply for this project is not available from existing power supply equipment. Battery and rectifier should be installed in this project.

9. Building to be used

Existing equipment room is available to be installed radio equipment of this project.

10. New tower

New tower should be constructed, because the existing tower could not install more antennas.

1-4 Ujung Pandang (Terminal Station)

1. Location

a. Coordinates:

Longitude E.119°24'21"

Latitude S.5°08'10"

b. Elevation 2 m ASL

2. Access road

The microwave terminal station is in the third floor of telephone exchange office located in outskirts of center of the city, no access road construction is required.

3. Site condition

4. Propagation condition

5. Existing transmission equipment

a. 6 GHz 1 W TR-7G 1,260-7 V/B x 2  
(Eastern Microwave)

b. STJJ + P3L4 (for rural)

c. SKSD + MUX (for satellite)

d. Coaxial LTE (PCM, PLESSY)

6. Existing antenna tower and antenna

a. 60 m height tower with 3 antennas

b. Others (for UHF, VHF)

7. Commercial power supply  
380/220 V 50 Hz 3 $\phi$  4 W (PLN)
8. Existing power plant
  - a. Engine/Generator 21 kVA, 127/220 V 3 $\phi$  4 W
  - b. Battery 24 V, 400 AH
9. Power equipment to be installed  
Engine/Generator, Battery and Charger should be installed, because power supply for this project is not available for existing power plant.
10. Building to be used  
The space of existing equipment room is narrow, cannot be installed the equipment of this project. However, the extend of equipment room was planned, should be made allowances for this project in that plan.

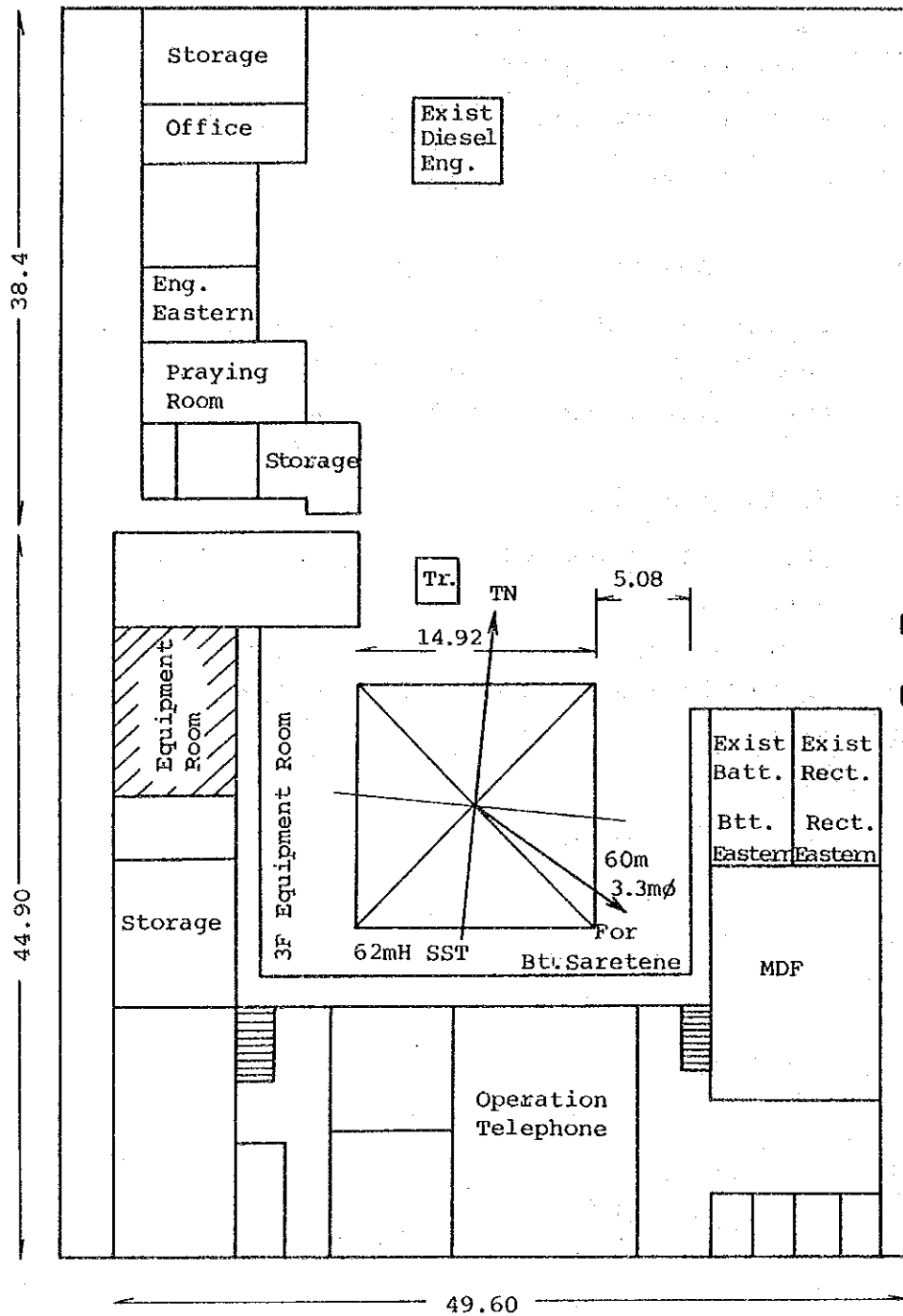


Figure 1-3 Site Layout for Ujung Pandang Station



1-5 Bt. Tino (Repeater Station)

1. Location

a. Coordinates:

Longitude E.118°54'26"

Latitude S.5°26'51"

b. Elevation 1130 m ASL

2. Access road

This is existing station, no access road construction is required.

3. Site condition

4. Propagation condition

5. Existing transmission equipment

app. 6 GHz TR-7G-7/B, V, W 1 W FM each one  
(Eastern Microwave)

6. Existing antenna tower and antenna

27.5 m height tower with 2 antennas

7. Commercial power supply

None

8. Existing power plant

a. Engine/Generator F3L - P12 x 2 sets

b. Battery 13 CS - 700 B x 2

c. Charger 3.5 kVA/7.1 kW

9. Power equipment to be installed

Engine/Generator, Battery and Charger should be installed in this project.

10. New tower

New antennas are capable for installation, only reinforced existing tower for this project. Therefore, no new tower construction is required.

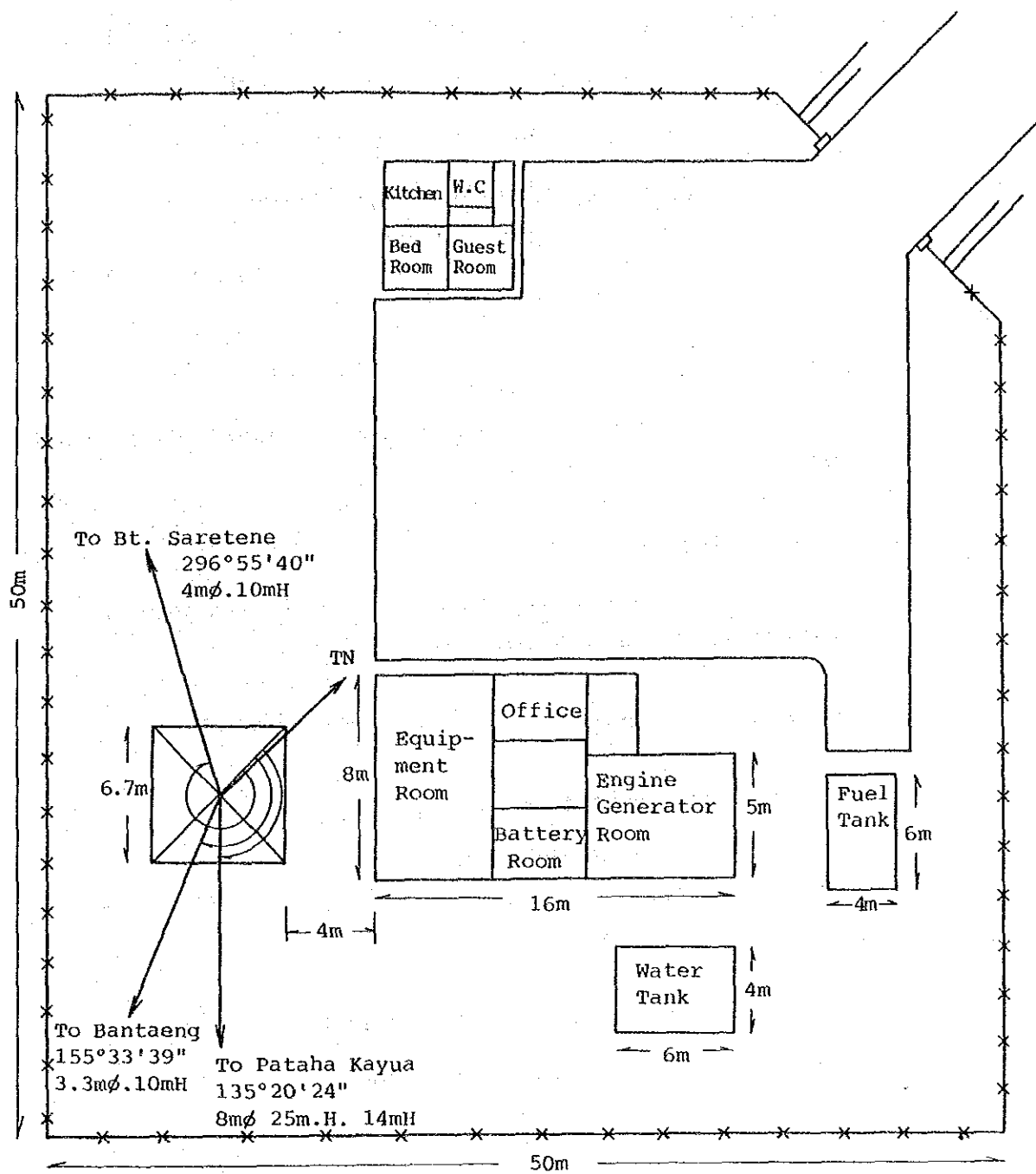


Figure 1-4 Site Layout for Bt. Tino Station

1-6 Bt. Saretene (Repeater Station)

1. Location

a. Coordinates:

Longitude E.119°34'07"

Latitude S.5°16'30"

b. Elevation 220 m ASL

2. Access road

At this station is existing one, no new access road construction is required.

3. Site condition

New tower construction space for this project is available in this site.

4. Propagation condition

5. Existing transmission equipment

app. 6 GHz TR-7G1260-7V/B x 2

1 W FM microwave system

(Eastern Microwave)

6. Existing antenna tower and antenna

12 m height tower with 2 antennas

7. Commercial power supply

None

8. Existing power plant

- a. Engine/Generator F2L - 912 x 2
- b. Battery 13 CS - 400 B (24 V, 400 AH) x 3
- c. Charger 3.5 kVA 280 V DC 5 kW

9. Power equipment to be installed

Engine/Generator and Charger should be installed in this project.

10. Building to be used

The existing equipment room is available to install the equipment for this project.

11. New tower to be constructed

New antenna tower should be constructed, because new antenna are not capable of installation.

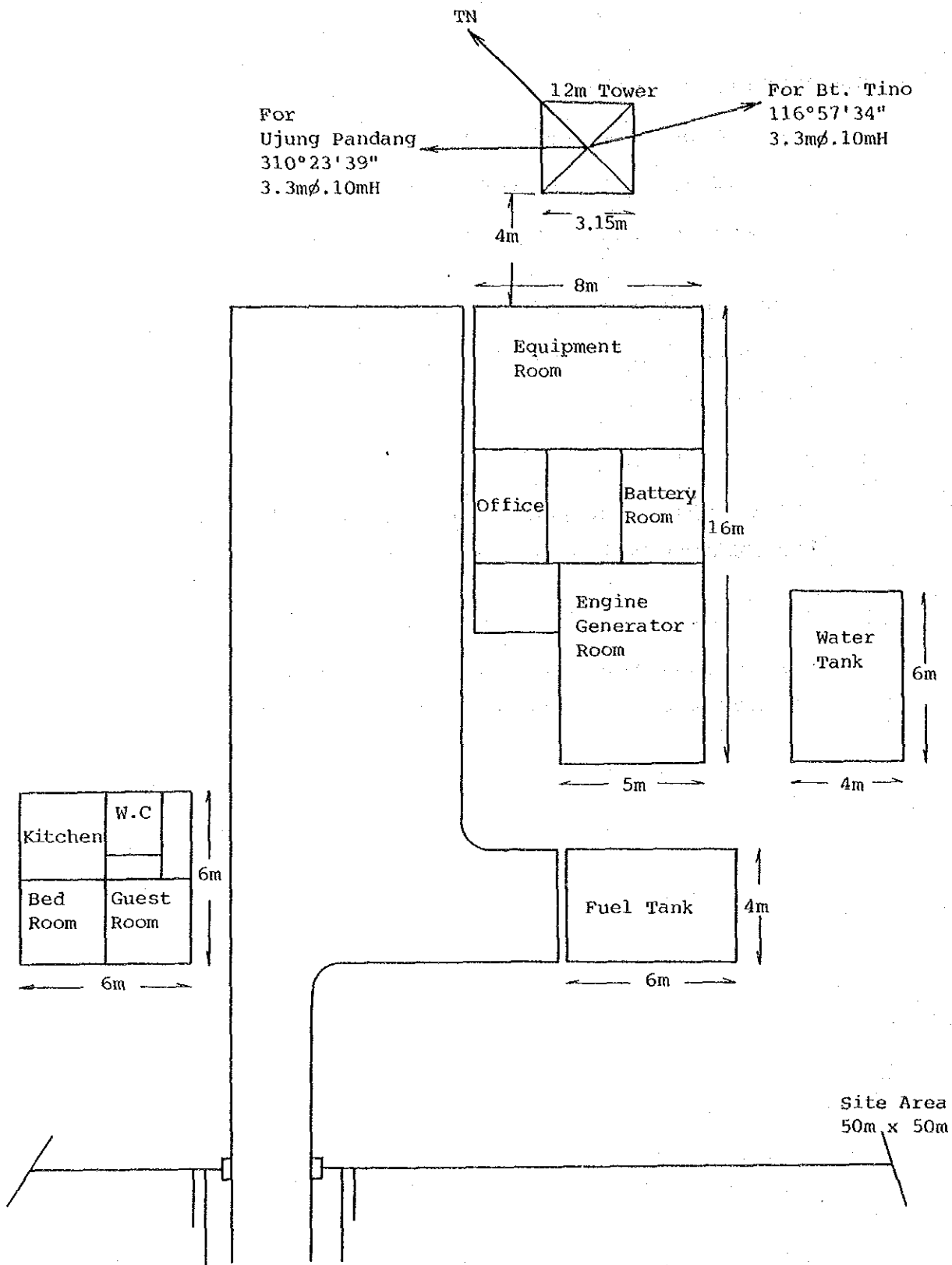


Figure 1-5 Site Layout for Bt. Saretene Station

2. Status-quo of Radio Stations on Each Route

2-1 Plan-1A, B and C Status-quo of Radio Station (Kalimantan Side)

Name of station Classification of station Elevation	Access road	Site and office	Equipment room	Electric power	Tower and antenna	Remarks
Banjarmasin Microwave terminal station 2 m	Station: Located in the area of telephone office placed in the center of city not necessary to construct new road	There are vacant space, but pre-occupied by another future office extension plan.	As the room is filled with the equipment for Jawa - Kalimantan troposcatter 2G/4G system, Banjarmasin - Balikpapan 2G digital microwave system and preceding Surabaya - Banjarmasin system, it will use the space of neighbor room.	Commercial 380V/220V 3ø/4W Engine/Generator 250kVA 380V/220V 50 Hz, 3ø/4W, one AVR Rectifier 40A x 2 Battery 170 AH x 2  If necessary, additional power will be supplemented.	Tower height 40 m SST 3.3mø dish x 2 2mø dish x 2 (grid) Yagi & Co-linear antenna  Tower will be commonly used with precedent Surabaya - Banjarmasin project	There is no vacant space for installing new tower.
Gn. Karamaian Microwave repeater station 305 m	As the station is existing, no problem for access road	Enough space is available. Tower will be installed by precedent Surabaya - Banjarmasin project.	4GHz (analog) FM microwave equipment, 2GHz (troposcatter) microwave equipment For Banjarmasin Submarine Cable Project are installed. It is also possible to install microwave and transmission equipment for this project.	No commercial power Engine/Generator 34kVA 220V/120V 3ø/4W, 50 Hz, 3 ea. Rectifier 24 V 2 ea. Battery 170 AH 2 ea. 60 AH 2 ea.  Abovementioned equipment are available for this project.	Tower height 13.5 m SST 19mø dish x 1 (mesh) (for troposcatter use) 2mø dish x 1  As the tower height is low, additional antenna cannot be installed on its tower.	Tower will be installed in space of this site by Surabaya - Banjarmasin Submarine Cable Project.
Takisung Cable landing terminal station & Microwave terminal station 1 m	Commonly use with Surabaya - Banjarmasin Submarine Cable Project	Area 50m x 50m Station space 240m <sup>2</sup>  Commonly use with Surabaya - Banjarmasin Submarine Cable Project	Floor space 10m x 10m  Commonly use with Surabaya - Banjarmasin Submarine Cable Project	No commercial power  Surabaya - Banjarmasin Submarine Cable Project can supply power from 75kVA x 3  If necessary, additional rectifier or battery will be provided.	Commonly use with Surabaya - Banjarmasin Submarine Cable Project	Newly installed station by preceding project.

2-2 Plan-1A Status-quo of Radio Station (Sulawesi Side)

Name of station Classification of station Elevation	Access road	Site and office	Equipment room	Electric power	Tower and antenna	Remarks
Ujung Pandang Microwave terminal station 2 m	As the station is commonly used with telephone office located in the vicinity of center of city, no problem is expected.	In the site area (50m x 80m) there is telephone office and a part of 3rd floor of the office building will be occupied for this project.	In the floor area 6m x 9.5m, owing to the existence micro-wave radio, rural radio, satellite transmission, coaxial cable transmission, voice distribution, monitoring, equipment. It is difficult to install the radio, transmission equipment of this project.	Commercial power receive from PLN 380V/220V 50Hz 3ø/4W Engine/Generator 21kVA x 1 AVR 220V/127V 3ø/4W x 1 Rectifier 175 A x 1 Battery 400 AH x 2  If necessary, additional power equipment will be provided.	Tower height 62m SST 3.3mø dish x 1 2.0mø dish x 1 2.0mø dish x 1 (grid)  Besides above, UHF/VHF antenna is attached on same tower.	The expansion of equipment room is planning. The existing tower will be reinforced for this project.
Bt. Saretene Microwave repeater station 220 m	As this station is existing station composing eastern microwave system, there is no problem regarding access road.	Site area 50m x 50m Station area 107m <sup>2</sup>  There is enough space.	Floor space 5m x 7m Radio repeater equipment x 2 Remote supervisory equipment x 1  Therefore, its possible to install the equipment in the floor space.	No commercial power  Dual prime, Engine/Generator 3.5kVA/5kW x 1 Control cubicle 3.5kVA/5kW x 1 Battery 13CS-400B x 3  If necessary, additional equipment will be installed in this project.		
Bt. Tino Microwave repeater station 1,130 m	Same as above	Same as above	Because of the equipment for eastern microwave system is branched to the Bantaeng station, microwave repeater equipment x 3, mod-demo equipment x 1, remote supervisory equipment x 1 are impossible to install in the room.	No commercial power  Dual prime, Engine/Generator 3.5kVA/7.1kW x 1 Control cubicle 3.5kVA/7.1kW x 1 Battery 13CS-700B x 2  If necessary, additional equipment will be installed in this project.	Tower height 27.5m SST  8mø dish x 2 4mø dish x 1 3.3mø dish x 1	In this project, the antenna dishes become possible to install, by means of reinforcing the tower structure.
Lamalaka Submarine cable landing terminal station & Microwave terminal station 1 m	Necessary to construct new road (0.2km) from main street to the station	Required area 50m x 50m between seaside and main street, there exist many coconuts trees, so, its necessary to cutting trees, piling soil etc. Site area is planned 240m <sup>2</sup>	Required floor area is 10m x 10m for submarine cable terminal equipment and micro-wave terminal station.	Near the site area commercial power is available, however it is supposed to be interrupting frequency. Therefore Engine/Generator 50kVA x 3 Rectifier & Battery x 1 set is recommendable.	Newly installed Tower height 62m Antenna dish x 1	Newly installed



2-3 Plan-1B Status-quo of Radio Station (Sulawesi Side)

Name of station Classification of station Elevation	Access road	Site and office	Equipment room	Electric power	Tower and antenna	Remarks
Ujung Pandang Microwave terminal station 2 m			Same as Plan-1A, please refer it			
Balang Submarine cable landing terminal station & Microwave terminal station 1 m	It is necessary to construct the road from public road to the station (distance is about 0.5km) and to repair for public road (distance is about 3km).	From seaside, passing over the swamp, there are coconuts forest. The station will be planned to install this area securing 50m x 50m. Space of site office will be about 240m <sup>2</sup> .	Floor space will be 10m x 10m. Submarine and microwave terminal equipments (1 + 1s) will be installed in this space.	Commercial power is available at about 1km apart from station, but it is unstable. Therefore, Engine/Generator 50kVA x 3 Rectifier x 1 set Battery x 1 set will be provided.	Tower height 72m Newly installed antenna dish x 2	Newly installed site with space diversity system, because the microwave propagation route pass along with the seashore.

2-4 (1/2) Plan-1C Status-quo of Radio Station (Sulawesi Side)

Name of station Classification of station Elevation	Access road	Site and office	Equipment room	Electric power	Tower and antenna	Remarks
Ujung Pandang Microwave terminal station 2 m			Same as Plan-1A, please refer it			
G. Makkarowa Microwave repeater terminal 615 m	Commonly use with Trans-Sulawesi digital microwave project	Same as description in "Access road"	Same as "Site and office" However, microwave repeater equipment x 2 will be installed in earlier stage.	In this project, if its necessary, additional equipment will be provided.	In this project, commonly use with Trans-Sulawesi digital microwave project.	Standby bearer will be commonly used.
Tompo Ladang Microwave repeater station 518 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
G. Barojang Microwave repeater station 580 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above

2-4 (2/2) Plan-1C Status-quo of Radio Station (Sulawesi Side)

Name of station Classification of station Elevation	Access road	Site and office	Equipment room	Electric power	Tower and antenna	Remarks
G. Patirosompa Microwave terminal station 105 m	Commonly used with Trans-Sulawesi digital microwave project	Same as description in "Access road"	Same as description in "Site & office". However, microwave repeater equipment x 2 will be newly installed.	In this project, if its necessary, additional equipment will be provided.	In this project, commonly use with Trans-Sulawesi digital microwave project	Installed by Trans-Sulawesi microwave project. Standby bearer will be commonly used.
B. Malocci Microwave repeater station 402 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
Pare Pare Microwave terminal station & Coaxial cable terminal station 5 m	As the telephone station and coaxial transmission station are existing, no problem for access road.	Same as description in "Access road"	Same as description in "Site & office" Installed together with microwave terminal equipment for Malocci station and optical fiber cable terminal equipment for Bojo station.	Same as above	Same as above	Same as above
Bojo Submarine cable landing terminal station & Microwave terminal station 1 m	Newly construct about 200m from public road	The station will be planned to install the area in the coconut forest securing 50m x 50m space, assuming station space 240m <sup>2</sup> .	Floor space will be kept 10m x 10m. Submarine cable terminal equipment, over land optical fiber cable terminal equipment, etc. will be installed in this space.	Commercial power is available in adjacent area. However, as it is not stable, Engine/Generator 50kVA x 3, Rectifier x 1, Battery x 1 set will be provided.	As adopting over-land optical fiber system for Pare Pare station. Its not necessary to install tower and antenna system.	Same as above

2-5 (1/4) Plan-2 Status-quo of Radio Station (Kalimantan Side)

Name of station Classification of station Elevation	Access road	Site and office	Equipment room	Electric power	Tower and antenna	Remarks
Banjarmasin Microwave terminal station 2 m			Same as Plan-1A			
Banjarbaru Microwave repeater station 15 m	As this is existing station, no problem for access road.	Supposed to be possible for using commonly, as the station is existing one.	Possible to install commonly with existing one.	If necessary, additional power equipment will be provided.	Existing tower 80m height. For Banjarmasin - Balikpapan 3mø x 1 4mø x 1 ... 2GHz Spur hop ... 2 dish	Newly installed tower 72m height
RS1 Microwave repeater station	It is necessary to construct road. Distance is about 2km.	Necessary to keep the area of about 600m <sup>2</sup> for the mountain site area, assuming about 120m <sup>2</sup> for office. 5 m	Assuming the floor space about 30m <sup>2</sup> . Equipment installing in the room Microwave repeater equipment (1+1S) x 2, Supervisory AL, AR equipment.	Dual prime Engine/Generator Rectifier Battery will be newly installed.	72m height tower will be installed newly. Providing 2 antenna dishes.	As the hop distance is long, at existing Marabaha station, and it is not adequate for high speed transmission system, new repeater station will be constructed.
Binuang Microwave repeater station 90 m	As this is existing station, no problem for access road.	As this is existing station of 20Hz system, we consider it is possible to use commonly.	Possible to use commonly.	If necessary, additional equipment will be provided.	Existing tower Height: 35m 2 antenna dish are installed.	Newly installed tower 72m height

2-5 (2/4) Plan-2 Status-quo of Radio Station (Kalimantan Side)

Name of station Classification of station Elevation	Access road	Site and office	Equipment room	Electric power	Tower and antenna	Remarks
Rantau Microwave repeater station 10 m	As this is existing station of 2GHz 34Mbit system. No problem for access road.	Suppose to be possible for using commonly, as the station is existing one of 2GHz system.	Same as description in "Site & office".	If necessary, additional equipment will be provided.	Existing power is guy-wire type of 55m height. 2mØ antenna dish x 2 are installing on the top of it.	In this project 72m height tower (SST) will be newly installed.
Kandangan Microwave repeater station 10 m	Same as above	Same as above	Same as above	Same as above	Existing tower is guy-wire type of 60m height, installing 2 antenna dishes. Each height of antenna dish is 55m and 60m.	Same as above
Barabai Microwave repeater station 15 m	Same as above	Same as above	Same as above	Same as above	Existing tower is guy-wire type of 60m height, installing 2 antenna dishes. Each height of antenna dish is 25m and 60m.	Same as above
B. Amuntai Microwave repeater station 5 m	Same as above	Same as above	Same as above	Same as above	Existing tower is guy-wire type of 80m height, installing 2 antenna dishes. Each height of antenna dish is 60m and 80m.	Same as above
Tanjung Microwave repeater station 5 m	Same as above	Same as above	Same as above	Same as above	Existing tower is guy-wire type of 70m height, mounted 3mØ antenna dish x 2. Each mounted height is 70m and 25m.	In this project, 72m height tower (SST) will be newly installed mounted 3 antenna dishes on it.

2-5 (3/4) Plan-2 Status-quo of Radio Station (Kalimantan Side)

Name of station Classification of station Elevation	Access road	Site and office	Equipment room	Electric power	Tower and antenna	Remarks
RS2 Microwave repeater station	It is necessary to construct new road about 2km in this project.	Necessary to keep the area of about 600m <sup>2</sup> for site area, and about 120m <sup>2</sup> for office space.	Assuming the floor space about 30m <sup>2</sup> .	In this project Dual prime Engine/Generator x 2 Rectifier Battery will be newly installed.	72m height tower will be installed newly, providing 3 antenna dishes for space diversity use to Tanjung direction.	Newly installed station the hop instance between Tanjung - Tanah Grogot and G. Halot is long, so insert 2 repeater station between the hop.
RS3 Microwave repeater station	Same as above	Same as above	Same as above	Same as above	72m height tower will be installed newly, providing 3 antenna dishes for space diversity use to Grogot direction.	Same as above
Tanah Grogot Microwave repeater station 5 m	In this site, 2GHz system is now under-constructing, therefore, no problem for access road.	In this site, 2GHz system is now under-constructing we consider it is possible to use commonly.	As 2GHz system is under-constructing, we consider it is possible to use commonly in this system	2GHz system is now under-constructing. In this project, if necessary, additional equipment will be provided.	According to the data concerning, existing tower is guy-wire type of 100m height mounted 4m <sup>2</sup> dish (to K.P. Lampi direction). However, we have no information to G. Halat direction.	In this project, 72m height tower (SST) will be newly installed, mounted on it 4 antenna dishes.
K.P. Lampi Microwave repeater station 60 m	Same as above	Same as above	Same as description in "Site & office".	Same as above	2GHz system is under-constructing. According to the information concerned, 100m height (SST) is planning to install having 2 antenna dishes. Each height is 50m and 80m. However detail information could not obtain.	In this project, 3 antenna dish are required. Therefore, 72m height tower (SST) will be installed newly.

2-5 (4/4) Plan-2 Status-quo of Radio Station (Kalimantan Side)

Name of station Classification of station Elevation	Access road	Site and office	Equipment room	Electric power	Tower and antenna	Remarks
RS4 Microwave repeater station	In this project, it is necessary to construct new road of about 20km.	Necessary to keep area of about 600m <sup>2</sup> for site area, and 120m <sup>2</sup> for office space.	We consider floor space is 30m <sup>2</sup> .	In this project Dual prime Engine/Generator Rectifier Battery will be newly installed.	In this project, 72m height tower will be installed newly, providing 2 antenna dishes.	Newly installed station.
Labangka Microwave repeater station 60 m	In this site, 2GHz system is now under-constructing, therefore, no problem for access road.	In this site, 2GHz system is now under-constructing. We consider, it is possible to use them commonly.	Same as description in "Site & office".	2GHz system is under-constructing. In this project, if necessary, additional equipment will be provided.	Existing tower is guy-wire type of 68m height mounted 4m $\phi$ and 3m $\phi$ antenna on it. Each antenna height is 50m and 68m respectively.	In this project, 72m height tower (SST) will be newly installed, having 3 antenna dishes.
Balikpapan Microwave terminal station 50 m	As this site is existing one on the hill in the vicinity of city, no problem for access road.	As this station is existing one, it is possible to use commonly.	There installed 7GHz microwave system (2+1S)	Same as above	Existing tower is triangle type of 42m height mounted on it 3m $\phi$ dish x 3, 6 of VHF, UHF antenna.	Same as above
Lemaru Submarine cable landing terminal station & Microwave terminal station 2 m	In the vicinity of the station, there exist several houses, so it is necessary to construct the access road of 200m, and repairing work of 1km is necessary.	Station will be in the coconuts forest. Tree cut and arrangement will be requested. Site area 50m x 50m. Station office 240m <sup>2</sup> should be secured.	Required floor space is 100m <sup>2</sup> .	Commercial power is available at about 1km apart from station, but in this project Engine/Generator 50kVA x 3 sets Rectifier Battery will be installed newly.	72m height tower (SST) will be installed newly, mounted antenna dish x 1.	Newly installed site.

2-6 (1/4) Plan-2 Status-quo of Radio Station (Sulawesi Side)

Name of station Classification of station Elevation	Access road	Site and office	Equipment room	Electric power	Tower and antenna	Remarks
Towaja Submarine cable landing terminal station & Microwave terminal station 2 m	It is necessary to construct the road from public road to the station. Distance is about 500m.	About 100m from seashore there are coconuts forest. The station will be planned to install this area, securing 50m x 50m. Space of site office will be about 240m <sup>2</sup> .	Floor space will be 100m. Submarine cable terminal equipment (CTE, TTE, PFE), microwave terminal equipment, AR/AL will be installed in this space.	Commercial power is available at about 200m from station. In this project, Engine/Generator 50kVA x 3 Rectifier x 1 Battery x 1 set will be provided.	72m height tower will be installed newly providing antenna dish x 1.	Newly installed station.
Donggala Microwave repeater station 39 m	Commonly use with Trans- Sulawesi digital microwave project	Same as description in "Access road".	Same as description in "Access road".	In this project, if it is necessary, additional equipment will be provided.	Commonly use with Trans- Sulawesi digital microwave project	Standby bearer will be commonly use with Trans- Sulawesi microwave system.
B. Salubay Microwave repeater station 980 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
G. Tokaraka Microwave repeater station 980 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
Porigi Microwave repeater station 980 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above



2-6 (2/4) Plan-2 Status-quo of Radio Station (Sulawesi Side)

Name of station Classification of station Elevation	Access road	Site and office	Equipment room	Electric power	Tower and antenna	Remarks
G. Membuku Microwave repeater station 418 m	Commonly use with Trans-Sulawesi digital microwave project	Same as description in "Access road".	Same as description in "Access road".	In this project, if it is necessary, additional equipment will be provided.	Commonly use with Trans-Sulawesi digital microwave project	Standby bearer will be commonly use with Trans-Sulawesi microwave system.
Buyungboyo Microwave repeater station 185 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
G. Dingge Microwave repeater station 922 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
Buyum Pondori Microwave repeater station 510 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
Pegunungan Sampuraga Microwave repeater station 1,392 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above

2-6 (3/4) Plan-2 Status-quo of Radio Station (Sulawesi Side)

Name of station Classification of station Elevation	Access road	Site and office	Equipment room	Electric power	Tower and antenna	Remarks
G. Bonepute Microwave repeater station 98 m	Commonly use with Trans-Sulawesi digital microwave project	Same as description in "Access road".	Same as description in "Access road".	In this project, if it is necessary, additional equipment will be provided.	Commonly use with Trans-Sulawesi digital microwave project	Standby bearer will be commonly use with Trans-Sulawesi microwave system.
Lagego Microwave repeater station 93 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
G. Brian Kunit Microwave repeater station 237 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
B. Sampodo Microwave repeater station 62 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
Lampuara Microwave repeater station 3 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above

2-6 (4/4) Plan-2 Status-quo of Radio Station (Sulawesi Side)

Name of station Classification of station Elevation	Access road	Site and office	Equipment room	Electric power	Tower and antenna	Remarks
Buntusirring Microwave repeater station 362 m	Commonly use with Trans-Sulawesi digital microwave project	Same as description in "Access road".	Same as description in "Access road".	In this project, if it is necessary, additional equipment will be provided.	Commonly use with Trans-Sulawesi digital microwave project	Standby bearer will be commonly use with Trans-Sulawesi microwave system.
Kolampu Microwave repeater station 50 m	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above
G. Patirosompa  G. Makkaroeva	Regarding Patirosompa, Barojang, Tomporadang, and Makkroewa station, refer to Plan-1C (Sulawesi Side)					
Ujung Pandang Microwave terminal station	Regarding Ujung Pandang terminal station, refer to Plan-1A (Sulawesi Side)					

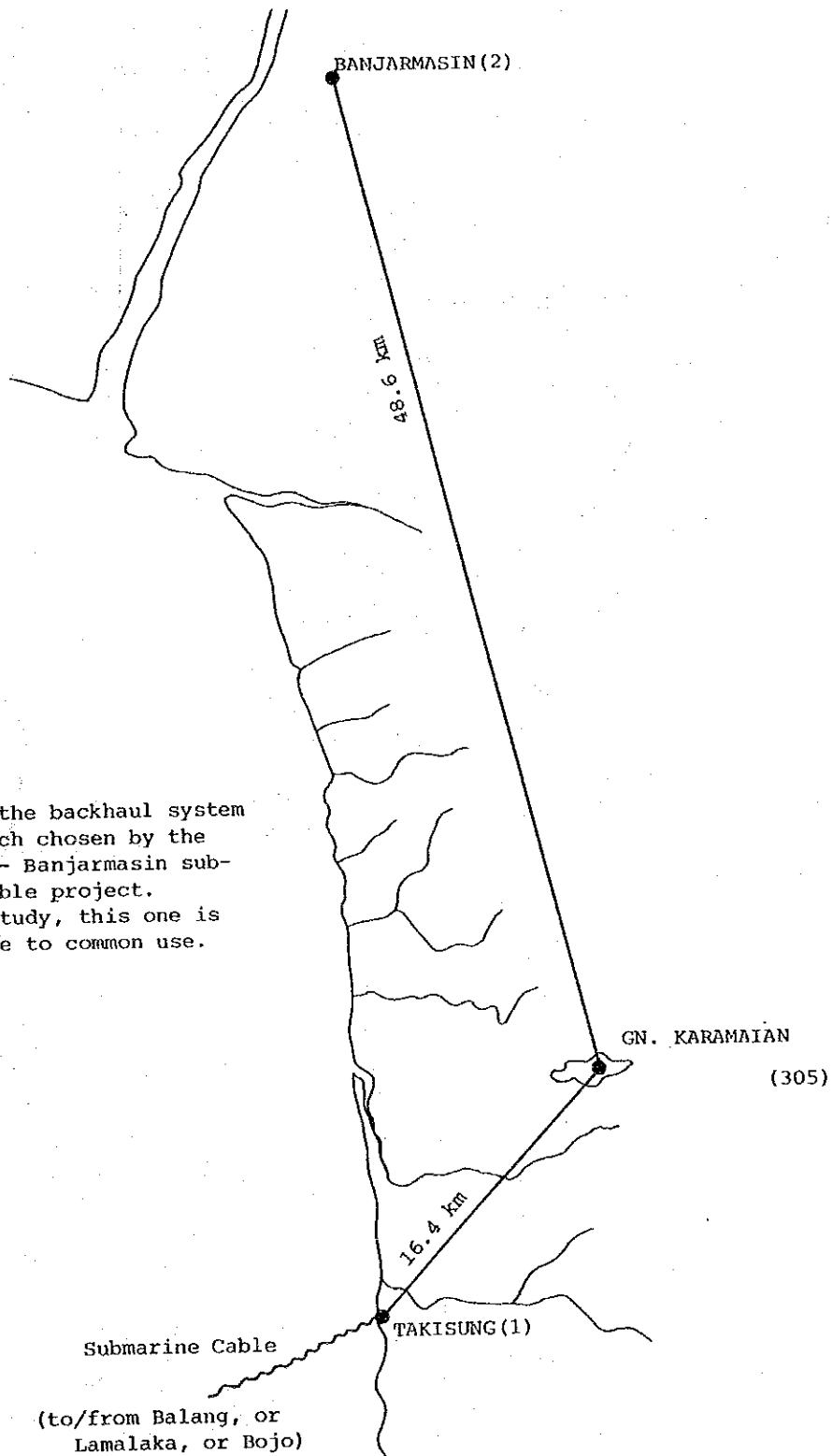
2-7 Plan-2' Status-quo of Radio Station (Kalimesi Side)

Name of station Classification of station Elevation	Access road	Site and office	Equipment room	Electric power	Tower and antenna	Remarks
Banjarmasin - Banjarbaru, G. Binuang - Tanjung, Tangl Grogot - Balikpapan	As these are existing stations of 2GHz system, no problem for access road.	As this is existing station of 2GHz system (some portion is under-constructing), it is possible to use commonly, as for the increasing of bearers.	Supposing possible to install commonly in the room for 5 bearers.	In this project, together with increasing bearers, if it is necessary, additional equipment will be provided.	For the existing tower of terminal station additional antenna dish x 1 For the existing tower of repeater station additional antenna dish x 2 will be required.	All-over of 2GHz system will be utilized generally.
Marabahan Microwave repeater station	Same as above	Same as above	Same as above	Same as above	80m height tower (SST) is existing. Antenna dish 4m $\phi$ , 2m $\phi$ are mounted on it. Each antenna height is 80m and 48m respectively.	Same as above
G. Halat Microwave repeater station 720 m			Detail information are not clear.			



### 3. Route Map of Backhaul Subsystem

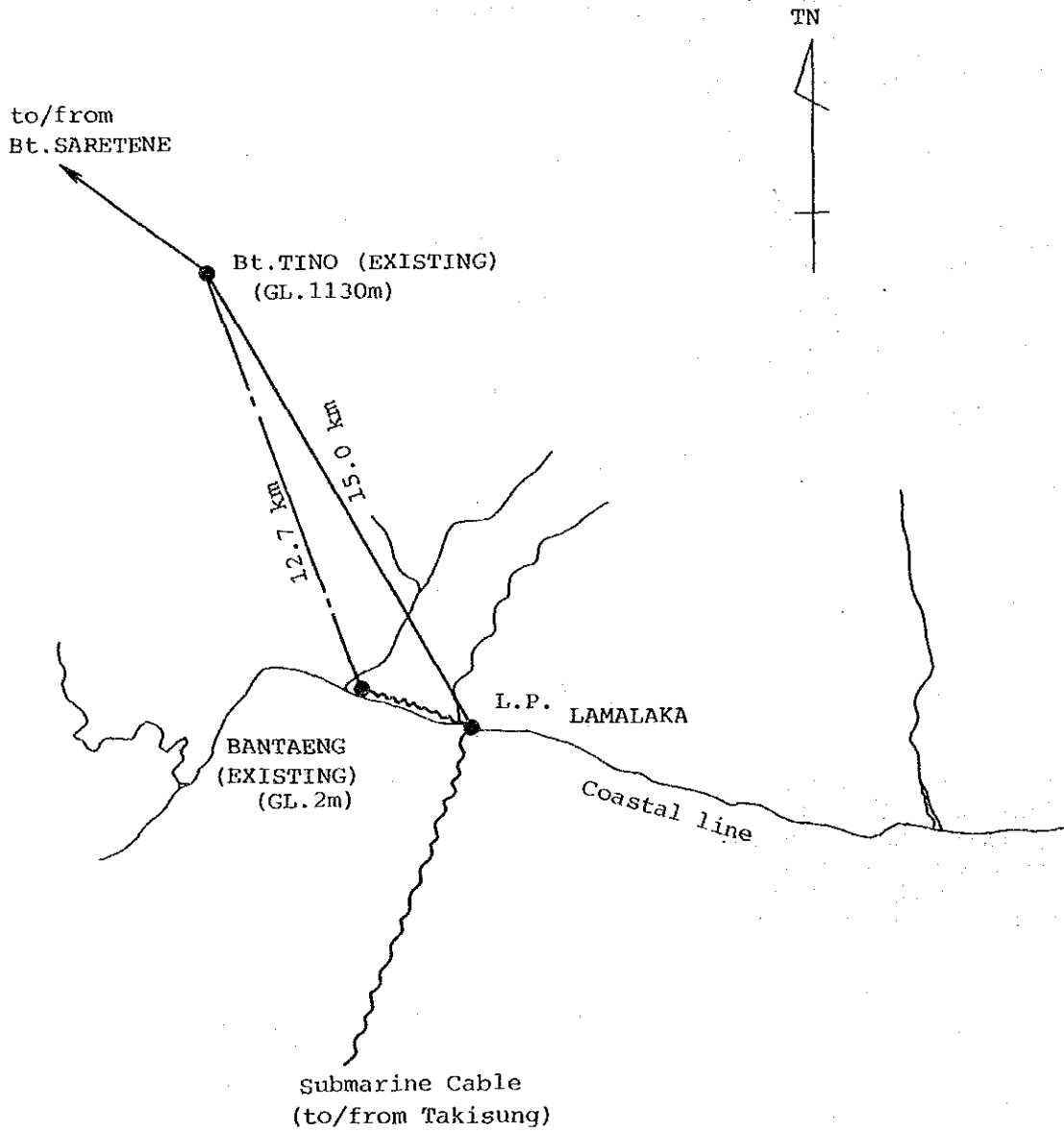
#### 3-1 (Takisung) Backhaul Subsystem Route for Plan-1A or 1B or 1C (Kalimantan Side)



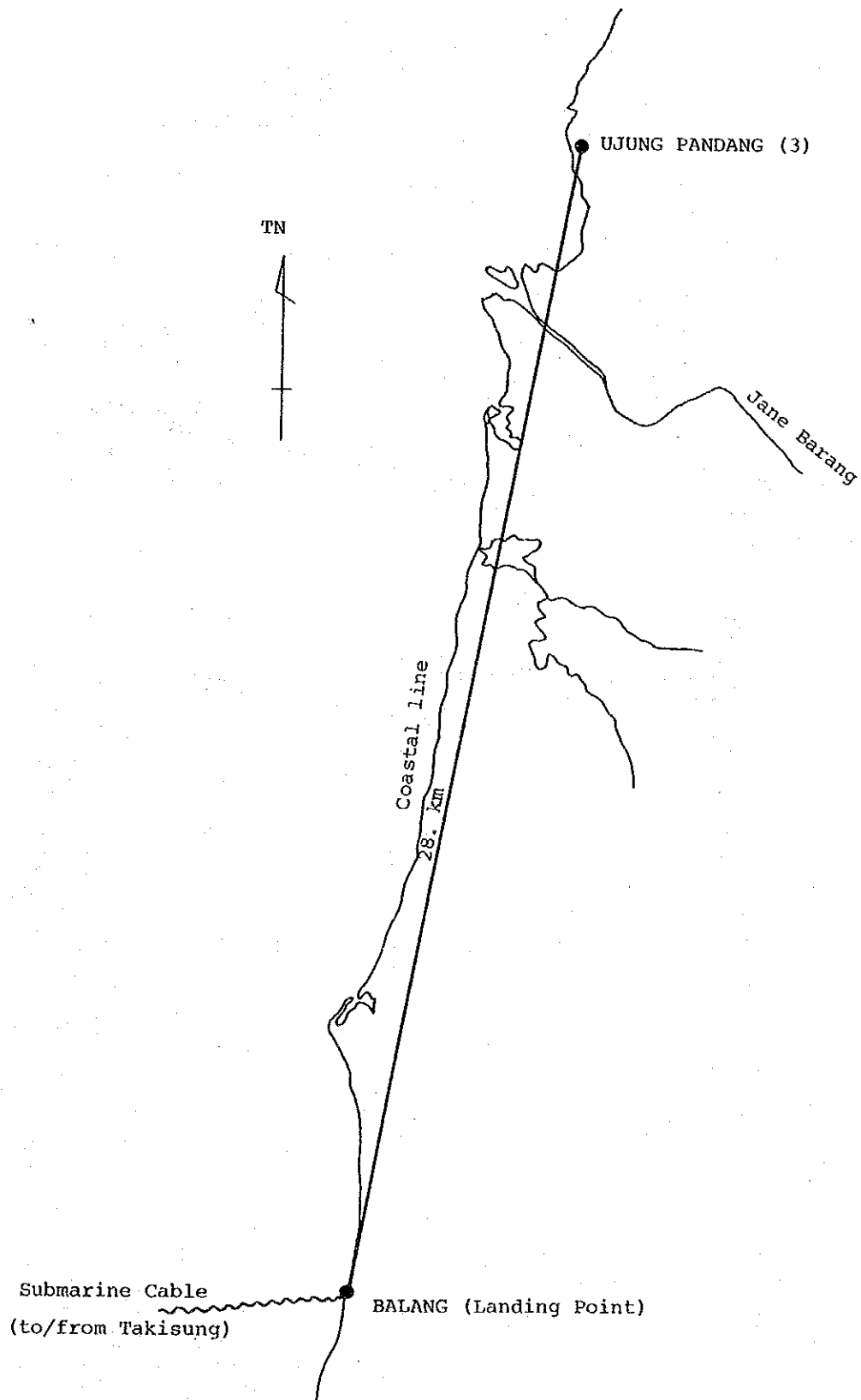
N.B

There is the backhaul system route which chosen by the Surabaya - Banjarmasin submarine cable project. In this study, this one is to be able to common use.

3-2 (Lamalaka) Backhaul Subsystem Route for Plan-1A  
(Sulawesi Side)

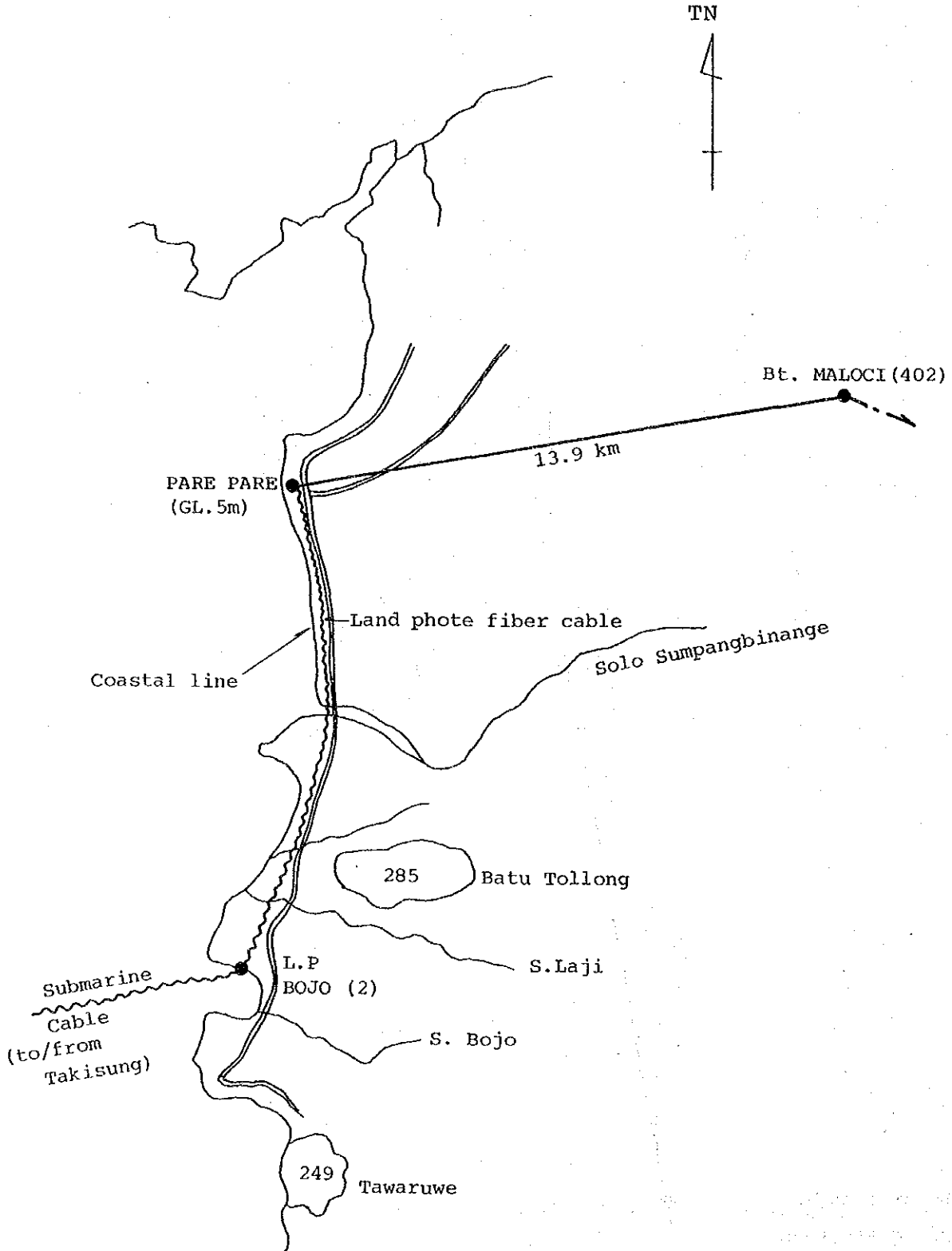


3-3 (Balang) Backhaul Subsystem Route for Plan-1B  
(Sulawesi Side)

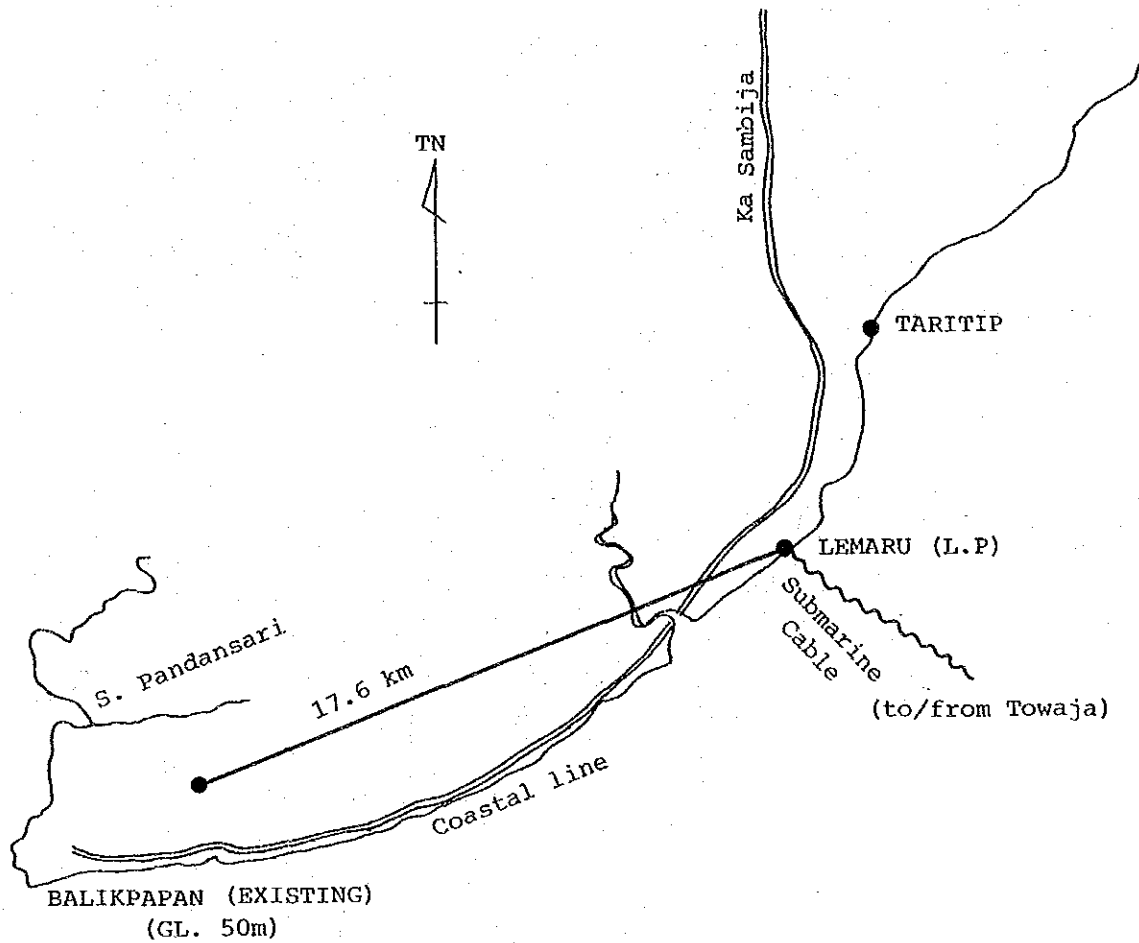




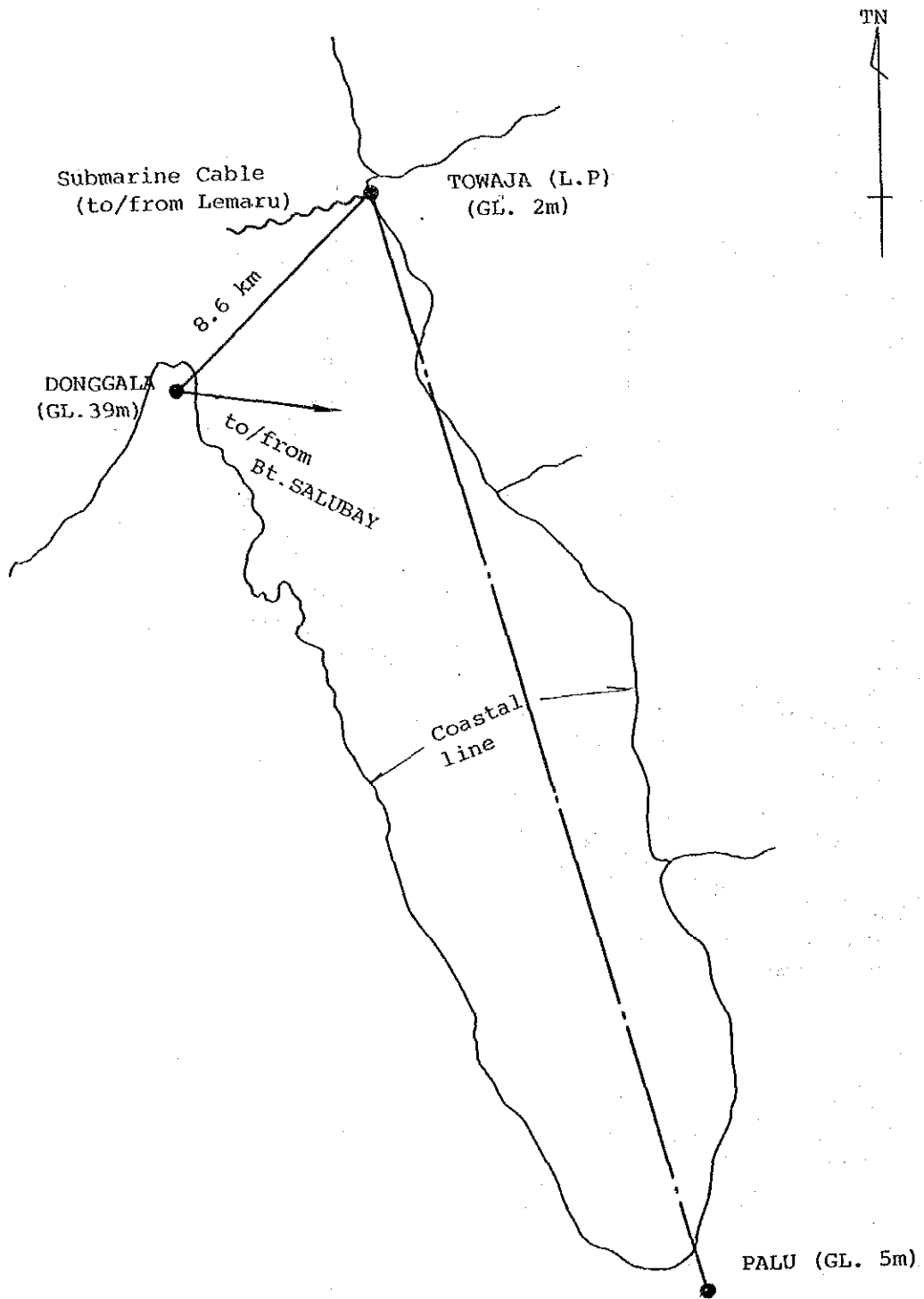
3-4 (Bojo) Backhaul Subsystem Route for Plan-1C  
(Sulawesi Side)



3-5 (Lemaru) Backhaul Subsystem Route for Plan-2  
(Kalimantan Side)



3-6 (Towaja) Backhaul Subsystem Route for Plan-2  
(Sulawesi Side)



**ANNEX VII**  
**INFORMATION ON ECONOMIC/FINANCIAL**  
**ANALYSIS**



1. Results of Calculation by Macro-economic Model Formula

- 1-1 Real Civil Consumer Expenses
- 1-2 Real Fixed Capital
- 1-3 Real Import
- 1-4 Real National Gross Product
- 1-5 Real National Benefit
- 1-6 Gross National Product Deflator
- 1-7 Market Price Index
- 1-8 Civil Final Consumer Deflator
- 1-9 Fixed Capital Deflator
- 1-10 Import Deflator

2. Relationship between Industries

- 2-1 Classification of Industries
- 2-2 1983 Relationship between Industries
- 2-3 1983 Investment Factor

3. Financial Data on (280 Mbps x 2)

1. Results of Calculation by Macro-economic Model Formula

1-1 Real Civil Consumer Expenses

..... Least Square Method .....

(1978-1985)

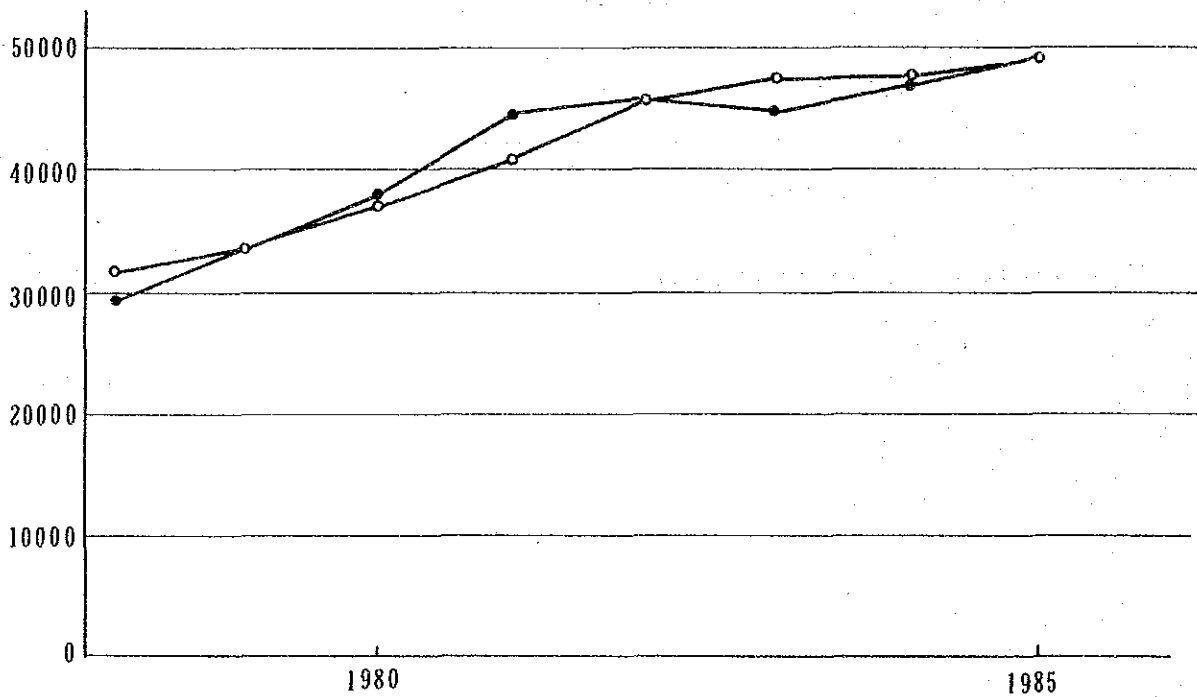
$$\text{CP.RI} = +5382.60 + 0.16574 \text{ NI.RI} + 0.67899 \text{ CP.RI} \quad (-1)$$

(0.83)            (0.52)            (1.83)

Correlation Factor = 0.89414

Standard Error = 2272.64

Durbin Watson Ratio = 1.449



Name Formula: CP.RI

Black point: Real Value

White point: Estimate

1-2 Real Fixed Capital

..... Least Square Method .....

(1978-1985)

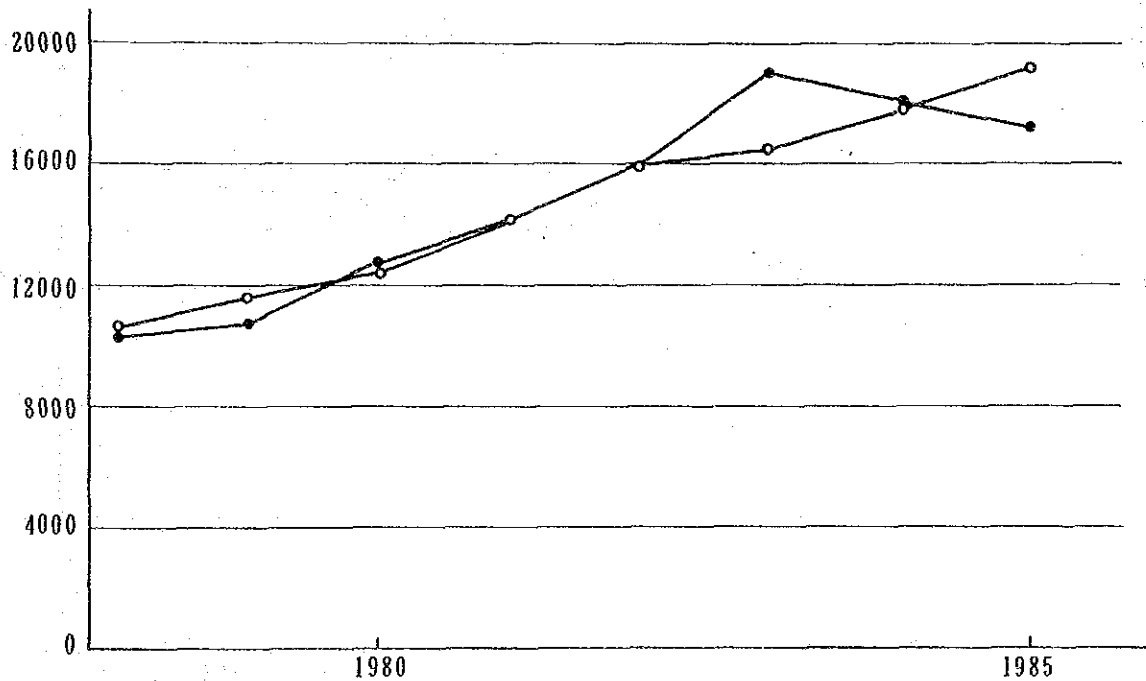
$$IP.RI = -5399.22 + 0.32921 GNP.RI \quad (-1)$$

(-1.57)      (5.90)

Correlation Factor = 0.82828

Standard Error = 1377.30

Durbin Watson Ratio = 1.590



Name Formula: IP.RI  
Black point: Real Value  
White point: Estimate



1-3 Real Import

..... Least Square Method .....  
(1978-1985)

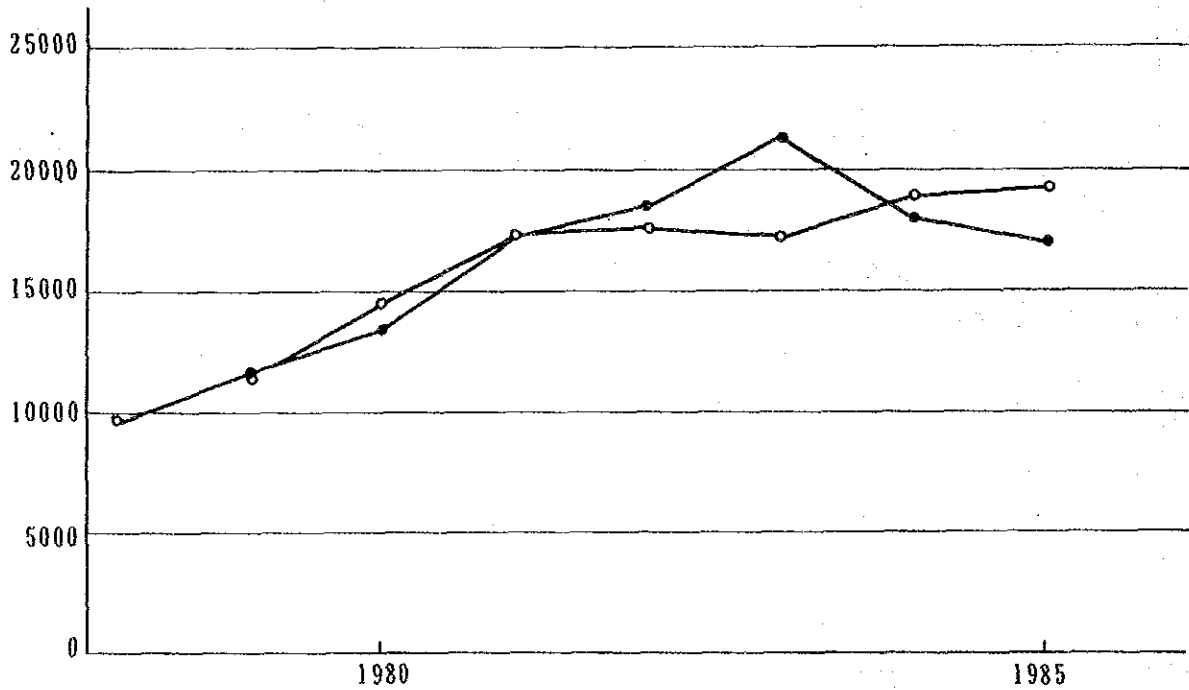
$$\text{LOG M.RI} = -14.0707 + 2.48417 \text{ LOG GDP.RI} - 0.58343 \text{ LOG DER.I}$$

(-2.74)      (3.91)                      (-1.62)

Correlation Factor = 0.78743

Standard Error = 0.12

Durbin Watson Ratio = 1.642



Name Formula: M.RI  
Black point: Real Value  
White point: Estimate

1-4 Real National Gross Product

..... Least Square Method .....

(1978-1985)

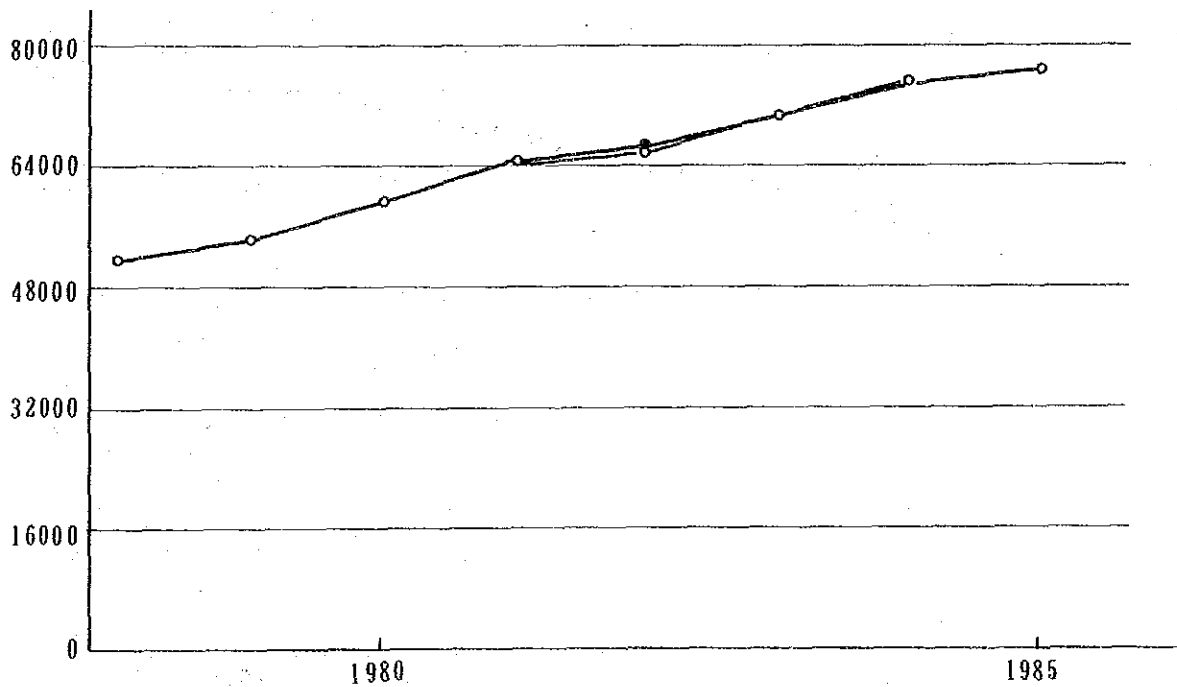
$$\text{GNP.RI} = +1307.52 + 0.94137 \text{ GDP.RI}$$

(1.05)      (52.29)

Correlation Factor = 0.99735

Standard Error = 473.67

Durbin Watson Ratio = 1.984



Name Formula: GNP.RI  
Black point: Real Value  
White point: Estimate

1-5 Real National Benefit

..... Least Square Method .....  
(1978-1985)

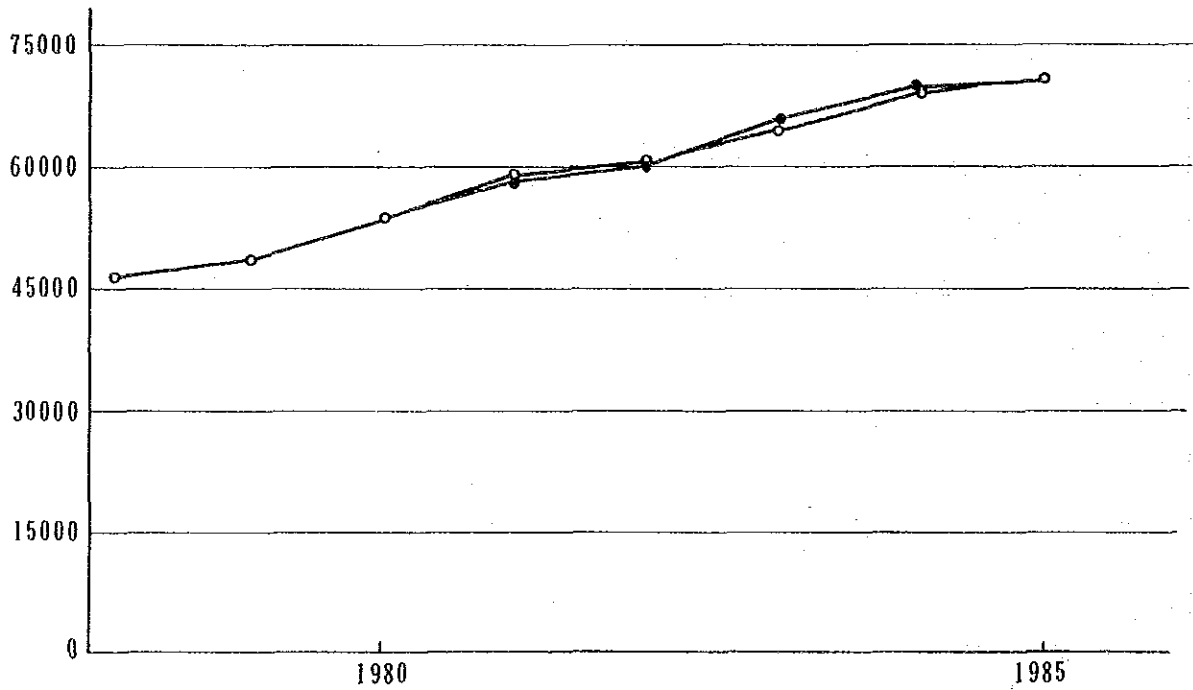
$$\text{NI.RI} = -5057.93 + 0.98940 \text{ GNP.RI}$$

(-2.48)      (31.57)

Correlation Factor = 0.99302

Standard Error = 762.22

Durbin Watson Ratio = 1.616



Name Formula: NI.RI  
Black point: Real Value  
White point: Estimate

1-6 Gross National Product Deflator

..... Least Square Method .....

(1978-1985)

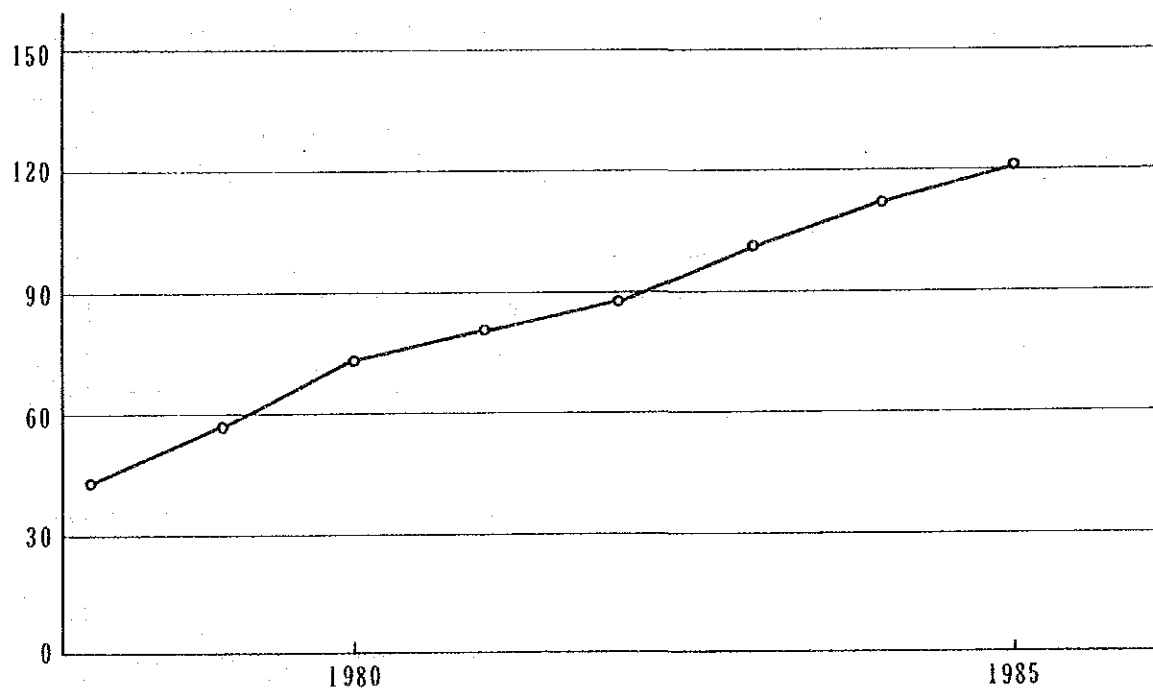
$$\text{PGNP.I} = -0.52871 + 1.00471 \text{ PGDP.I}$$

(-3.07)      (512.46)

Correlation Factor = 0.99997

Standard Error = 0.14

Durbin Watson Ratio = 2.397



Name Formula: PGNP.I  
Black point: Real Value  
White point: Estimate

1-7 Market Price Index

..... Least Square Method .....  
(1980-1985)

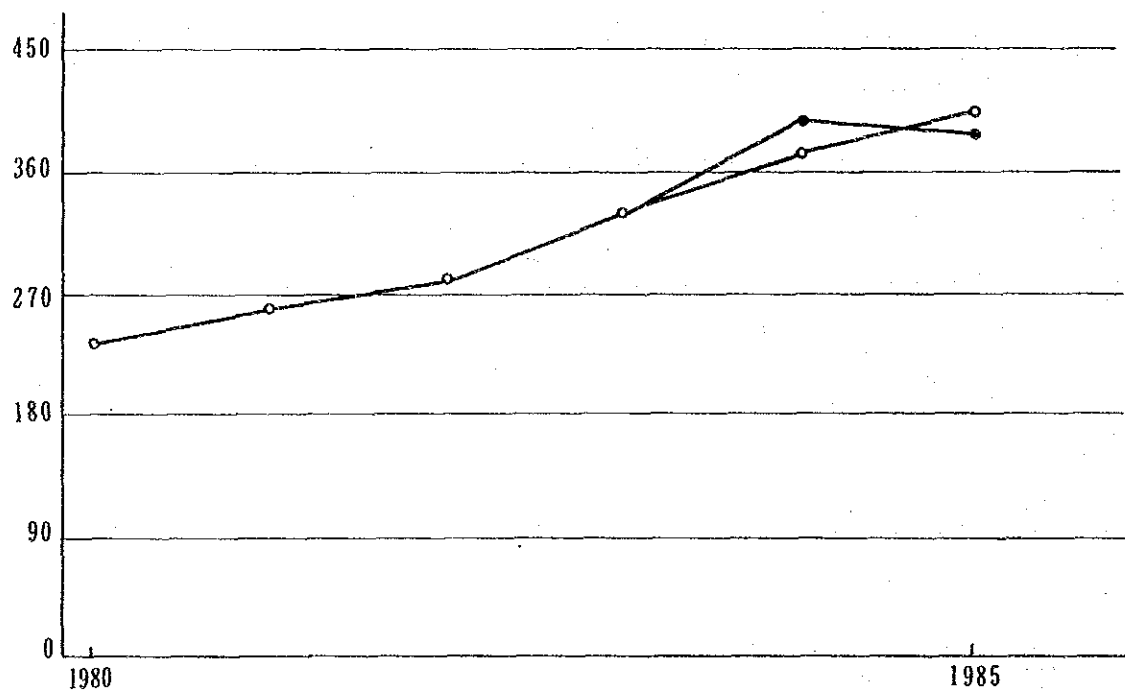
$$\text{WPI.I} = -33.8708 + 3.62939 \text{ PGNP.I}$$

(-0.96)      (10.02)

Correlation Factor = 0.95207

Standard Error = 14.92

Durbin Watson Ratio = 2.680



Name Formula: WPI.I  
Black point: Real Value  
White point: Estimate

1-8 Civil Final Consumer Deflator

..... Least Square Method .....  
(1978-1985)

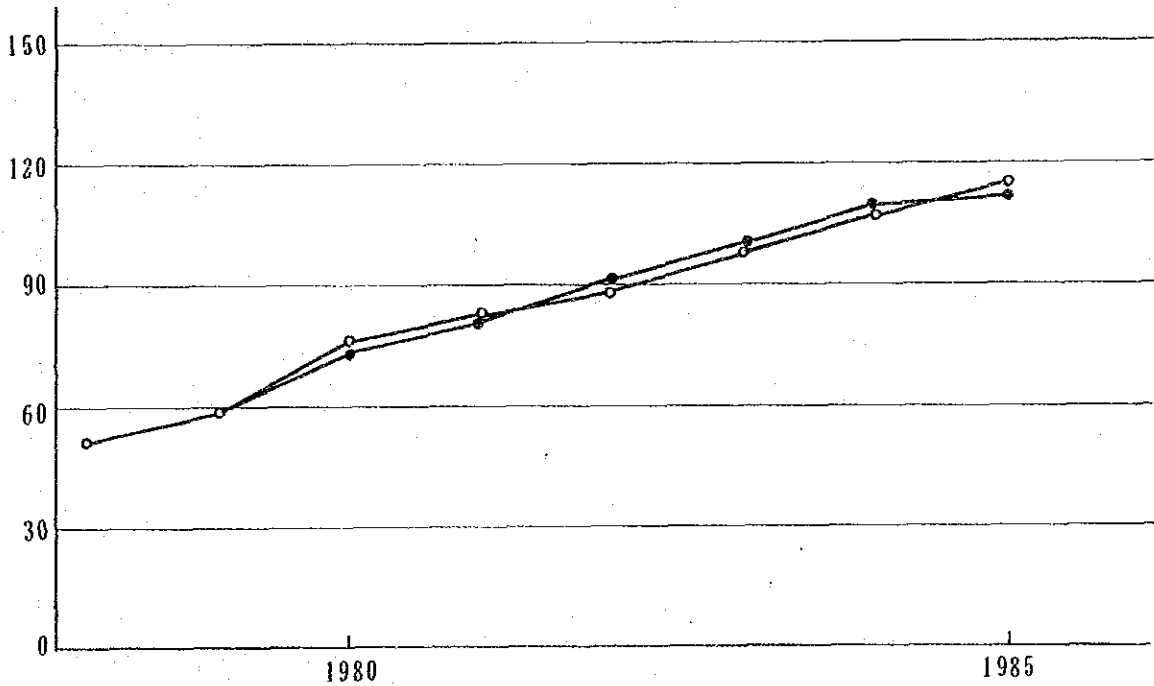
$$\text{PCP.I} = +22.8964 + 0.56415 \text{ PCG.I} + 0.0561841 \text{ WPI.I}$$

(3.49)      (4.64)                      (2.89)

Correlation Factor = 0.97949

Standard Error = 3.23

Durbin Watson Ratio = 1.508



Name Formula: PCP.I  
Black point: Real Value  
White point: Estimate

1-9 Fixed Capital Deflator

..... Least Square Method .....

(1978-1985)

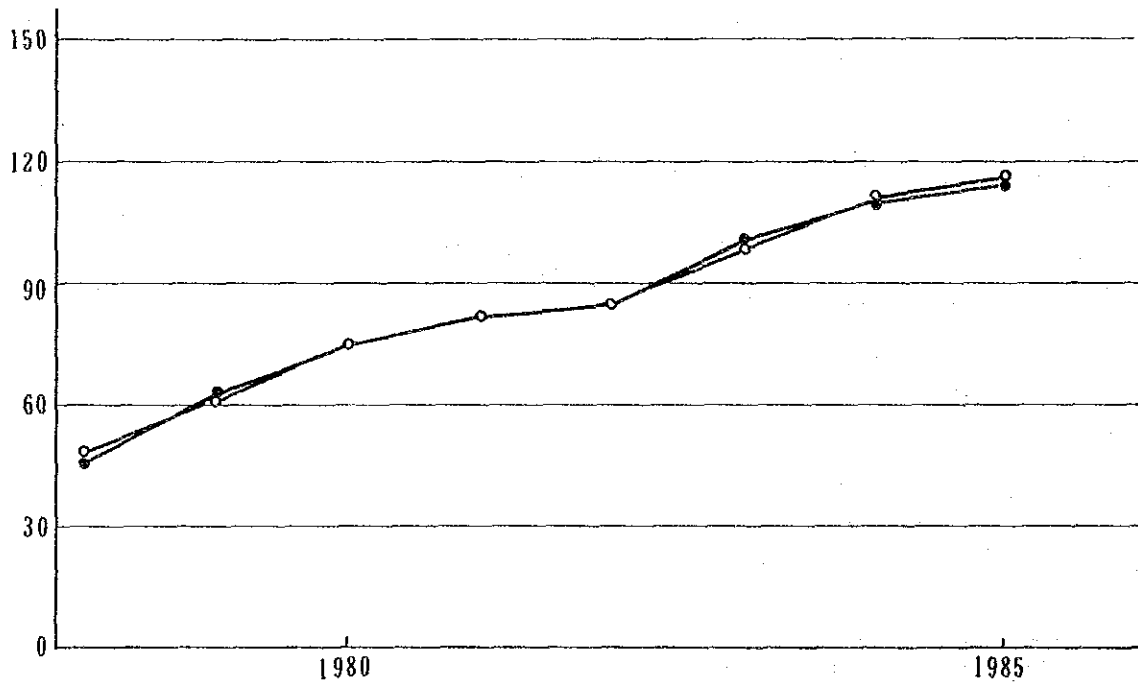
$$\text{PIP.I} = +6.73653 + 0.83495 \text{ PM.I} + 0.0239820 \text{ WPI.I}$$

(1.44)      (9.83)      (1.85)

Correlation Factor = 0.99278

Standard Error = 1.99

Durbin Watson Ratio = 2.094



Name Formula: PIP.I  
Black point: Real Value  
White point: Estimate

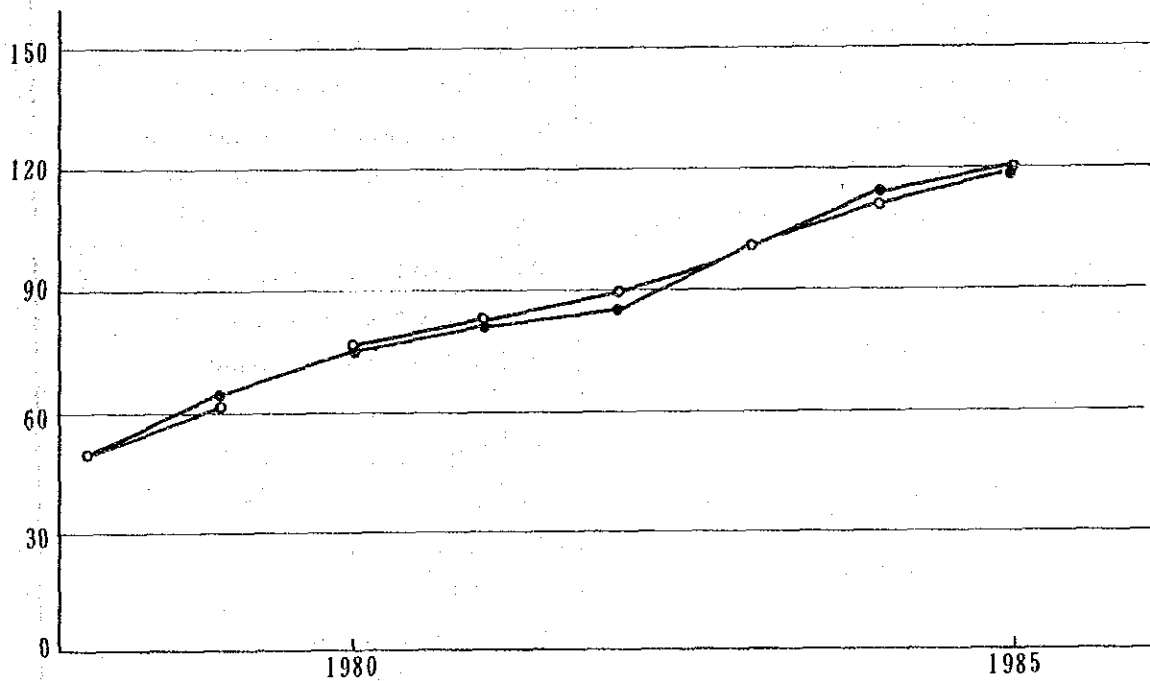
1-10 Import Deflator

..... Least Square Method .....  
(1978-1985)

$$\text{PM.I} = 11.3549 + 0.88866 \text{PGNP.I}$$

(3.57)      (24.52)

Correlation Factor = 0.98847  
Standard Error = 2.56  
Durbin Watson Ratio = 1.410



Name Formula: PM.I  
Black point: Real Value  
White point: Estimate



## 2. Relationship between Industries

### 2-1 Classification of Industries

No.	Category	No.	Category
1	Paddy	204	Indirect tax
2	Other food crops	205	Subsidy
3	Other agricultural crops	206	Gross value added
4	Livestock and its product	210	Total input
5	Forestry		
6	Fishery		
7	Mining and quarrying		(Final Demand)
8	Food beverage and tobacco	301	Private expenditure
9	Other industries	302	Government expenditure
10	Oil refinery	303	Fixed gross formation
11	Electricity, gas and water supply	304	Charge in stock
12	Construction	305	Export of goods
13	Trade	306	Export of service
14	Restaurant and hotel	309	Total final demand
15	Transport	310	Total demand
16	Communication	401	Import of goods
17	Financing, real estate and business service	402	Import sales tax
18	Public administration and defence	403	Import duty
19	Service	404	Subsidy
20	Unspecified sector	405	Import of service
190	Intermediate total	409	Total import
		600	Total output
		700	Total supply
	(Valuable Added)		
201	Wage and salary		
202	Operating surplus		
203	Depreciation		

## 2-2 (1/4) Relationship between Industries (1983)

TRANSACTION TABLE AT PRODUCER'S PRICES, 20=20 (MILLION RUPIAHS)

SECTOR	DESCRIPTION	1 PADDY	2 FOOD CROPS	3 AGRI CROPS	4 LIVESTOCK	5 FORESTRY
1	PADDY	61432.8	1035167.7	0.0	5940.4	0.0
2	OTHER FOOD CROPS	0.0	133184.3	1316.7	9448.0	0.0
3	OTHER AGRICULTURAL CROPS	0.0	420.7	589918.8	10186.3	0.0
4	LIVESTOCK & ITS PRODUCT	5673.1	18072.0	5122.0	503658.9	0.0
5	FORESTRY	235.0	1886.6	3809.7	1013.3	44625.2
6	FISHERY	0.0	0.0	0.0	227.3	0.0
7	MINING & QUARRYING	0.0	0.0	0.9	78.3	0.0
8	FOOD BEVERAGE & TABACCO	0.0	0.0	6.2	81995.1	0.0
9	OTHER INDUSTRIES	178059.4	87804.5	150893.0	8454.7	35145.3
10	OIL REFINERY	239.3	584.1	20346.7	1321.2	23378.0
11	ELECTRICITY, GAS, WATER SUP	0.0	0.0	4181.3	550.5	2710.3
12	CONSTRUCTION	2463.6	7917.2	20702.8	4176.0	18642.8
13	TRADE	8577.5	40948.6	81402.7	65078.9	6957.0
14	RESTAURANT & HOTEL	0.0	0.0	2639.7	758.4	2297.6
15	TRANSPORT	15612.3	13422.7	71054.9	23035.1	6205.7
16	COMMUNICATION	0.0	0.0	556.3	44.5	402.7
17	FINANCING, REAL ESTATE ETC	27444.2	10614.2	38232.1	11822.6	28506.3
18	PUBLIC ADMIN. & DEFENCE	0.0	0.0	0.0	0.0	0.0
19	SERVICE	1353.7	970.2	42303.9	2164.2	44440.8
20	UNSPECIFIED SECTOR	0.0	0.0	0.0	0.0	0.0
190	TOTAL INTERMEDIATE INPUT	301090.9	1350992.8	1044493.6	729953.7	213211.7
201	WAGE & SALARY	630488.2	408228.6	694445.1	289304.6	242465.8
202	OPERATING SURPLUS	2431988.3	2514941.7	1588289.5	873422.0	1042828.0
203	DEPRECIATION	39988.5	35534.0	99270.2	19717.2	113888.1
204	INDIRECT TAX	32645.1	7617.6	28644.9	8525.6	12918.6
205	SUBSIDY	0.0	0.0	0.0	0.0	0.0
209	GROSS VALUE ADDED	3135130.1	2967322.8	2410629.7	1190969.4	1412100.5
210	TOTAL INPUT	3436221.0	4318315.6	3455123.3	1920823.1	1625312.2
SECTOR	DESCRIPTION	6 FISHERY	7 MINING QUARRYING	8 FOOD BEVERAGE	9 INDUSTRIES	10 OIL REFINERY
1	PADDY	0.0	0.0	2200694.9	1881.4	0.0
2	OTHER FOOD CROPS	507.6	0.0	435144.0	1586.3	0.0
3	OTHER AGRICULTURAL CROPS	0.0	0.0	938635.8	177231.9	0.0
4	LIVESTOCK & ITS PRODUCT	241.6	0.0	27874.4	33983.9	0.0
5	FORESTRY	8593.7	111.4	3087.7	198341.9	21.8
6	FISHERY	80387.0	0.0	32945.8	108.4	0.0
7	MINING & QUARRYING	2343.9	418739.0	5783.7	362003.6	1377281.5
8	FOOD BEVERAGE & TABACCO	824.4	8.0	353563.4	23643.9	0.0
9	OTHER INDUSTRIES	4351.5	390602.4	140048.0	3810017.1	36793.0
10	OIL REFINERY	14981.1	74195.2	43595.4	124746.7	1462.9
11	ELECTRICITY, GAS, WATER SUP	582.8	746.7	13516.2	46785.1	16776.5
12	CONSTRUCTION	1936.4	66525.5	5623.3	15701.3	6291.3
13	TRADE	32171.2	13299.8	312507.9	494575.8	8492.3
14	RESTAURANT & HOTEL	0.0	59245.0	11305.6	14284.1	29305.3
15	TRANSPORT	9971.7	44180.0	84038.6	207842.8	12327.1
16	COMMUNICATION	0.0	5366.0	2023.9	4517.5	3300.6
17	FINANCING, REAL ESTATE ETC	11869.0	422614.5	52402.7	88608.7	31541.9
18	PUBLIC ADMIN. & DEFENCE	0.0	0.0	0.0	0.0	0.0
19	SERVICE	1350.6	109168.1	7881.3	17088.9	7492.0
20	UNSPECIFIED SECTOR	0.0	0.0	0.0	0.0	0.0
190	TOTAL INTERMEDIATE INPUT	218515.8	1604771.6	4671272.6	5602959.8	1529086.2
201	WAGE & SALARY	126057.9	333662.6	449521.2	901259.8	32415.2
202	OPERATING SURPLUS	626858.8	11743631.2	822866.4	2159402.9	361874.6
203	DEPRECIATION	33581.7	342773.7	228103.6	311222.0	61610.1
204	INDIRECT TAX	8081.7	16667.3	312940.7	127576.0	0.0
205	SUBSIDY	0.0	0.0	-62953.0	-372300.0	-361874.6
209	GROSS VALUE ADDED	792590.1	12436734.8	1750478.9	3127154.8	94025.3
210	TOTAL INPUT	1011105.9	14041506.4	9421751.5	8720114.4	1623111.5

2-2 (2/4) Relationship between Industries (1983)

TRANSACTION TABLE AT PRODUCER'S PRICES, 20=20 (MILLION RUPIANS)

SECTOR	DESCRIPTION	11 ELECTRICITY SUP	12 CONSTRUCTION	13 TRADE	14 RESTAURANT	15 TRANSPORT
1	PADDY	0.0	18384.2	9.7	0.0	0.0
2	OTHER FOOD CROPS	0.0	0.0	129.8	93532.9	125.6
3	OTHER AGRICULTURAL CROPS	0.0	0.0	103.4	60540.3	8.4
4	LIVESTOCK & ITS PRODUCT	0.0	169.5	0.0	259468.3	3805.6
5	FORESTRY	0.0	445292.2	103.6	8624.4	1021.1
6	FISHERY	0.0	0.0	0.0	87711.3	126.4
7	Mining & Quarrying	3903.2	307537.5	92.5	2.3	831.1
8	Food Beverage & Tobacco	0.0	0.0	0.0	375566.0	7369.2
9	Other Industries	35668.9	2149466.5	68780.3	52369.9	138031.8
10	Oil Refinery	127914.0	649604.5	44438.9	47731.4	415235.7
11	Electricity, Gas, Water Sup	73332.9	6072.8	36618.1	56377.1	13270.4
12	Construction	15869.5	12784.4	37076.8	27466.4	41671.4
13	Trade	11086.8	1003915.1	11577.3	115269.3	16382.8
14	Restaurant & Hotel	2755.8	27253.4	59338.8	4485.6	30845.7
15	Transport	8448.0	212115.6	77700.1	40375.6	325008.5
16	Communication	718.3	7538.9	36631.0	11290.6	15184.4
17	Financing, Real Estate Etc	6981.2	102417.7	223386.3	53397.1	121586.9
18	Public Admin. & Defence	0.0	0.0	0.0	0.0	0.0
19	Service	8216.8	7898.9	58701.1	22860.6	415026.9
20	Unspecified Sector	0.0	0.0	0.0	8417.2	8157.8
190	TOTAL INTERMEDIATE INPUT	292876.4	4850256.2	644993.7	1308426.0	1551673.5
201	WAGE & SALARY	85250.0	1347383.0	909038.7	275572.4	663826.9
202	OPERATING SURPLUS	111009.2	948516.5	514322.5	556473.7	1016552.4
203	DEPRECIATION	33560.8	161378.4	156547.1	88519.0	344893.4
204	INDIRECT TAX	780.9	125148.0	213454.3	78106.2	35022.0
205	SUBSIDY	0.0	0.0	-693599.4	0.0	0.0
209	GROSS VALUE ADDED	230600.9	2582425.9	5730663.2	1008671.3	2060394.7
210	TOTAL INPUT	523477.3	7532682.1	6376656.9	2315097.3	3612088.2

SECTOR	DESCRIPTION	16 COMMUNICATION	17 FINANCING	18 PUBLIC ADMIN.	19 SERVICE	20 UNSPECIFIED
1	PADDY	0.0	0.0	0.0	180.0	0.0
2	OTHER FOOD CROPS	0.0	0.0	0.0	24848.3	0.0
3	OTHER AGRICULTURAL CROPS	0.0	0.0	0.0	1552.2	0.0
4	LIVESTOCK & ITS PRODUCT	0.0	0.0	0.0	25196.8	0.0
5	FORESTRY	0.0	0.0	0.0	925.8	0.0
6	FISHERY	0.0	0.0	0.0	5483.8	0.0
7	Mining & Quarrying	0.0	0.0	0.0	0.2	0.0
8	Food Beverage & Tobacco	28.1	958.4	0.0	27767.1	0.0
9	Other Industries	26106.9	44484.1	0.0	739493.0	0.0
10	Oil Refinery	9029.2	6391.7	0.0	33343.0	0.0
11	Electricity, Gas, Water Sup	3182.2	17334.9	0.0	71386.1	0.0
12	Construction	19693.3	160319.4	0.0	44948.5	0.0
13	Trade	3387.3	8153.8	0.0	155766.4	0.0
14	Restaurant & Hotel	2924.3	23366.2	0.0	16009.5	0.0
15	Transport	16327.9	26804.5	0.0	58814.8	0.0
16	Communication	2986.3	21101.6	0.0	12747.9	0.0
17	Financing, Real Estate Etc	15071.6	70824.2	0.0	89584.7	0.0
18	Public Admin. & Defence	0.0	0.0	0.0	0.0	0.0
19	Service	14636.7	37710.0	0.0	124130.3	0.0
20	Unspecified Sector	1480.5	0.0	0.0	0.0	0.0
190	TOTAL INTERMEDIATE INPUT	114884.3	417633.5	0.0	1430178.2	0.0
201	WAGE & SALARY	56601.7	360207.5	2344689.5	1515088.9	0.0
202	OPERATING SURPLUS	19284.5	1793864.4	663068.2	663068.2	0.0
203	DEPRECIATION	73638.8	183733.3	123404.7	176341.7	0.0
204	INDIRECT TAX	805.4	36601.5	0.0	72853.1	0.0
205	SUBSIDY	0.0	0.0	0.0	0.0	0.0
209	GROSS VALUE ADDED	150328.4	2354406.7	2468094.2	2427349.9	0.0
210	TOTAL INPUT	265192.7	2772060.2	2468094.2	3857528.1	0.0

2-2 (3/4) Relationship between Industries (1983)

TRANSACTION TABLE AT PRODUCER'S PRICES, 20*20 (MILLION RUPIAHS)		301 PRIVATE EXPEND		302 GOVERNMENT EXP		303 GROSS FORMATION		304 CHANGE IN STOCK	
SECTOR	DESCRIPTION	190 TOTAL INT DEN	301 PRIVATE EXPEND	302 GOVERNMENT EXP	303 GROSS FORMATION	304 CHANGE IN STOCK	190 TOTAL INT DEN	301 PRIVATE EXPEND	302 GOVERNMENT EXP
1	PADDY	3323691.1	0.0	0.0	0.0	112529.9	3323691.1	0.0	0.0
2	OTHER FOOD CROPS	69823.5	3737635.0	0.0	0.0	2745.9	69823.5	3737635.0	0.0
3	OTHER AGRICULTURAL CROPS	1778767.3	687372.1	0.0	0.0	48817.4	1778767.3	687372.1	0.0
4	LIVESTOCK & ITS PRODUCT	883097.5	342566.2	0.0	2216.7	88938.4	883097.5	342566.2	2216.7
5	FORESTRY	722893.4	189645.2	0.0	0.0	4820.3	722893.4	189645.2	0.0
6	FISHERY	187991.0	720817.3	0.0	0.0	0.0	187991.0	720817.3	0.0
7	MINING & QUARRYING	2478898.3	25575.7	0.0	0.0	903285.0	2478898.3	25575.7	0.0
8	FOOD BEVERAGE & TOBACCO	879529.8	6092561.3	3019.7	0.0	24013.3	879529.8	6092561.3	3019.7
9	OTHER INDUSTRIES	814281.3	2620116.0	357132.5	3171200.8	145013.4	814281.3	2620116.0	357132.5
10	OIL REFINERY	1638509.0	579846.8	0.0	0.0	-55325.3	1638509.0	579846.8	0.0
11	ELECTRICITY, GAS, WATER SUP	362473.0	135842.5	0.0	0.0	0.0	362473.0	135842.5	0.0
12	CONSTRUCTION	509809.6	0.0	0.0	0.0	0.0	509809.6	0.0	0.0
13	TRADE	2387555.5	2668382.4	52804.4	467310.3	54279.8	2387555.5	2668382.4	52804.4
14	RESTAURANT & HOTEL	281717.8	1777825.9	337282.0	0.0	0.0	281717.8	1777825.9	337282.0
15	TRANSPORT	1247185.7	1797782.8	137075.0	61925.8	15541.8	1247185.7	1797782.8	137075.0
16	COMMUNICATION	125101.0	109423.8	34483.9	0.0	0.0	125101.0	109423.8	34483.9
17	FINANCING, REAL ESTATE ETC	1388885.9	1582354.9	0.0	0.0	0.0	1388885.9	1582354.9	0.0
18	PUBLIC ADMIN. & DEFENCE	923195.0	1903640.4	2458904.2	0.0	0.0	923195.0	1903640.4	2458904.2
19	SERVICE	16084.6	43664.2	1084763.9	0.0	0.0	16084.6	43664.2	1084763.9
20	UNSPECIFIED SECTOR	27975270.3	25594852.5	5147675.5	10549745.8	1344658.9	27975270.3	25594852.5	5147675.5
190	TOTAL INTERMEDIATE INPUT	11667415.7					11667415.7		
201	WAGE & SALARY	34419174.8					34419174.8		
202	OPERATING SURPLUS	2617825.2					2617825.2		
203	DEPRECIATION	1116382.9					1116382.9		
204	INDIRECT TAX	-1490727.0					-1490727.0		
205	SUBSIDY	48330071.6					48330071.6		
200	GROSS VALUE ADDED	76305341.8					76305341.8		
210	TOTAL INPUT								

SECTOR	DESCRIPTION	305 EXPORT OF GOODS	306 EXPORT OF SERV.	309 TOTAL FIN DEN	310 TOTAL DEMAND	401 IMPORT OF GOODS
1	PADDY	0.0	0.0	112529.9	3436221.0	0.0
2	OTHER FOOD CROPS	31897.8	0.0	3772078.5	4471902.0	-142561.3
3	OTHER AGRICULTURAL CROPS	1119054.5	0.0	1864500.2	3643257.5	-18192.7
4	LIVESTOCK & ITS PRODUCT	12856.0	0.0	1048377.3	1929474.8	-7413.8
5	FORESTRY	729018.7	0.0	903484.2	1626177.6	-710.3
6	FISHERY	103019.4	0.0	82836.7	1011827.7	-542.9
7	MINING & QUARRYING	11331627.8	0.0	12280488.5	14739086.8	-695889.2
8	FOOD BEVERAGE & TOBACCO	104562.4	0.0	6224152.7	7103682.5	-655498.2
9	OTHER INDUSTRIES	655822.6	20029.6	6989321.3	15111902.6	-6812417.4
10	OIL REFINERY	896339.9	0.0	1288992.9	2927501.9	-1295580.1
11	ELECTRICITY, GAS, WATER SUP	0.0	0.0	161004.3	523477.3	0.0
12	CONSTRUCTION	0.0	0.0	7022872.5	7532082.1	0.0
13	TRADE	745324.5	0.0	3985101.4	6375659.9	0.0
14	RESTAURANT & HOTEL	0.0	0.0	2184078.1	2445795.9	0.0
15	TRANSPORT	17323.2	341255.1	2528813.5	3773999.2	0.0
16	COMMUNICATION	0.0	8525.5	152433.2	277534.2	0.0
17	FINANCING, REAL ESTATE ETC	0.0	30321.0	1721207.8	3108093.7	0.0
18	PUBLIC ADMIN. & DEFENCE	0.0	2468094.2	2468094.2	2468094.2	0.0
19	SERVICE	504.2	2988908.5	339819.2	3912103.5	-2526.8
20	UNSPECIFIED SECTOR	0.0	459301.4	339819.2	355883.8	-74052.5
100	TOTAL INTERMEDIATE INPUT	15702860.8		58799094.9	86774365.2	-9086995.1

2-2 (4/4) Relationship between Industries (1983)

TRANSACTION TABLE AT PRODUCER'S PRICES, 20=20 (MILLION RUPIAHS)						
SECTOR	DESCRIPTION	402 IMPORT SALES TAX	403 IMPORT DUTY	404 SUBSIDY	405 IMPORT OF SERV.	409 TOTAL IMPORT
1	PADDY	0.0	0.0	0.0	0.0	0.0
2	OTHER FOOD CROPS	-3183.1	-7852.0	0.0	0.0	-153586.4
3	OTHER AGRICULTURAL CROPS	-2718.3	-3933.2	0.0	0.0	-188144.2
4	LIVESTOCK & ITS PRODUCT	-354.0	-783.9	0.0	0.0	-8551.7
5	FORESTRY	-34.8	-120.3	0.0	0.0	-865.4
6	FISHERY	-56.0	-122.9	0.0	0.0	-721.8
7	Mining & Quarrying	-733.7	-857.5	0.0	0.0	-697580.4
8	FOOD BEVERAGE & TOBACCO	-9780.8	-16052.0	0.0	0.0	-881931.0
9	OTHER INDUSTRIES	-156909.8	-370053.1	0.0	-42407.9	-6381788.2
10	OIL REFINERY	-3475.6	-4934.7	0.0	0.0	-1304390.4
11	ELECTRICITY, GAS, WATER SUP	0.0	0.0	0.0	0.0	0.0
12	CONSTRUCTION	0.0	0.0	0.0	0.0	0.0
13	TRADE	0.0	0.0	0.0	0.0	0.0
14	RESTAURANT & HOTEL	0.0	0.0	0.0	0.0	0.0
15	TRANSPORT	0.0	0.0	0.0	0.0	0.0
16	COMMUNICATION	0.0	0.0	0.0	0.0	0.0
17	FINANCING, REAL ESTATE ETC	0.0	0.0	0.0	0.0	0.0
18	PUBLIC ADMIN. & DEFENCE	-2.4	-6.2	0.0	0.0	-12341.5
19	SERVICE	-239.4	0.0	0.0	0.0	-336033.5
20	UNSPECIFIED SECTOR	-32.1	-512.4	0.0	0.0	-54575.4
190	TOTAL INTERMEDIATE INPUT	-177500.0	-61.8	0.0	-281737.4	-355883.8
			-405900.0	0.0	-798638.2	-10468023.3
SECTOR	DESCRIPTION	600 TOTAL OUTPUT	700 TOTAL SUPPLY			
1	PADDY	3436221.0	3435221.0			
2	OTHER FOOD CROPS	4318315.6	4471802.0			
3	OTHER AGRICULTURAL CROPS	3455123.3	3643267.5			
4	LIVESTOCK & ITS PRODUCT	1920923.1	1929474.8			
5	FORESTRY	1825312.2	1826177.8			
6	FISHERY	1011195.9	1011827.7			
7	Mining & Quarrying	14041506.4	14739086.8			
8	FOOD BEVERAGE & TOBACCO	6421751.5	7103882.5			
9	OTHER INDUSTRIES	8730114.4	15111802.6			
10	OIL REFINERY	1623111.5	2927501.9			
11	ELECTRICITY, GAS, WATER SUP	523477.3	523477.3			
12	CONSTRUCTION	7532682.1	7532682.1			
13	TRADE	6375656.9	6375656.9			
14	RESTAURANT & HOTEL	2315087.3	2445795.9			
15	TRANSPORT	3612068.2	3773999.2			
16	COMMUNICATION	265182.7	277534.2			
17	FINANCING, REAL ESTATE ETC	2772060.2	3108093.7			
18	PUBLIC ADMIN. & DEFENCE	2468094.2	2468094.2			
19	SERVICE	3857528.1	3912103.5			
20	UNSPECIFIED SECTOR	0.0	355883.8			
190	TOTAL INTERMEDIATE INPUT	76305341.9	86774385.2			

2-3 (1/4) Investment Factor (1983)

AIJ TABLE.20-20

SECTOR	DESCRIPTION	1 PADDY	2 FOOD CROPS	3 AGRI CROPS	4 LIVESTOCK	5 FORESTRY
1	PADDY	0.017878	0.239716	0.000000	0.003032	0.000000
2	OTHER FOOD CROPS	0.000000	0.030842	0.000381	0.004918	0.000000
3	OTHER AGRICULTURAL CROPS	0.000000	0.000097	0.170737	0.005303	0.000000
4	LIVESTOCK & ITS PRODUCT	0.001851	0.004185	0.001483	0.262196	0.000000
5	FORESTRY	0.000088	0.000437	0.002550	0.000528	0.027456
6	FISHERY	0.000000	0.000000	0.000000	0.000118	0.000000
7	MINING & QUARRYING	0.000000	0.000000	0.000000	0.000041	0.000000
8	FOOD BEVERAGE & TABACCO	0.000000	0.000000	0.000000	0.042685	0.000000
9	OTHER INDUSTRIES	0.051818	0.020333	0.045410	0.004401	0.021524
10	OIL REFINERY	0.000070	0.000135	0.005889	0.000688	0.014384
11	ELECTRICITY,GAS,WATER SUP	0.000000	0.000000	0.001210	0.000287	0.001668
12	CONSTRUCTION	0.000717	0.001833	0.005902	0.002174	0.011409
13	TRADE	0.002496	0.008483	0.023560	0.033879	0.004280
14	RESTAURANT & HOTEL	0.000000	0.000000	0.000754	0.000395	0.001414
15	TRANSPORT	0.004543	0.003108	0.020826	0.011992	0.003818
16	COMMUNICATION	0.000000	0.000000	0.000190	0.000023	0.000248
17	FINANCING,REAL ESTATE ETC	0.007887	0.002458	0.011065	0.006155	0.017539
18	PUBLIC ADMIN. & DEFENCE	0.000000	0.000000	0.000000	0.000000	0.000000
19	SERVICE	0.000394	0.000225	0.012244	0.001127	0.027343
20	UNSPECIFIED SECTOR	0.000000	0.000000	0.000000	0.000000	0.000000
190	TOTAL INTERMEDIATE INPUT	0.087623	0.312852	0.302303	0.380002	0.131182
201	WAGE & SALARY	0.193486	0.094766	0.200890	0.150807	0.149181
202	OPERATING SURPLUS	0.707751	0.582390	0.459685	0.454689	0.641617
203	DEPRECIATION	0.011640	0.008320	0.028731	0.010264	0.070072
204	INDIRECT TAX	0.009500	0.001764	0.008291	0.004438	0.007948
205	SUBSIDY	0.000000	0.000000	0.000000	0.000000	0.000000
209	GROSS VALUE ADDED	0.912377	0.687148	0.697697	0.619998	0.868818
210	TOTAL INPUT	1.000000	1.000000	1.000000	1.000000	1.000000

SECTOR	DESCRIPTION	7 MINING QUARRYING	8 FOOD BEVERAGE	9 INDUSTRIES	10 OIL REFINERY
1	PADDY	0.000000	0.342604	0.000216	0.000000
2	OTHER FOOD CROPS	0.000000	0.067761	0.000182	0.000000
3	OTHER AGRICULTURAL CROPS	0.000000	0.146165	0.020301	0.000000
4	LIVESTOCK & ITS PRODUCT	0.000000	0.004341	0.003893	0.000000
5	FORESTRY	0.000000	0.000481	0.022719	0.000013
6	FISHERY	0.000000	0.000130	0.000013	0.000000
7	MINING & QUARRYING	0.029822	0.000901	0.041466	0.848584
8	FOOD BEVERAGE & TABACCO	0.000001	0.055057	0.02708	0.000000
9	OTHER INDUSTRIES	0.027818	0.021808	0.436422	0.022688
10	OIL REFINERY	0.005282	0.006789	0.14289	0.000901
11	ELECTRICITY,GAS,WATER SUP	0.000053	0.002105	0.005359	0.010338
12	CONSTRUCTION	0.004738	0.000876	0.01799	0.003876
13	TRADE	0.000947	0.048664	0.056652	0.004000
14	RESTAURANT & HOTEL	0.004219	0.001761	0.001636	0.018055
15	TRANSPORT	0.000862	0.003146	0.013087	0.007595
16	COMMUNICATION	0.000009	0.000409	0.000517	0.002034
17	FINANCING,REAL ESTATE ETC	0.011739	0.008160	0.007859	0.019433
18	PUBLIC ADMIN. & DEFENCE	0.000000	0.000000	0.000000	0.000000
19	SERVICE	0.001386	0.007775	0.001227	0.004618
200	UNSPECIFIED SECTOR	0.000000	0.000000	0.000001	0.000000
201	WAGE & SALARY	0.218118	0.114288	0.641797	0.842071
202	OPERATING SURPLUS	0.124673	0.023703	0.070000	0.019371
203	DEPRECIATION	0.619973	0.336351	0.128137	0.222951
204	INDIRECT TAX	0.032223	0.024411	0.035049	0.037958
205	SUBSIDY	0.006015	0.001187	0.048731	0.000000
209	GROSS VALUE ADDED	0.000000	-0.009803	-0.042845	-0.222651
210	TOTAL INPUT	0.783884	0.272586	0.388203	0.057923
		1.000000	1.000000	1.000000	1.000000

2-3 (2/4) Investment Factor (1983)

AIJ TABLE.20=20

SECTOR	DESCRIPTION	11 ELECTRICITY-SUP	12 CONSTRUCTION	13 TRADE	14 RESTAURANT	15 TRANSPORT
1	PADDY	0.000000	0.002441	0.000002	0.000000	0.000000
2	OTHER FOOD CROPS	0.000000	0.000000	0.000020	0.040401	0.000035
3	OTHER AGRICULTURAL CROPS	0.000000	0.000023	0.000016	0.026150	0.000002
4	LIVESTOCK & ITS PRODUCT	0.000000	0.000000	0.000000	0.112077	0.001054
5	FORESTRY	0.000000	0.059115	0.000016	0.003725	0.000283
6	FISHERY	0.000000	0.000000	0.000000	0.029580	0.000035
7	FISHING & QUARRYING	0.007456	0.040327	0.000015	0.000001	0.000230
8	FOOD BEVERAGE & TOBACCO	0.000000	0.000000	0.000000	0.162225	0.002040
9	OTHER INDUSTRIES	0.068138	0.285352	0.010789	0.022621	0.038214
10	OIL REFINERY	0.244354	0.086238	0.006970	0.020617	0.114958
11	ELECTRICITY, GAS, WATER SUP	0.139897	0.000806	0.005587	0.024326	0.003874
12	CONSTRUCTION	0.030507	0.001697	0.005815	0.011864	0.011537
13	TRADE	0.021179	0.133275	0.003816	0.049790	0.004536
14	RESTAURANT & HOTEL	0.005264	0.003019	0.008413	0.001938	0.008541
15	TRANSPORT	0.012318	0.028159	0.017110	0.017440	0.089979
16	COMMUNICATION	0.001374	0.001001	0.005745	0.004877	0.004108
17	FINANCING, REAL ESTATE ETC	0.013293	0.013596	0.035037	0.023065	0.033661
18	PUBLIC ADMIN. & DEFENCE	0.000000	0.000000	0.000000	0.000000	0.000000
19	SERVICE	0.015687	0.001022	0.009207	0.008875	0.114900
20	UNSPECIFIED SECTOR	0.000000	0.000000	0.000000	0.003835	0.001705
190	TOTAL INTERMEDIATE INPUT	0.559483	0.657170	0.101165	0.564307	0.429580
201	WAGE & SALARY	0.162853	0.142721	0.119033	0.119033	0.183780
202	OPERATING SURPLUS	0.212081	0.125920	0.806869	0.240367	0.281432
203	DEPRECIATION	0.064111	0.021424	0.024554	0.042555	0.095511
204	INDIRECT TAX	0.001492	0.016614	0.003348	0.003738	0.009696
205	SUBSIDY	0.000000	0.000000	-0.108785	0.000000	0.000000
200	GROSS VALUE ADDED	0.440517	0.342830	0.898835	0.435693	0.570420
210	TOTAL INPUT	1.000000	1.000000	1.000000	1.000000	1.000000
SECTOR	DESCRIPTION	16 COMMUNICATION	17 FINANCING	18 PUBLIC ADMIN.	19 SERVICE	20 UNSPECIFIED
1	PADDY	0.000000	0.000000	0.000000	0.000047	0.000000
2	OTHER FOOD CROPS	0.000000	0.000000	0.000000	0.005442	0.000000
3	OTHER AGRICULTURAL CROPS	0.000000	0.000000	0.000000	0.000402	0.000000
4	LIVESTOCK & ITS PRODUCT	0.000000	0.000000	0.000000	0.008532	0.000000
5	FORESTRY	0.000000	0.000000	0.000000	0.000240	0.000000
6	FISHERY	0.000000	0.000000	0.000000	0.001422	0.000000
7	FISHING & QUARRYING	0.000000	0.000000	0.000000	0.000000	0.000000
8	FOOD BEVERAGE & TOBACCO	0.000106	0.000346	0.000000	0.007198	0.000000
9	OTHER INDUSTRIES	0.098445	0.016047	0.000000	0.191701	0.000000
10	OIL REFINERY	0.034048	0.002306	0.000000	0.008644	0.000000
11	ELECTRICITY, GAS, WATER SUP	0.012037	0.006325	0.000000	0.018506	0.000000
12	CONSTRUCTION	0.074280	0.057834	0.000000	0.011652	0.000000
13	TRADE	0.012773	0.002943	0.000000	0.040380	0.000000
14	RESTAURANT & HOTEL	0.011027	0.008429	0.000000	0.004150	0.000000
15	TRANSPORT	0.061570	0.008670	0.000000	0.014728	0.000000
16	COMMUNICATION	0.011251	0.007812	0.000000	0.003305	0.000000
17	FINANCING, REAL ESTATE ETC	0.056833	0.025549	0.000000	0.023223	0.000000
18	PUBLIC ADMIN. & DEFENCE	0.000000	0.000000	0.000000	0.000000	0.000000
19	SERVICE	0.055193	0.013604	0.000000	0.003179	0.000000
20	UNSPECIFIED SECTOR	0.005583	0.000000	0.000000	0.000000	0.000000
190	TOTAL INTERMEDIATE INPUT	0.433135	0.370750	0.000000	0.370750	0.000000
201	WAGE & SALARY	0.213436	0.129942	0.950000	0.392761	0.000000
202	OPERATING SURPLUS	0.072719	0.547123	0.000000	0.171889	0.000000
203	DEPRECIATION	0.277673	0.059086	0.000000	0.045714	0.000000
204	INDIRECT TAX	0.003037	0.013204	0.000000	0.018886	0.000000
205	SUBSIDY	0.000000	0.000000	0.000000	0.000000	0.000000
200	GROSS VALUE ADDED	0.566885	0.849335	1.000000	0.628250	0.000000
210	TOTAL INPUT	1.000000	1.000000	1.000000	1.000000	0.000000

2-3 (3/4) Investment Factor (1983)

AIJ TABLE.20=20

SECTOR	DESCRIPTION	190 TOTAL INT DEH	301 PRIVATE EXPEND	302 GOVERNMENT EXPD	303 GROSS FORMATION	304 CHAGE	IH STOCK
1	PADDY	0.043558	0.000000	0.000000	0.000000	0.063687	0.000000
2	OTHER FOOD CROPS	0.009171	0.146031	0.000000	0.000000	0.002042	0.000000
3	OTHER AGRICULTURAL CROPS	0.023311	0.028856	0.001798	0.000000	0.036295	0.000000
4	LIVESTOCK & ITS PRODUCT	0.011573	0.038826	0.000000	0.000210	0.066142	0.000000
5	FORESTRY	0.009471	0.008628	0.000000	0.000000	0.003583	0.000000
6	FISHERY	0.002464	0.028163	0.000000	0.000000	0.000000	0.000000
7	MINING & QUARRYING	0.032483	0.000999	0.000000	0.000000	0.671758	0.000000
8	FOOD BEVERAGE & TOBACCO	0.011526	0.238039	0.000588	0.000000	0.017858	0.000000
9	OTHER INDUSTRIES	0.106711	0.102369	0.069379	0.000000	0.107844	0.000000
10	OIL REFINERY	0.021473	0.022655	0.013236	0.000000	-0.041145	0.000000
11	ELECTRICITY,GAS,WATER SUP	0.004750	0.005307	0.001888	0.000000	0.000000	0.000000
12	CONSTRUCTION	0.006681	0.000000	0.031147	0.049029	0.000000	0.000000
13	TRADE	0.031288	0.104255	0.019258	0.044296	0.040367	0.000000
14	RESTAURANT & HOTEL	0.003692	0.069452	0.063579	0.000000	0.000000	0.000000
15	TRANSPORT	0.016345	0.070240	0.026629	0.005870	0.011558	0.000000
16	COMMUNICATION	0.001639	0.004275	0.008699	0.000000	0.000000	0.000000
17	FINANCING,REAL ESTATE ETC	0.018175	0.061823	0.021084	0.000000	0.000000	0.000000
18	PUBLIC ADMR. & DEFENCE	0.000000	0.000000	0.479458	0.000000	0.000000	0.000000
19	SERVICE	0.012099	0.074376	0.210729	0.000000	0.000000	0.000000
20	UNSPECIFIED SECTOR	0.000211	0.001706	0.057532	0.000000	0.000000	0.000000
190	TOTAL INTERMEDIATE INPUT	0.366623	1.000000	1.000000	1.000000	1.000000	1.000000
201	WAGE & SALARY	0.152904					
202	OPERATING SURPLUS	0.451072					
203	DEPRECIATION	0.034307					
204	INDIRECT TAX	0.014830					
205	SUBSIDY	-0.019536					
206	GROSS VALUE ADDED	0.633377					
210	TOTAL INPUT	1.000000					

SECTOR	DESCRIPTION	305 EXPORT OF GOODS	306 EXPORT OF SERV.	309 TOTAL FIN DEB	310 TOTAL DEHAND	409 TOTAL IMPORT
1	PADDY	0.000000	0.000000	0.001914	0.039599	0.000000
2	OTHER FOOD CROPS	0.002019	0.000000	0.004152	0.051535	-0.034590
3	OTHER AGRICULTURAL CROPS	0.071264	0.000000	0.031710	0.041985	-0.074536
4	LIVESTOCK & ITS PRODUCT	0.000806	0.000000	0.017796	0.022236	-0.004461
5	FORESTRY	0.046426	0.000000	0.015366	0.018740	-0.000955
6	FISHERY	0.006561	0.000000	0.014011	0.011060	-0.000784
7	MINING & QUARRYING	0.721628	0.000000	0.204515	0.169855	-0.204722
8	FOOD BEVERAGE & TOBACCO	0.008659	0.000000	0.105855	0.081864	-0.097431
9	OTHER INDUSTRIES	0.041765	0.043609	0.118528	0.174152	-0.442073
10	OIL REFINERY	0.044345	0.000000	0.021922	0.033737	-0.584624
11	ELECTRICITY,GAS,WATER SUP	0.000000	0.000000	0.002738	0.006033	0.000000
12	CONSTRUCTION	0.000000	0.000000	0.119438	0.086808	0.000000
13	TRADE	0.047464	0.000000	0.067826	0.073474	0.000000
14	RESTAURANT & HOTEL	0.000000	0.128827	0.038805	0.028186	-0.054763
15	TRANSPORT	0.011032	0.0742987	0.042974	0.043492	-0.049830
16	COMMUNICATION	0.000000	0.018562	0.002592	0.003198	-0.045878
17	FINANCING,REAL ESTATE ETC	0.000000	0.066015	0.029273	0.035818	-0.109181
18	PUBLIC ADMR. & DEFENCE	0.000000	0.000000	0.041975	0.028443	0.000000
19	SERVICE	0.000032	0.000000	0.050833	0.045084	-0.013952
20	UNSPECIFIED SECTOR	0.000000	0.000000	0.005779	0.004101	-1.000000
190	TOTAL INTERMEDIATE INPUT	1.000000	1.000000	1.000000	1.000000	-0.148261



2-3 (4/4) Investment Factor (1983)

A1J TABLE.20=20

SECTOR	DESCRIPTION	600 TOTAL OUTPUT	700 TOTAL SUPPLY
1	PADDY	0.045033	0.039599
2	OTHER FOOD CROPS	0.056593	0.051535
3	OTHER AGRICULTURAL CROPS	0.045280	0.041986
4	LIVESTOCK & ITS PRODUCT	0.025174	0.022236
5	FORESTRY	0.021300	0.018740
6	FISHERY	0.013251	0.011660
7	MINING & QUARRYING	0.184017	0.189855
8	FOOD BEVERAGE & TOBACCO	0.084159	0.081864
9	OTHER INDUSTRIES	0.114410	0.174152
10	OIL REFINERY	0.021271	0.033737
11	ELECTRICITY GAS WATER SUP	0.006860	0.006033
12	CONSTRUCTION	0.088718	0.088808
13	TRADE	0.083555	0.073474
14	RESTAURANT & HOTEL	0.030340	0.028186
15	TRANSPORT	0.047337	0.043482
16	COMMUNICATION	0.003475	0.003198
17	FINANCING REAL ESTATE ETC	0.036329	0.035818
18	PUBLIC ADMIN. & DEFENCE	0.032345	0.028443
19	SERVICE	0.050554	0.045084
20	UNSPECIFIED SECTOR	0.000000	0.004101
190	TOTAL INTERMEDIATE INPUT	1.000000	1.000000

3. (1/12) Financial Data on (280 Mbps x 2)

\*\*\*\*\* INCOME STATEMENT \*\*\*\*\*

	(Year)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1. REVENUE		0	0	0	0	128	309	350	401	442	494	523
2. TELEPHONE		0	0	0	0	135	189	245	316	387	475	560
3. INSTALLATION		0	0	0	0	10,763	14,094	17,425	20,756	24,087	27,418	30,823
4. RENTAL		0	0	0	0	11,026	14,592	18,020	21,473	24,916	28,387	31,906
5. SLDD CALL		0	0	0	0	1,764	2,334	2,883	3,435	3,986	4,541	5,104
6. (SUB TOTAL)		0	0	0	0	12,790	16,926	20,903	24,908	28,902	32,928	37,010
7. OTHERS		0	0	0	0	2,142	2,142	2,142	2,142	2,142	2,142	2,142
8. TOTAL REVENUE		0	0	0	0	2,142	2,142	2,142	2,142	2,142	2,142	2,142
9. OPERATION COSTS		0	0	0	0	3,439	3,439	3,439	3,439	3,439	3,439	3,439
10. DEPRECIATION		0	0	0	0	479	479	479	479	479	479	479
11. SUBMARINE		0	0	0	0	4,562	4,562	4,562	4,562	4,562	4,562	4,562
12. MICROWAVE		0	0	0	0	8,480	8,480	8,480	8,480	8,480	8,480	8,480
13. I.D.C.		0	0	0	0	2,168	6,304	10,281	14,286	18,279	26,845	30,927
14. (TOTAL DEPRECIATION)		0	0	0	0	13,675	13,675	13,675	13,675	13,675	13,675	13,675
15. GROSS PROFIT		0	0	0	0	-11,507	-7,734	-3,667	611	4,604	13,170	18,620
16. INTEREST		0	0	0	0	-11,507	-7,734	-3,667	0	0	0	0
17. LONG-TERM		0	0	0	0	13,675	13,675	13,675	13,675	13,675	13,675	12,307
18. SHORT-TERM		0	0	0	0	0	363	273	0	0	0	0
19. (TOTAL INTEREST PAID)		0	0	0	0	13,675	14,038	13,948	13,675	13,675	13,675	12,037
20. NET PROFIT B/TAX		0	0	0	0	-11,507	-7,734	-3,667	611	4,604	13,170	18,620
21. LOSS CARRYOVER		0	0	0	0	-11,507	-7,734	-3,667	0	0	0	0
22. INCOME TAX		0	0	0	0	0	0	0	0	0	0	4,933
23. NET PROFIT A/TAX		0	0	0	0	-11,507	-7,734	-3,667	611	4,604	13,170	13,687
24. ACCUMULATE NET PROFIT A/TAX		0	0	0	0	-11,507	-19,241	-22,908	-22,297	-17,693	-4,523	9,164
25. TAXABLE INCOME(1)		0	0	0	0	14,040	10,459	6,607	2,265	0	0	0
26. TAXABLE INCOME(2)		0	0	0	0	0	14,040	24,499	31,106	33,371	0	0
27. TAXABLE INCOME(3)		0	0	0	0	0	0	17,066	8,872	2,265	0	0
28. TAXABLE INCOME(4)		0	0	0	0	0	0	-17,066	-8,872	-2,265	0	0
29. TAXABLE INCOME(5)		0	0	0	0	0	0	34,132	17,744	4,530	0	0
29.1 TAXABLE INCOME (5.5)		0	0	0	0	0	0	0	0	0	0	0

3. (2/12) Financial Data on (280 Mbps x 2)

\*\*\*\*\* INCOME STATEMENT \*\*\*\*\*

	(Year)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1. REVENUE												
2. TELEPHONE		564	604	644	684	720	720	720	720	720	774	774
3. INSTALLATION		652	752	858	971	1,034	1,097	1,160	1,223	1,286	1,353	1,421
4. RENTAL		36,672	41,298	45,925	50,552	52,723	54,894	57,064	59,235	61,406	63,465	65,524
5. SLD CALL		37,888	42,554	47,427	52,207	54,477	56,711	58,944	61,178	63,412	65,592	67,719
6. (SUB TOTAL)		6,062	6,824	7,588	8,353	8,716	9,073	9,431	9,788	10,145	10,494	10,835
7. OTHERS		43,950	49,478	55,015	60,560	63,193	65,784	68,375	70,966	73,557	76,086	78,554
8. TOTAL REVENUE		2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142
9. OPERATION COSTS												
10. DEPRECIATION												
11. SUBMARINE		3,851	3,851	3,851	3,851	3,851	3,851	3,851	3,851	3,851	3,851	3,851
12. MICROWAVE		554	554	554	554	554	554	554	556	556	594	594
13. I.D.C.		0	0	0	0	0	0	0	0	0	0	0
14. (TOTAL DEPRECIATION)		4,405	4,405	4,405	4,405	4,405	4,405	4,405	4,407	4,245	4,245	4,245
15. GROSS PROFIT		37,403	42,931	48,468	54,013	56,646	59,237	61,828	64,417	67,170	69,699	72,167
16. INTEREST												
17. LONG-TERM		12,218	10,691	9,164	7,636	6,109	4,582	3,054	1,527	0	0	0
18. SHORT-TERM		0	0	0	0	0	0	0	0	0	0	0
19. (TOTAL INTEREST PAID)		12,218	10,691	9,164	7,636	6,109	4,582	3,054	1,527	0	0	0
20. NET PROFIT B/TAX		25,185	32,240	39,304	46,377	50,537	54,655	58,774	62,890	67,170	69,699	72,167
21. LOSS CARRYOVER		0	0	0	0	0	0	0	0	0	0	0
22. INCOME TAX		8,279	11,284	13,756	16,231	17,687	19,129	20,570	22,011	23,509	24,394	25,258
23. NET PROFIT A/TAX		16,906	20,956	25,548	30,146	32,850	35,526	38,204	40,879	43,661	45,305	46,909
24. ACCUMULATE NET PROFIT A/TAX		15,377	36,333	61,881	92,027	124,877	160,403	198,607	239,486	283,147	328,452	375,361
25. TAXABLE INCOME(1)		0	0	0	0	0	0	0	0	0	0	0
26. TAXABLE INCOME(2)		8,872	2,265	0	0	0	0	0	0	0	0	0
27. TAXABLE INCOME(3)		0	0	0	0	0	0	0	0	0	0	0
28. TAXABLE INCOME(4)		0	0	0	0	0	0	0	0	0	0	0
29. TAXABLE INCOME(5)		0	0	0	0	0	0	0	0	0	0	0
29.1 TAXABLE INCOME (5.5)		0	0	0	0	0	0	0	0	0	0	0

3. (3/12) Financial Data on (280 Mbps x 2)

\*\*\*\*\* INCOME STATEMENT \*\*\*\*\*

(Year)	2012	2013	2014	2015	2016	2017	2018	2019	TOTAL
1. REVENUE									
2. TELEPHONE	774	774	774	849	849	849	849	849	16,009
3. INSTALLATION	1,488	1,556	1,624	1,698	1,772	1,846	1,920	1,994	26,018
4. RENTAL	67,583	69,642	71,701	74,493	77,285	80,077	82,869	85,661	1,258,996
5. SLDD CALL	69,845	71,972	74,099	77,040	79,906	82,772	85,638	88,504	1,301,023
6. (SUB TOTAL)	11,175	11,515	11,855	12,326	12,784	13,243	13,702	14,160	208,152
7. OTHERS	81,020	83,487	85,954	89,366	92,690	96,015	99,340	102,664	1,509,175
8. TOTAL REVENUE	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	53,550
9. OPERATION COSTS									
10. DEPRECIATION									
11. SUBMARINE	3,851	3,851	3,851	3,851	3,851	3,851	6,856	0	99,280
12. MICROWAVE	394	394	394	394	394	394	394	0	11,852
13. I.D.C.	0	0	0	0	0	0	0	0	24,923
14. (TOTAL DEPRECIATION)	4,245	4,245	4,245	4,245	4,245	4,245	7,250	0	136,055
15. GROSS PROFIT	74,633	77,100	79,567	82,979	86,303	89,628	89,948	100,522	1,319,570
16. INTEREST									
17. LONG-TERM	0	0	0	0	0	0	0	0	160,365
18. SHORT-TERM	0	0	0	0	0	0	0	0	1,578
19. (TOTAL INTEREST PAID)	0	0	0	0	0	0	0	0	161,943
20. NET PROFIT B/TAX	74,633	77,100	79,567	82,979	86,303	89,628	89,948	100,522	1,157,627
21. LOSS CARRYOVER	0	0	0	0	0	0	0	0	-33,371
22. INCOME TAX	26,121	26,985	27,848	29,042	30,206	31,369	31,481	35,182	405,169
23. NET PROFIT A/TAX	48,512	50,115	51,719	53,937	56,097	58,259	58,467	65,340	752,467
24. ACCUMULATE NET PROFIT A/TAX	423,873	473,988	525,707	579,644	635,741	694,000	752,467	817,807	5,846,390
25. TAXABLE INCOME(1)	0	0	0	0	0	0	0	0	33,371
26. TAXABLE INCOME(2)	8,872	2,265	0	0	0	0	0	0	166,855
27. TAXABLE INCOME(3)	0	0	0	0	0	0	0	0	28,203
28. TAXABLE INCOME(4)	0	0	0	0	0	0	0	0	-28,203
29. TAXABLE INCOME(5)	0	0	0	0	0	0	0	0	56,406
29.1 TAXABLE INCOME (5.5)	0	0	0	0	0	0	0	0	-33,371

3. (4/12) Financial Data on (280 Mbps x 2)

\*\*\*\*\* CASH FLOW STATEMENT \*\*\*\*\*

(Year)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1. SOURCE OF FUND											
2. PAID-IN SHARE CAPITAL	298	530	515	225	0	0	0	0	0	0	0
3. LONG-TERM DEBT	23,780	51,700	37,355	14,441	0	0	0	0	0	0	0
4. SHORT-TERM DEBT	0	0	0	0	4,625	5,669	2,861	0	0	0	0
5. NET PROFIT A/TAX	0	0	0	0	-14,040	-10,459	-6,607	-2,265	2,599	11,108	18,135
6. DEPRECIATION	0	0	0	0	9,415	9,415	9,415	9,415	8,888	4,405	4,405
7. (TOTAL SOURCE OF FUND)	24,078	52,230	37,870	14,666	0	4,625	5,669	7,150	11,487	15,513	22,540
8. APPLICATION OF FUND											
9. CAPITAL COSTS											
10. SUBMARINE	22,471	46,082	26,787	940	0	0	0	0	0	0	0
11. MICROWAVE	1,607	3,294	2,025	186	0	0	0	0	1,197	0	0
12. (TOTAL CAPITAL COSTS)	24,078	49,376	28,812	1,126	0	0	0	0	1,197	0	0
13. INTEREST DURING CONSTRUCTION	0	2,854	9,058	13,540							
14. REPAYMENT											
15. LONG-TERM	0	0	0	0	0	0	0	0	0	12,728	12,728
16. SHORT-TERM	0	0	0	0	0	4,625	5,669	2,861	0	0	0
17. (TOTAL REPAYMENT)	0	0	0	0	0	4,625	5,669	2,861	0	12,728	12,728
18. TOTAL APPLICATION OF FUND	24,078	52,230	37,870	14,666	0	4,625	5,669	2,861	1,197	12,728	12,728
19. SURPLUS CASH	0	0	0	0	0	0	0	4,289	10,290	2,785	9,812
20. ACCUMULATE SURPLUS CASH	0	0	0	0	0	0	0	4,289	14,579	17,364	27,176

3. (5/12) Financial Data on (280 Mbps x 2)

\*\*\*\*\* CASH FLOW STATEMENT \*\*\*\*\*

(Year)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1. SOURCE OF FUND											
2. PAID-IN SHARE CAPITAL	0	0	0	0	0	0	0	0	0	0	0
3. LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0	0
4. SHORT-TERM DEBT	0	0	0	0	0	0	0	0	0	0	0
5. NET PROFIT A/TAX	16,906	20,956	25,548	30,146	32,850	35,526	38,204	40,879	43,661	45,305	46,909
6. DEPRECIATION	4,405	4,405	4,405	4,405	4,405	4,405	4,405	4,407	4,245	4,245	4,245
7. (TOTAL SOURCE OF FUND)	21,311	25,361	29,953	34,551	37,255	39,931	42,609	45,286	47,906	49,550	51,154
8. APPLICATION OF FUND											
9. CAPITAL COSTS											
10. SUBMARINE	0	0	0	0	0	0	0	0	0	0	0
11. MICROWAVE	0	0	0	0	0	0	0	5,905	0	0	0
12. (TOTAL CAPITAL COSTS)	0	0	0	0	0	0	0	5,905	0	0	0
13. INTEREST DURING CONSTRUCTION											
14. REPAYMENT											
15. LONG-TERM	12,728	12,728	12,728	12,728	12,728	12,728	12,728	12,724	0	0	0
16. SHORT-TERM	0	0	0	0	0	0	0	0	0	0	0
17. (TOTAL REPAYMENT)	12,728	12,728	12,728	12,728	12,728	12,728	12,728	12,724	0	0	0
18. TOTAL APPLICATION OF FUND	12,728	12,728	12,728	12,728	12,728	12,728	12,728	18,629	0	0	0
19. SURPLUS CASH	8,583	12,633	17,225	21,823	24,527	27,203	29,881	26,657	47,906	49,550	51,154
20. ACCUMULATE SURPLUS CASH	35,759	48,392	65,617	87,440	111,967	139,170	169,051	195,708	243,614	293,164	344,318

3. (6/12) Financial Data on (280 Mbps x 2)

\*\*\*\*\* CASH FLOW STATEMENT \*\*\*\*\*

	(Year)	2012	2013	2014	2015	2016	2017	2018	2019	TOTAL
1. SOURCE OF FUND										
2. PAID-IN SHARE CAPITAL		0	0	0	0	0	0	0	0	1,568
3. LONG-TERM DEBT		0	0	0	0	0	0	0	0	127,276
4. SHORT-TERM DEBT		0	0	0	0	0	0	0	0	13,155
5. NET PROFIT A/TAX		48,512	50,115	51,719	53,937	56,097	58,259	58,467	65,340	752,467
6. DEPRECIATION		4,245	4,245	4,245	4,245	4,245	4,245	7,250	0	136,055
7. (TOTAL SOURCE OF FUND)		52,757	54,360	55,964	58,182	60,342	62,504	65,717	65,340	1,030,521
8. APPLICATION OF FUND										
9. CAPITAL COSTS										
10. SUBMARINE		0	0	0	0	0	0	0	0	96,280
11. MICROWAVE		0	0	0	0	0	0	0	0	14,214
12. (TOTAL CAPITAL COSTS)		0	0	0	0	0	0	0	0	110,494
13. INTEREST DURING CONSTRUCTION										
14. REPAYMENT										
15. LONG-TERM		0	0	0	0	0	0	0	0	127,276
16. SHORT-TERM		0	0	0	0	0	0	0	0	13,155
17. (TOTAL REPAYMENT)		0	0	0	0	0	0	0	0	140,431
18. TOTAL APPLICATION OF FUND		0	0	0	0	0	0	0	0	276,377
19. SURPLUS CASH		52,757	54,360	55,964	58,182	60,342	62,504	65,717	65,340	754,144
20. ACCUMULATE SURPLUS CASH		397,075	451,435	507,399	565,581	625,923	688,427	754,144	819,484	5,787,592

3. (7/12) Financial Data on (280 Mbps x 2)

\*\*\*\*\* BALANCE SHEET \*\*\*\*\*

(Year)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1. ASSETS											
2. CURRENT ASSETS	0	0	0	0	0	0	0	4,289	14,570	17,364	27,176
3. FIXED ASSETS											
4. SUBMARINE	22,471	68,553	95,340	96,280	96,280	96,280	96,280	96,280	96,280	96,280	96,280
5. MICROWAVE	1,607	4,901	6,926	7,112	7,112	7,112	7,112	7,112	8,309	8,309	8,309
6. I.D.C.	0	2,854	11,912	25,452	25,452	25,452	25,452	25,452	25,452	25,452	25,452
7. LESS DEPRECIATION	0	0	0	0	9,415	18,830	28,245	37,660	46,548	50,953	55,358
8. NET FIXED ASSETS	24,078	76,308	114,178	128,844	119,429	110,014	100,599	91,184	83,493	79,088	74,683
9. TOTAL ASSETS	24,078	76,308	114,178	128,844	119,429	110,014	100,599	95,473	98,072	96,452	101,859
10. LIABILITIES											
11. CURRENT LIABILITIES											
12. LONG-TERM DEBT	0	0	0	0	0	0	0	0	12,728	12,728	12,728
TO BE REPAYED IN A YEAR											
13. SHORT-TERM DEBT	0	0	0	0	4,625	5,669	2,861	0	0	0	0
14. TOTAL CURRENT LIABILITIES	0	0	0	0	4,625	5,669	2,861	0	12,728	12,728	12,728
15. FIXED LIABILITIES	23,780	75,480	112,835	127,276	127,276	127,276	127,276	127,276	114,548	101,820	89,092
16. TOTAL LIABILITIES	23,780	75,480	112,835	127,276	131,901	132,945	130,137	127,276	127,276	114,548	101,820
17. EQUITY											
18. PAID-IN SHARE CAPITAL	298	828	1,343	1,568	1,568	1,568	1,568	1,568	1,568	1,568	1,568
19. RELATED EARNING	0	0	0	0	-14,040	-24,499	-31,106	-33,371	-30,772	-19,664	-1,529
20. TOTAL EQUITY	298	828	1,343	1,568	-12,472	-22,931	-29,538	-31,803	-29,204	-18,096	39
21. LIABILITIES & EQUITY	24,078	76,308	114,178	128,844	119,429	110,014	100,599	95,473	98,072	96,452	101,859



3. (8/12) Financial Data on (280 Mbps x 2)

\*\*\*\*\* BALANCE SHEET \*\*\*\*\*

(Year)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1. ASSETS											
2. CURRENT ASSETS	35,759	48,392	65,617	87,440	111,967	139,170	169,051	195,708	243,614	293,164	344,318
3. FIXED ASSETS											
4. SUBMARINE	22,471	68,553	95,340	96,280	96,280	96,280	96,280	96,280	96,280	96,280	96,280
5. MICROWAVE	8,309	8,309	8,309	8,309	8,309	8,309	8,309	14,214	14,214	14,214	14,214
6. I.D.C.	25,452	25,452	25,452	25,452	25,452	25,452	25,452	25,452	25,452	25,452	25,452
7. LESS DEPRECIATION	59,763	64,168	68,573	72,978	77,383	81,788	86,193	90,660	94,845	99,090	103,335
8. NET FIXED ASSETS	70,278	65,873	61,468	57,063	52,658	48,253	43,848	45,346	41,101	36,856	32,611
9. TOTAL ASSETS	106,037	114,265	127,085	144,503	164,625	187,423	212,899	241,054	284,715	330,020	376,929
10. LIABILITIES											
11. CURRENT LIABILITIES											
12. LONG-TERM DEBT	12,728	12,728	12,728	12,728	12,728	12,728	12,728	0	0	0	0
TO BE REPAID IN A YEAR											
13. SHORT-TERM DEBT	0	0	0	0	0	0	0	0	0	0	0
14. TOTAL CURRENT LIABILITIES	12,728	12,728	12,728	12,728	12,728	12,728	12,724	0	0	0	0
15. FIXED LIABILITIES	76,364	63,636	50,908	38,180	25,452	12,724	0	0	0	0	0
16. TOTAL LIABILITIES	89,092	76,364	63,636	50,908	38,180	25,452	12,724	0	0	0	0
17. EQUITY											
18. PAID-IN SHARE CAPITAL	1,568	1,568	1,568	1,568	1,568	1,568	1,568	1,568	1,568	1,568	1,568
19. RELATED EARNING	15,377	36,333	61,881	92,027	124,877	160,403	198,607	239,486	283,147	328,452	375,361
20. TOTAL EQUITY	16,945	37,901	63,449	93,595	126,445	161,971	200,175	241,054	284,715	330,020	376,929
21. LIABILITIES & EQUITY	106,037	114,265	127,085	144,503	164,625	187,423	212,899	241,054	284,715	330,020	376,929

3. (9/12) Financial Data on (280 Mbps x 2)

\*\*\*\*\* BALANCE SHEET \*\*\*\*\*

(Year)	2012	2013	2014	2015	2016	2017	2018	2019	TOTAL
1. ASSETS									
2. CURRENT ASSETS	397,075	451,435	507,399	565,581	625,923	638,427	754,144	819,484	5,787,592
3. FIXED ASSETS									
4. SUBMARINE	96,280	96,280	96,280	96,280	96,280	96,280	96,280	96,280	2,689,644
5. MICROWAVE	14,214	14,214	14,214	14,214	14,214	14,214	14,214	14,214	288,438
6. I.D.C.	25,452	25,452	25,452	25,452	25,452	25,452	25,452	25,452	676,518
7. LESS DEPRECIATION	107,580	111,825	116,070	120,315	124,560	128,805	136,055	136,055	1,990,935
8. NET FIXED ASSETS	28,366	24,121	19,876	15,631	11,386	7,141	-109	-109	1,663,665
9. TOTAL ASSETS	425,441	475,556	527,275	581,212	637,309	695,568	754,035	819,375	7,451,257
10. LIABILITIES									
11. CURRENT LIABILITIES									
12. LONG-TERM DEBT	0	0	0	0	0	0	0	0	127,276
TO BE REPAID IN A YEAR									
13. SHORT-TERM DEBT	0	0	0	0	0	0	0	0	13,155
14. TOTAL CURRENT LIABILITIES	0	0	0	0	0	0	0	0	140,431
15. FIXED LIABILITIES	0	0	0	0	0	0	0	-127,276	1,421,199
16. TOTAL LIABILITIES	0	0	0	0	0	0	0	-127,276	1,561,630
17. EQUITY									
18. PAID-IN SHARE CAPITAL	1,568	1,568	1,568	1,568	1,568	1,568	1,568	1,568	43,237
19. RELATED EARNING	423,873	473,988	525,707	579,644	635,741	694,000	752,467	817,807	5,846,390
20. TOTAL EQUITY	425,441	475,556	527,275	581,212	637,309	695,568	754,035	819,375	5,889,627
21. LIABILITIES & EQUITY	425,441	475,556	527,275	581,212	637,309	695,568	754,035	819,375	7,451,257

3. (10/12) Financial Data on (280 Mbps x 2)

\*\*\*\*\* INTERNAL RATE OF RETURN \*\*\*\*\*

EIRR = ..... 0.2003474 \* 100%

(Year)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
1. CASH IN-FLOW										
2. TELEPHONE REVENUE	0	0	0	0	11,026	14,592	18,020	21,473	24,915	28,387
3. OTHER REVENUE	0	0	0	0	1,764	2,334	2,883	3,435	3,986	4,541
4. CONSUMER'S SURPLUS	0	0	0	0	1,730	2,187	2,697	3,208	3,719	4,231
5. TOTAL IN-FLOW	0	0	0	0	14,520	19,113	23,600	28,116	32,621	37,159
6. CASH OUT-FLOW										
7. CAPITAL COSTS	24,078	49,376	28,812	1,126	0	0	0	0	1,197	0
8. OPERATION COSTS	0	0	0	0	2,142	2,142	2,142	2,142	2,142	2,142
9. TOTAL OUT-FLOW	24,078	49,376	28,812	1,126	2,142	2,142	2,142	2,142	3,339	2,142
10. ANNUAL CASH FLOW	-24,078	-49,376	-28,812	-1,126	12,378	16,971	21,458	25,974	29,282	35,017
11. ACCUMULATE ANNUAL CASH FLOW	-24,078	-73,454	-102,266	-103,392	-91,014	-74,043	-52,585	-26,611	2,671	37,688
12. DISCOUNTED CASH FLOW	-24,078	-41,134	-19,996	-651	5,962	6,810	7,173	7,234	6,794	6,768
13. ACCUMULATE DISCOUNTED CASH FLOW	-24,078	-65,212	-85,208	-85,859	-79,897	-73,087	-65,914	-58,680	-51,886	-45,118
14. DISCOUNT RATE	1	0.8330921	0.6940425	0.5782013	0.4816950	0.4012963	0.3343168	0.2785167	0.2320301	0.1933024

FIRR = ..... 0.1821405 %

(Year)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
1. CASH IN-FLOW										
2. TELEPHONE REVENUE	0	0	0	0	11,026	14,592	18,020	21,473	24,916	28,387
3. OTHER REVENUE	0	0	0	0	1,764	2,334	2,883	3,435	3,986	4,541
4. TOTAL IN-FLOW	0	0	0	0	12,790	16,926	20,903	24,908	28,902	32,928
5. CASH OUT-FLOW										
6. CAPITAL COSTS	24,078	49,376	28,812	1,126	0	0	0	0	1,197	0
7. OPERATION COSTS	0	0	0	0	2,142	2,142	2,142	2,142	2,142	2,142
8. TOTAL OUT-FLOW	24,078	49,376	28,812	1,126	2,142	2,142	2,142	2,142	3,339	2,142
9. ANNUAL CASH FLOW	-24,078	-49,376	-28,812	-1,126	10,648	14,784	18,761	22,766	25,563	30,786
10. ACCUMULATE ANNUAL CASH FLOW	-24,078	-73,454	-102,266	-103,392	-92,744	-77,960	-59,199	-36,433	-10,870	-47,829
11. DISCOUNTED CASH FLOW	-24,078	-41,768	-20,617	-681	5,452	6,403	6,874	7,056	6,702	6,828
12. ACCUMULATE DISCOUNTED CASH FLOW	-24,078	-65,846	-86,463	-87,144	-81,692	-75,289	-68,415	-61,359	-54,657	-47,829
13. DISCOUNT RATE	1	0.8459230	0.7155858	0.6053305	0.5120630	0.4331659	0.3664250	0.3095674	0.2622086	0.2218083

3. (11/12) Financial Data on (280 Mbps x 2)

\*\*\*\*\* INTERNAL RATE OF RETURN \*\*\*\*\*

EIRR = ..... 0.2003474 \* 100%

(Year)	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1. CASH IN-FLOW	33,128	37,888	42,654	47,427	52,207	54,477	56,711	58,944	61,178	63,412
2. TELEPHONE REVENUE	5,300	6,062	6,824	7,588	8,353	8,716	9,073	9,431	9,788	10,145
3. OTHER REVENUE	5,187	5,940	6,697	7,457	8,243	8,446	8,793	9,140	9,506	9,856
4. CONSUMER'S SURPLUS	43,615	49,890	56,175	62,472	68,803	71,639	74,577	77,515	80,472	83,413
5. TOTAL IN-FLOW										
6. CASH OUT-FLOW	0	0	0	0	0	0	0	0	0	0
7. CAPITAL COSTS	2,142	10,421	13,426	15,898	18,373	19,829	21,271	22,712	24,153	25,651
8. OPERATION COSTS	2,142	10,421	13,426	15,898	18,373	19,829	21,271	22,712	24,153	25,651
9. TOTAL OUT-FLOW										
10. ANNUAL CASH FLOW	41,473	39,469	42,749	46,574	50,430	51,810	53,306	54,803	50,414	57,762
11. ACCUMULATE ANNUAL CASH FLOW	79,161	118,630	161,379	207,953	258,383	310,193	363,499	418,302	468,716	526,478
12. DISCOUNTED CASH FLOW	6,678	5,295	4,777	4,336	3,911	3,348	2,869	2,458	1,883	1,798
13. ACCUMULATE DISCOUNTED CASH FLOW	-38,440	-33,145	-28,368	-24,032	-20,121	-16,773	-13,904	-11,446	-9,563	-7,765
14. DISCOUNT RATE	0.1610387	0.1341601	0.1117677	0.0931128	0.0775715	0.0646242	0.0538379	0.0448519	0.0373658	0.0311291

FIRR = ..... 0.1821405 %

(Year)	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1. CASH IN-FLOW	33,128	37,888	42,654	47,427	52,207	54,477	56,711	58,944	61,178	63,412
2. TELEPHONE REVENUE	5,300	6,062	6,824	7,588	8,353	8,716	9,073	9,431	9,788	10,145
3. OTHER REVENUE	38,428	43,950	49,478	55,015	60,560	63,193	65,784	68,375	70,966	73,557
4. TOTAL IN-FLOW										
5. CASH OUT-FLOW	0	0	0	0	0	0	0	0	0	0
6. CAPITAL COSTS	2,142	10,421	13,426	15,898	18,373	19,829	21,271	22,712	24,153	25,651
7. OPERATION COSTS	2,142	10,421	13,426	15,898	18,373	19,829	21,271	22,712	24,153	25,651
8. TOTAL OUT-FLOW										
9. ANNUAL CASH FLOW	36,286	33,529	36,052	39,117	42,187	43,364	44,513	45,663	40,908	47,906
10. ACCUMULATE ANNUAL CASH FLOW	56,202	89,731	125,783	164,900	207,087	250,451	294,964	340,627	381,535	429,441
11. DISCOUNTED CASH FLOW	6,808	5,321	4,840	4,442	4,053	3,524	3,060	2,655	2,012	1,993
12. ACCUMULATE DISCOUNTED CASH FLOW	-41,021	-35,700	-30,860	-26,418	-22,365	-18,841	-15,781	-13,126	-11,114	-9,121
13. DISCOUNT RATE	0.1876327	0.1587228	0.1342673	0.1135798	0.0960798	0.0812761	0.0687533	0.0581600	0.0491989	0.0416185

3. (12/12) Financial Data on (280 Mbps x 2)

\*\*\*\*\* INTERNAL RATE OF RETURN \*\*\*\*\*

EIRR = ..... 0.2003474 \* 100%

(Year)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	TOTAL
1. CASH IN-FLOW											
2. TELEPHONE REVENUE	65,592	67,719	69,845	71,972	74,099	77,040	79,906	82,772	85,638	88,504	1,301,023
3. OTHER REVENUE	10,494	10,835	11,175	11,515	11,855	12,326	12,784	13,243	13,702	14,160	208,152
4. CONSUMER'S SURPLUS	10,207	10,539	11,847	11,179	11,511	11,969	12,413	12,857	13,300	13,743	201,859
5. TOTAL IN-FLOW	86,293	89,093	91,867	94,666	97,465	101,335	105,103	108,872	112,640	116,407	1,711,034
6. CASH OUT-FLOW	0	0	0	0	0	0	0	0	0	0	110,494
7. CAPITAL COSTS	26,536	27,400	28,263	29,127	29,990	31,184	32,348	33,511	33,623	37,324	458,710
8. OPERATION COSTS	26,536	27,400	28,263	29,127	29,990	31,184	32,348	33,511	33,623	37,324	569,204
9. TOTAL OUT-FLOW											
10. ANNUAL CASH FLOW	59,757	61,693	63,604	65,539	67,475	70,151	72,755	75,361	79,017	79,083	1,141,830
11. ACCUMULATE ANNUAL CASH FLOW	586,235	647,928	711,552	777,071	844,546	914,697	987,452	1,062,813	1,141,830	1,220,913	10,079,714
12. DISCOUNTED CASH FLOW	1,549	1,332	1,144	982	842	730	630	544	475	396	463
13. ACCUMULATE DISCOUNTED CASH FLOW	-6,216	-4,884	-3,740	-2,758	-1,916	-1,186	-556	-12	463	859	-859,301
14. DISCOUNT RATE	0.0259334	0.0216049	0.0179989	0.0149947	0.0124920	0.0104070	0.0086700	0.0072229	0.0060173	0.0050130	5.9612954

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FIRR = ..... 0.1821405 %

(Year)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	TOTAL
1. CASH IN-FLOW											
2. TELEPHONE REVENUE	65,592	67,719	69,845	71,972	74,099	77,040	79,906	82,772	85,638	88,504	1,301,023
3. OTHER REVENUE	10,494	10,835	11,175	11,515	11,855	12,326	12,784	13,243	13,702	14,160	208,152
4. TOTAL IN-FLOW	76,086	78,554	81,020	83,487	85,954	89,366	92,690	96,015	99,340	102,664	1,509,175
5. CASH OUT-FLOW	0	0	0	0	0	0	0	0	0	0	110,494
6. CAPITAL COSTS	26,536	27,400	28,263	29,127	29,990	31,184	32,348	33,511	33,623	37,324	458,710
7. OPERATION COSTS	26,536	27,400	28,263	29,127	29,990	31,184	32,348	33,511	33,623	37,324	569,204
8. TOTAL OUT-FLOW											
9. ANNUAL CASH FLOW	49,550	51,154	52,757	54,360	55,964	58,182	60,342	62,504	65,717	65,340	939,971
10. ACCUMULATE ANNUAL CASH FLOW	478,991	530,145	582,020	637,262	693,226	751,408	811,750	874,254	939,971	1,005,311	8,080,150
11. DISCOUNTED CASH FLOW	1,744	1,523	1,329	1,158	1,008	887	778	682	606	510	594
12. ACCUMULATE DISCOUNTED CASH FLOW	-7,377	-5,854	-4,525	-3,367	-2,359	-1,472	-694	-12	594	1,104	-902,185
13. DISCOUNT RATE	0.0352060	0.0297816	0.0251929	0.0213113	0.0180277	0.0152500	0.0129003	0.0109127	0.0092313	0.0078089	6.4395817

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