PROGRAM STUDI

S1 SISTEM KOMPUTER

UNIVERSITAS DIPONEGORO

Jaringan Komputer

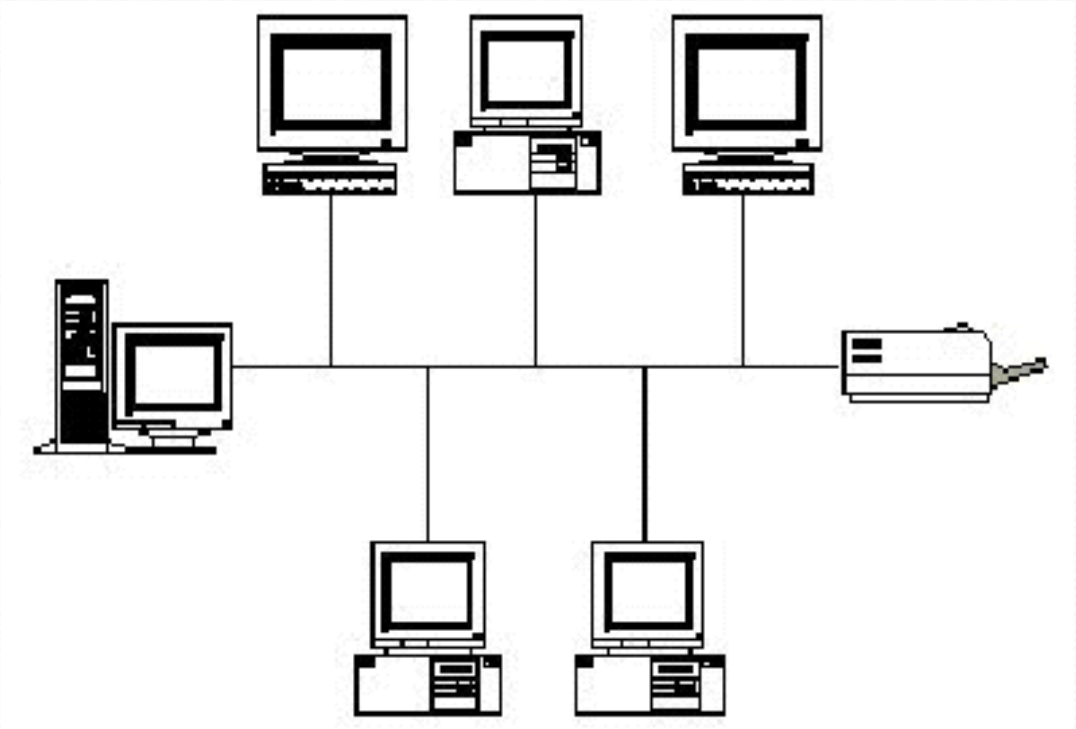
Disampaikan Dalam Rangka
Pengabdian Masyarakat

Trainner: Adian Fatchur Rochim, ST, MT
Email: adian@undip.ac.id

24 Oktober 2009

Apa itu Jaringan

- Kumpulan dua atau lebih dari komputer yang saling berhubungan satu sama lain



Kegunaan Jaringan

- Sharing resource (data, printer, dll)
- Efisiensi waktu
- Efisiensi tempat
- Effisiensi dana

Kerugian Jaringan

- Membutuhkan biaya tambahan
- Memungkinkan adanya serangan ke komputer kita
- Mengurangi human communication

Peralatan Jaringan Sederhana

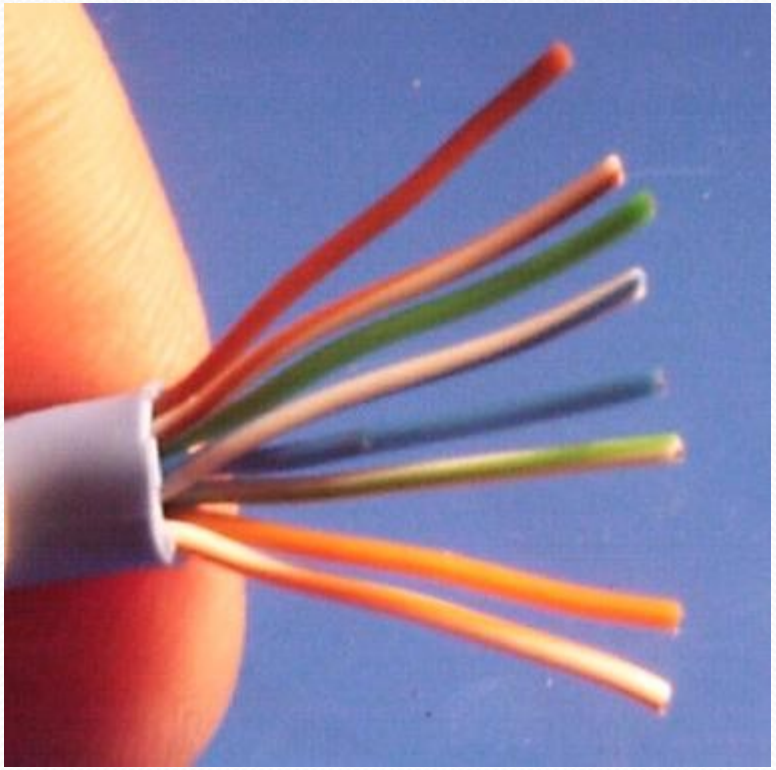
- PC (komputer)
- LAN card
- Kabel UTP
- RJ 45
- Tang Crimping
- Multimeter
- Hub
- Switch

PC

Projected Sale of Electronic Dingbats
1st Quarter
2nd Quarter
3rd Quarter
4th Quarter
DVD
CD-ROM

LAN card

Kabel UTP



RJ 45

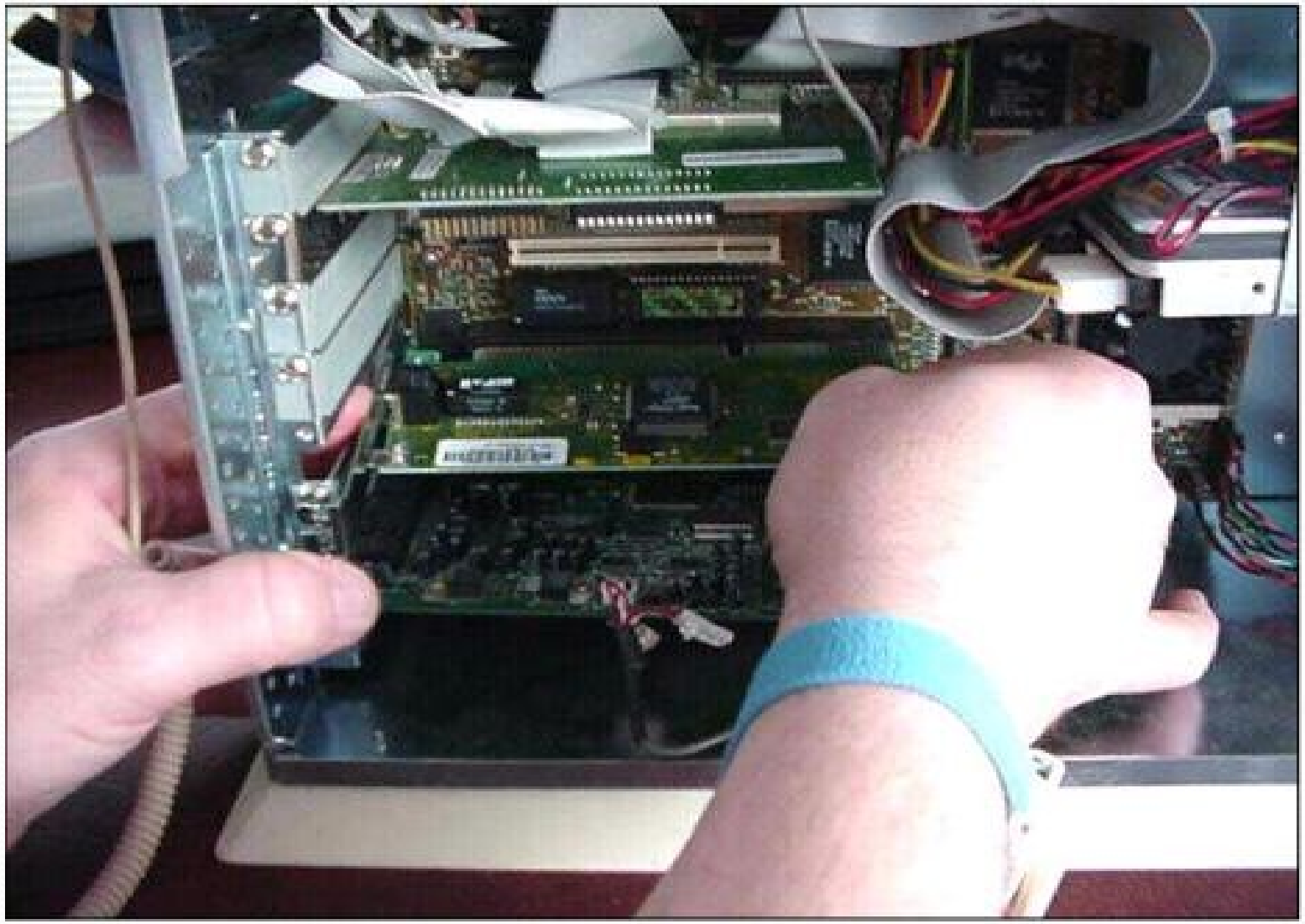
Tang Crimping

Multimeter

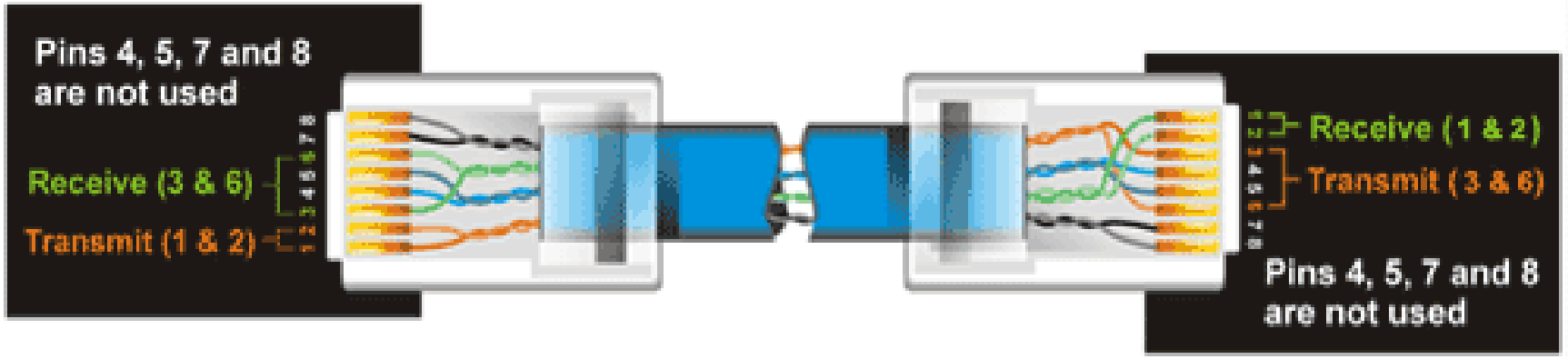
HUB

SWITCH

Pasang LAN card ke PC



Aturan Pengkabelan (1)



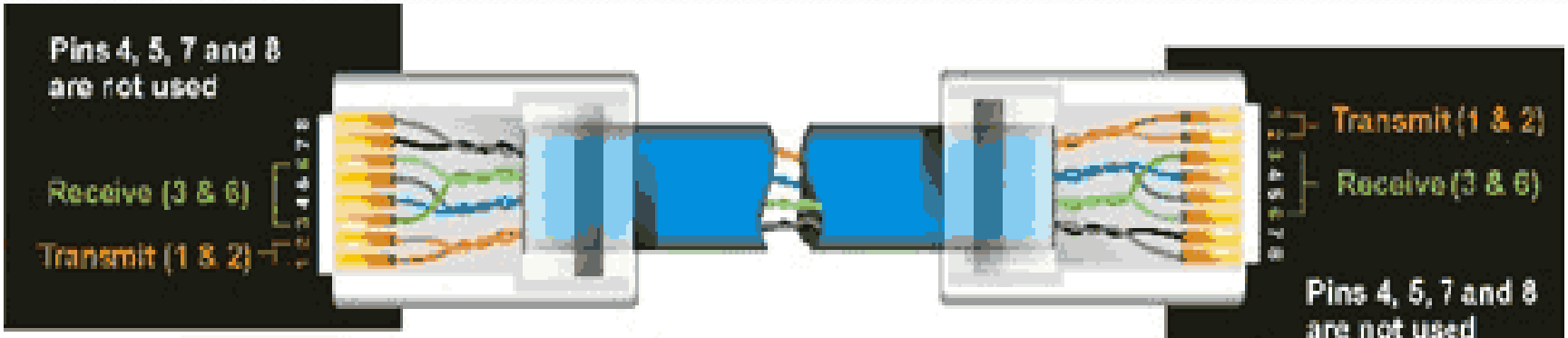
Pin number	Wire Color
Pin 1 ==>	Orange/White
Pin 2 ==>	Orange
Pin 3 ==>	Green/White
Pin 4 ==>	Blue
Pin 5 ==>	Blue/White
Pin 6 ==>	Green
Pin 7 ==>	Brown/White
Pin 8 ==>	Brown

Crossed-Over

Wire	Becomes
1	3
2	6
3	1
6	2

Pin number	Wire Color
Pin 1 ==>	Green/White
Pin 2 ==>	Green
Pin 3 ==>	Orange/White
Pin 4 ==>	Blue
Pin 5 ==>	Blue/White
Pin 6 ==>	Orange
Pin 7 ==>	Brown/White
Pin 8 ==>	Brown

Aturan Pengkabelan (2)



Pin number	Wire Color
Pin 1 ==>	Orange/White
Pin 2 ==>	Orange
Pin 3 ==>	Green/White
Pin 4 ==>	Blue
Pin 5 ==>	Blue/White
Pin 6 ==>	Green
Pin 7 ==>	Brown/White
Pin 8 ==>	Brown

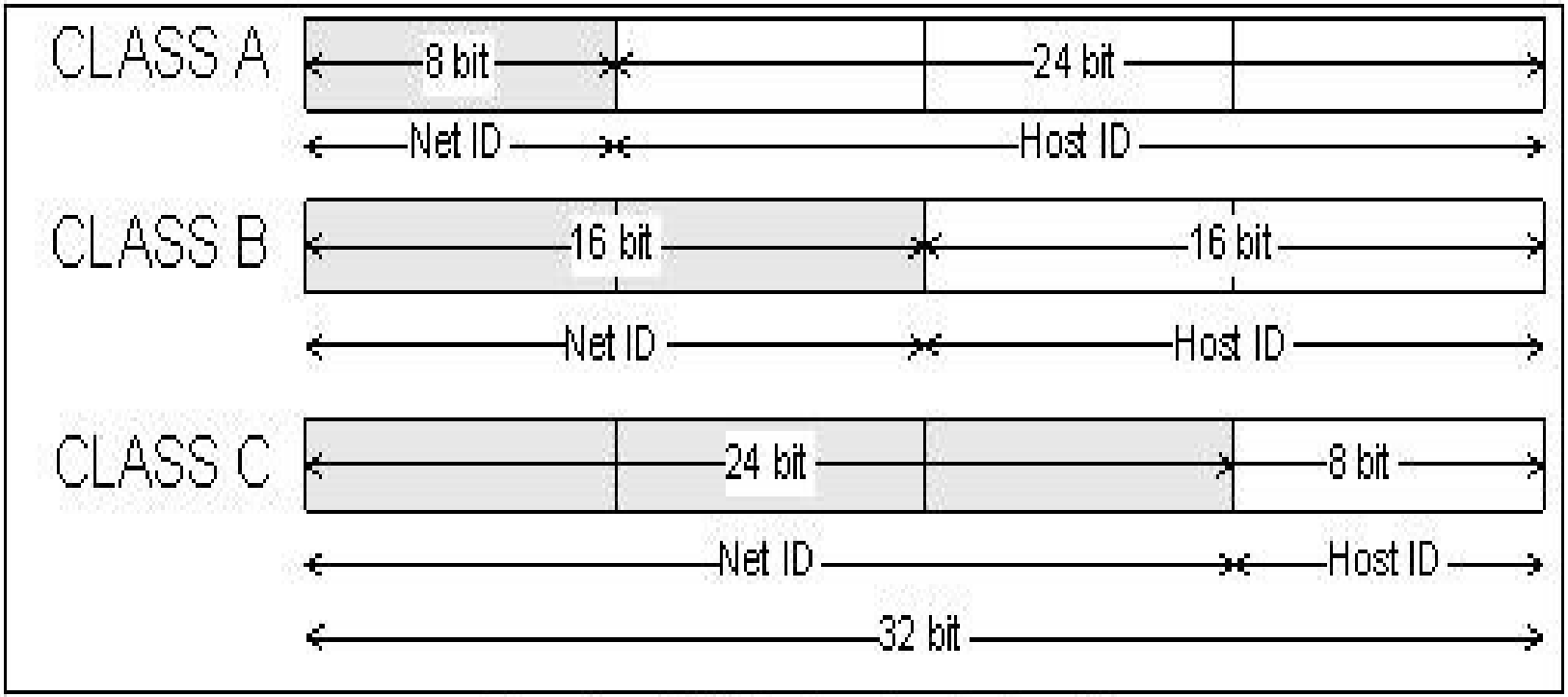
Straight-Through

Wire	Becomes
1	1
2	2
3	3
6	6

Kegunaan IP dan Subnetmask

- Identitas dari komputer agar bisa terhubung dengan komputer yang lain
- Terdiri dari 32 bit yang direpresentasikan dalam 4 group (W X Y Z)
- Terdiri dari 3 kelas (A, B, C)

Pembagian Kelas Jaringan



Gambar 3.1 Pembagian kelas IP

Kelas – kelas IP

Kelas	Network ID	Host ID	Default Subnet Mask
A	W.	X.Y.Z	255.0.0.0
B	W.X	Y.Z	255.255.0.0
C	W.X.y	Z	255.255.255.0

Jumlah Network

Kelas	Range	Jumlah Maksimur	Default Subnet Mask
A	1 - 126	127	16777214
B	128 - 191	16384	65534
C	192 - 223	2097152	254

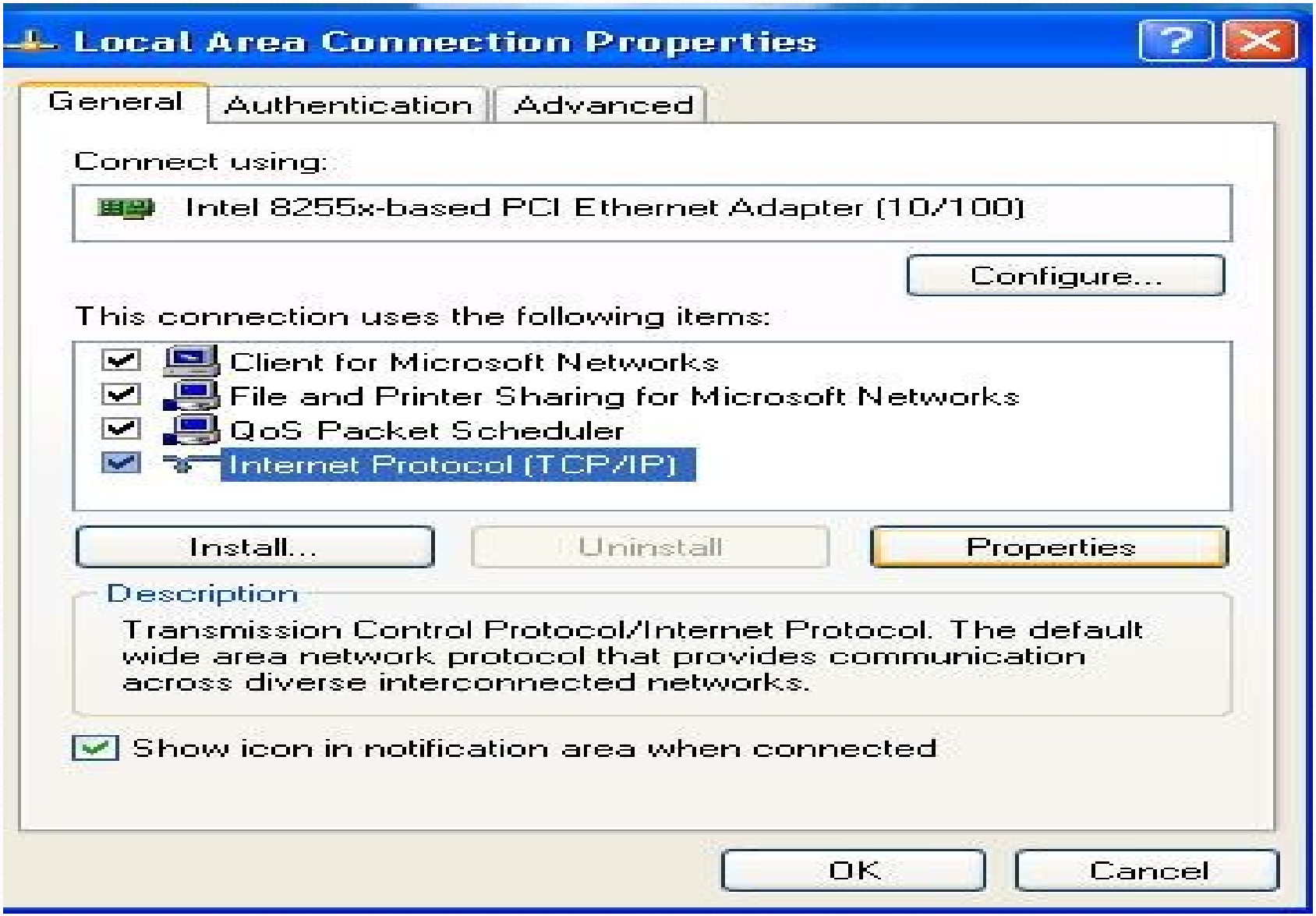
Kenapa harus memakai subnetmask berbeda ???

- Teknologi yang berbeda dalam jaringan
- Kongesti yang berbeda, sebuah LAN dengan 254 host akan memiliki performansi yang kurang baik dibandingkan 62 host
- Perbedaan group dalam satu organisasi yang berbeda wewenangnya

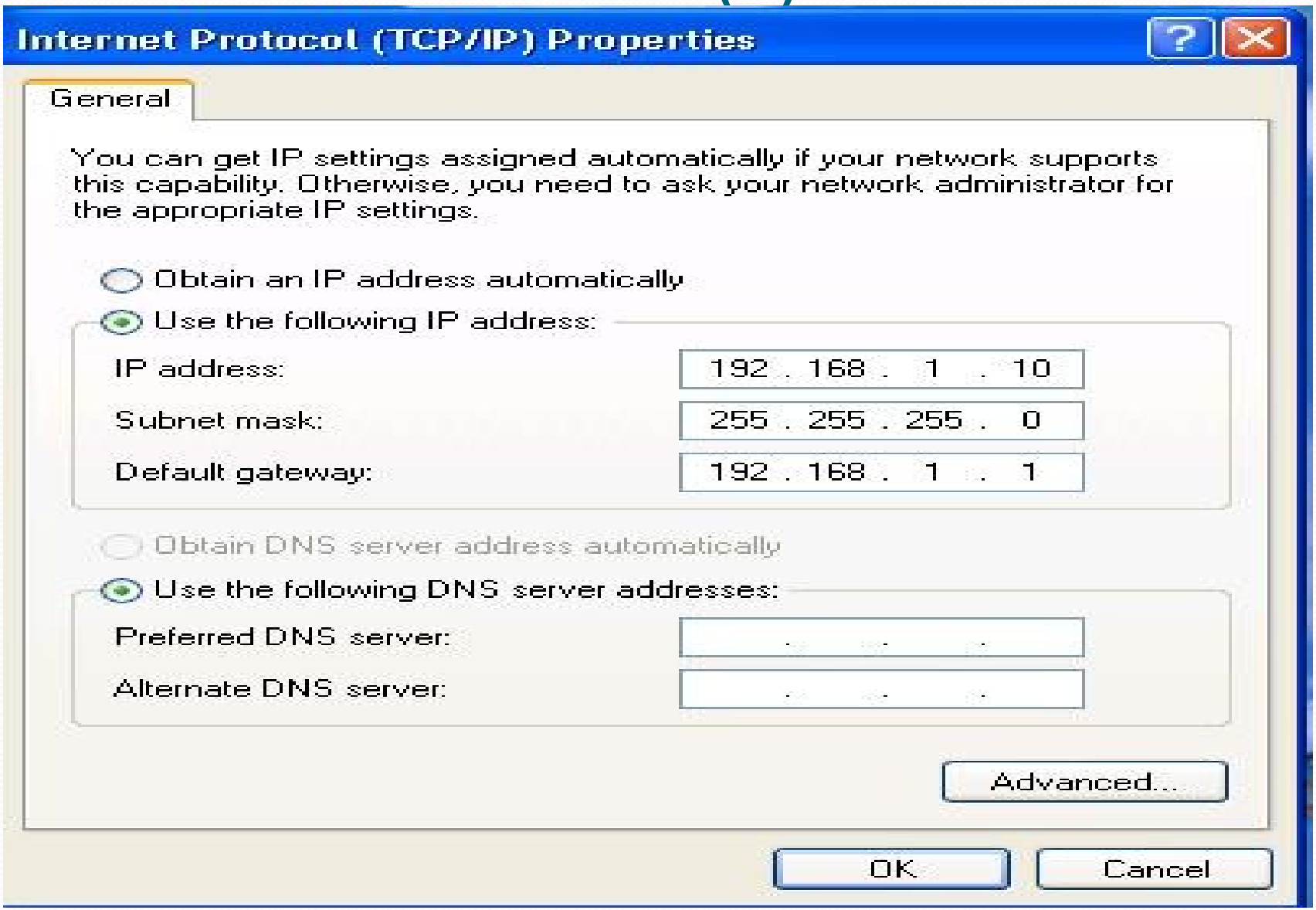
Pemberian nomor IP (1)

Pemberian nomor IP (2)

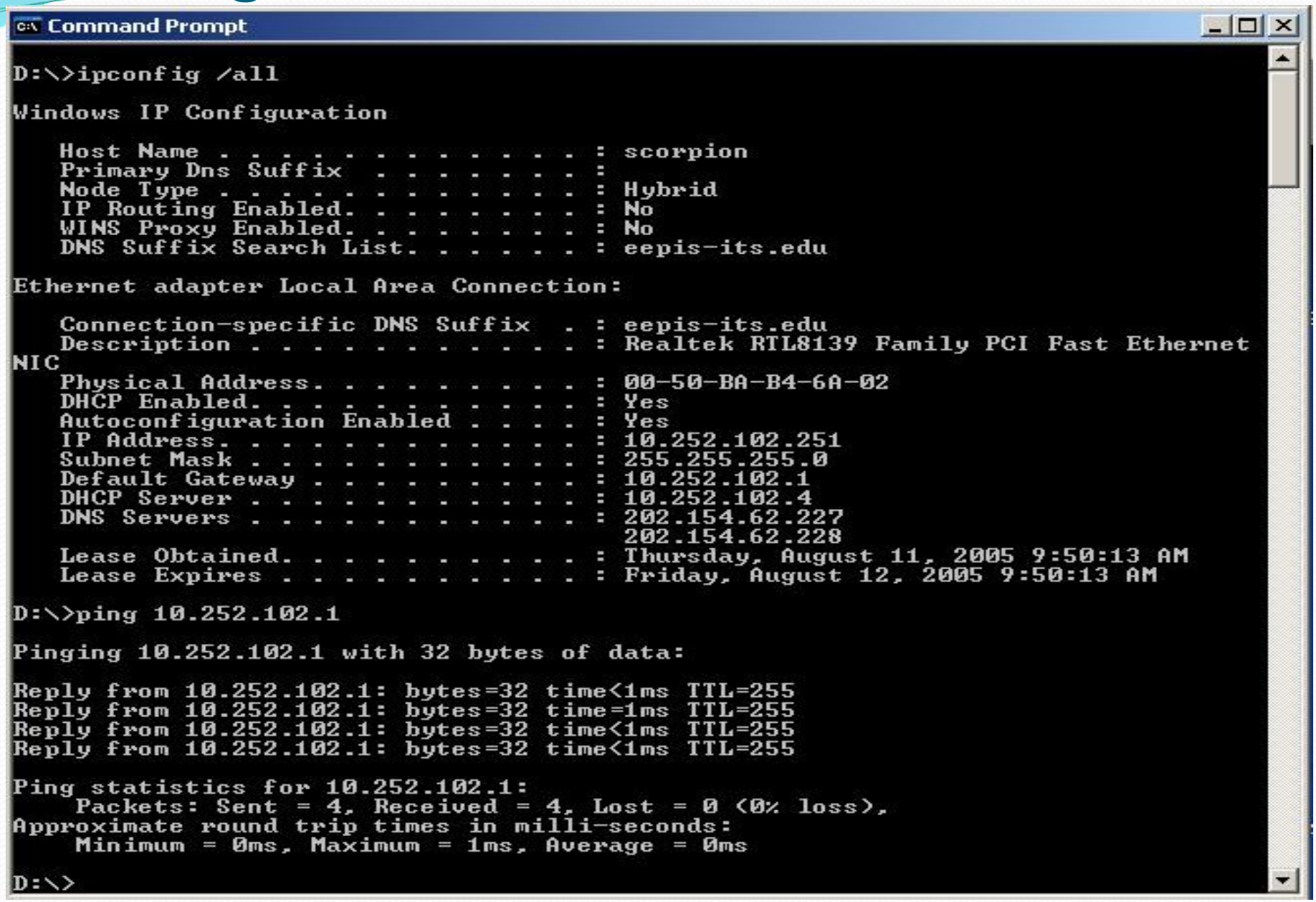
Pemberian nomor IP (3)



Pemberian nomor IP (4)

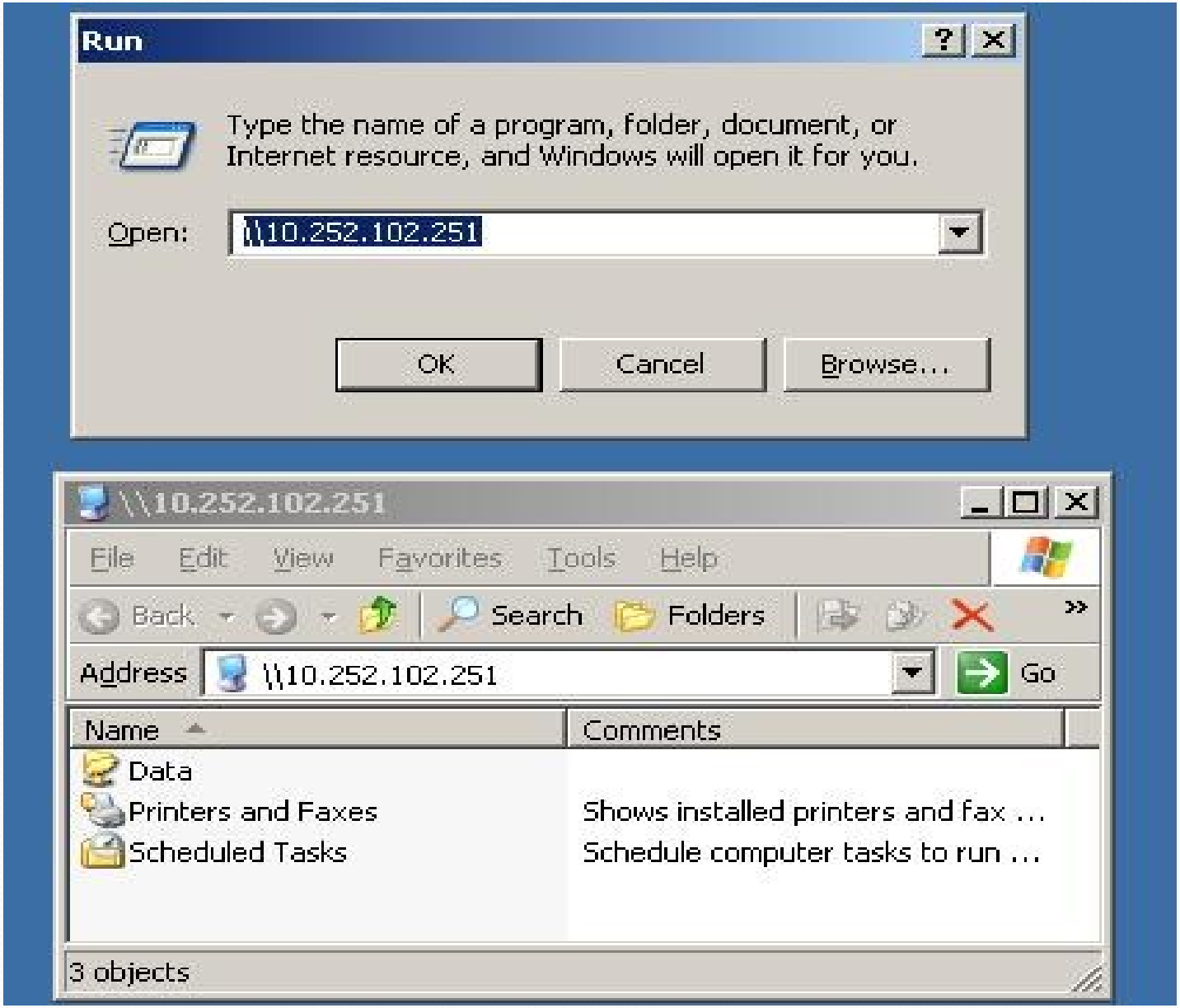


Testing koneksi



Sharing Data

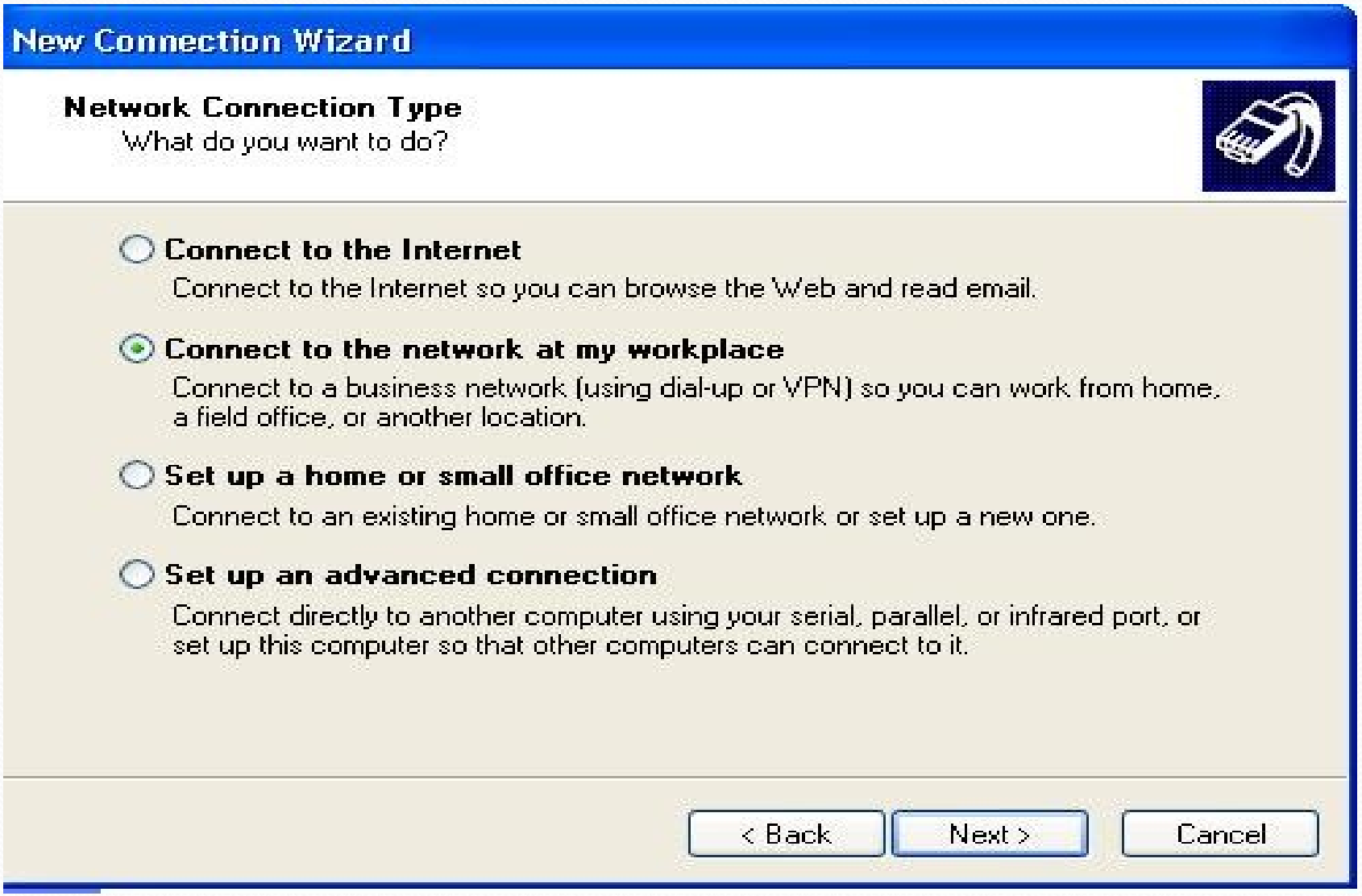
Ambil Data Sharing



Koneksi Internet via Modem

Koneksi Internet via Modem

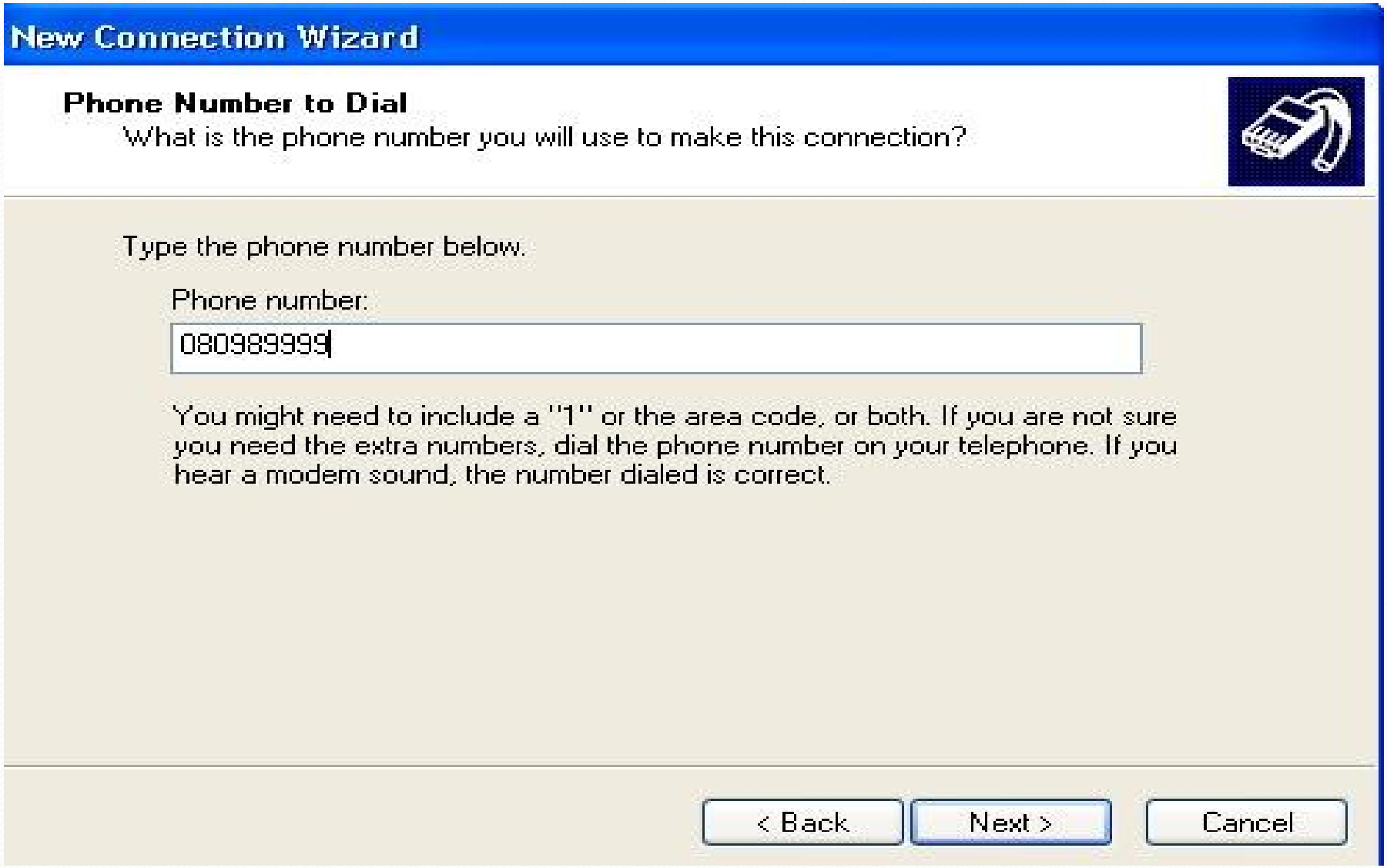
Koneksi Internet via Modem



Koneksi Internet via Modem

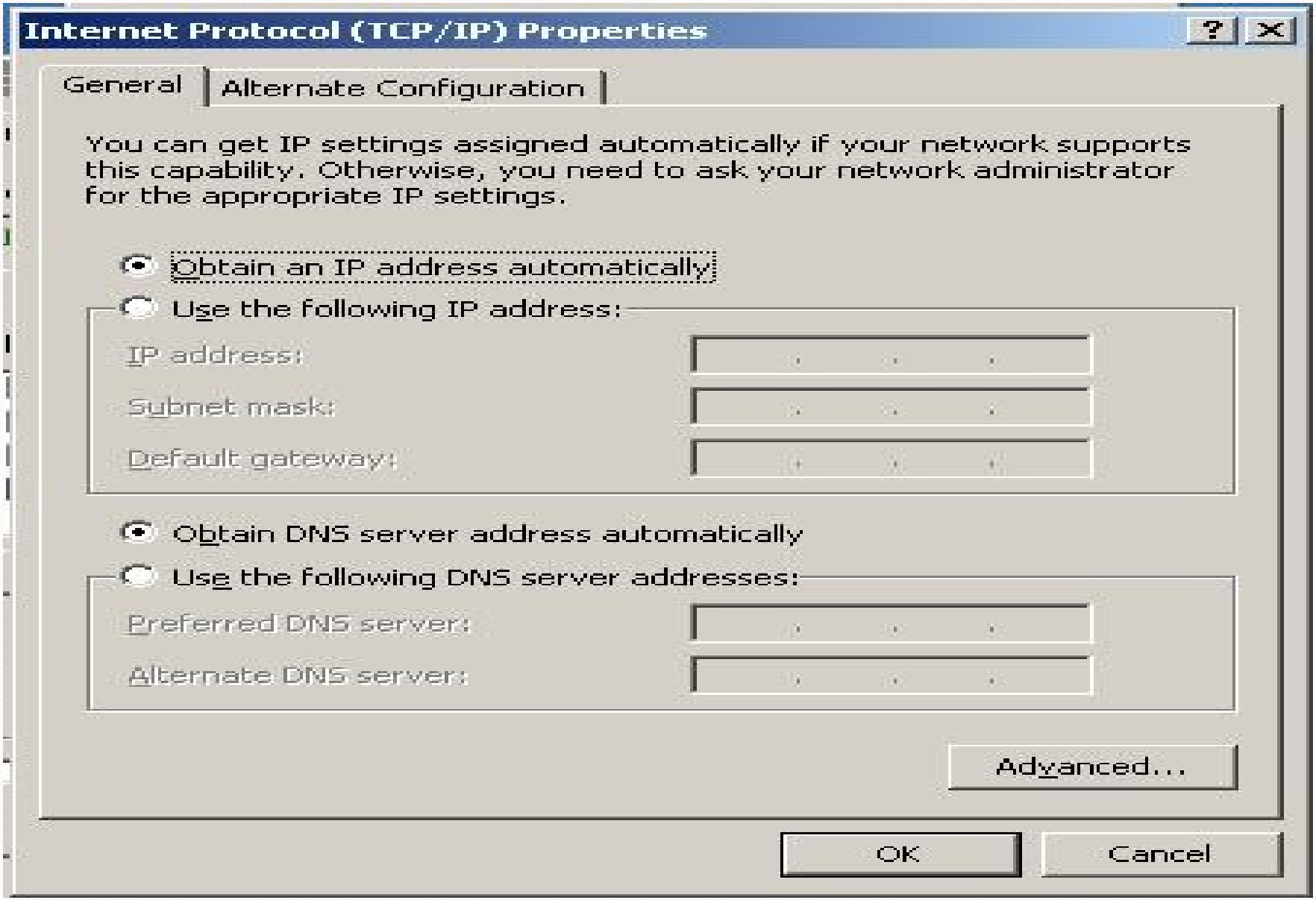
New Connection Wizard
Select a Device
This is the device that will be used to make the connection.
You have more than one dial-up device on your computer.
Select the devices to use in this connection:
Modem - Lucent Technologies Soft Modem AMR (COM3)
Modem - Nokia CDMA 1xRTT 3G Packet Data Modem (COM4)
< Back
Next >
Cancel

Koneksi Internet via Modem



Koneksi Internet via Modem

Koneksi internet via jaringan



Sekian

Terima Kasih