Considerations of Wireless VoIP system

By Hirohide Ogawa

Hitachi Cable,Ltd.

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1. WirelessIP 5000

WirelessIP 5000

Concept: Broad connection nature

Target: Replace inside **PHS**, **Codeless Phone**,

and **Table IP Phone** for Enterprise

IP Telephony Network (SIP)
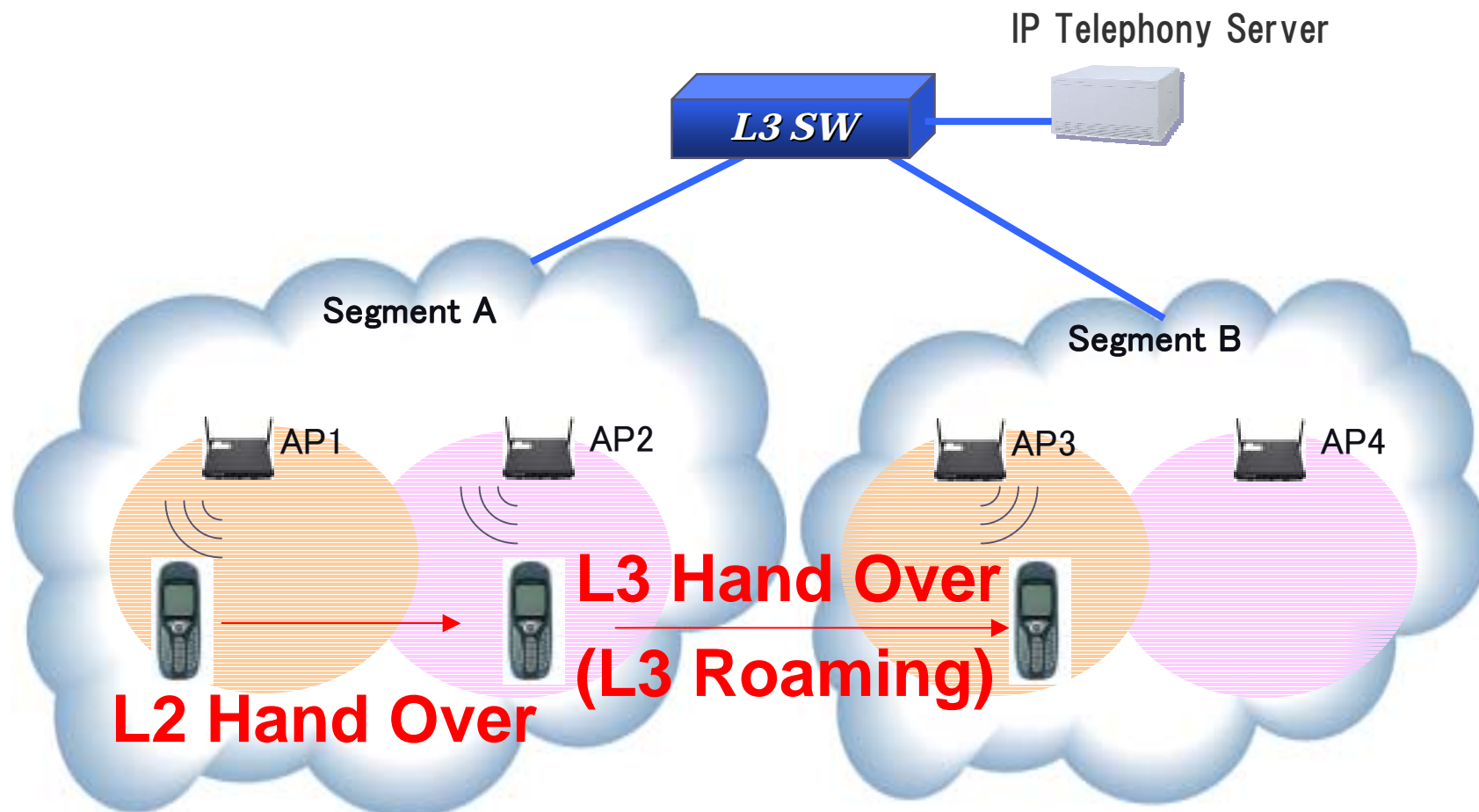
AP

802.11b

WirelessIP 5000
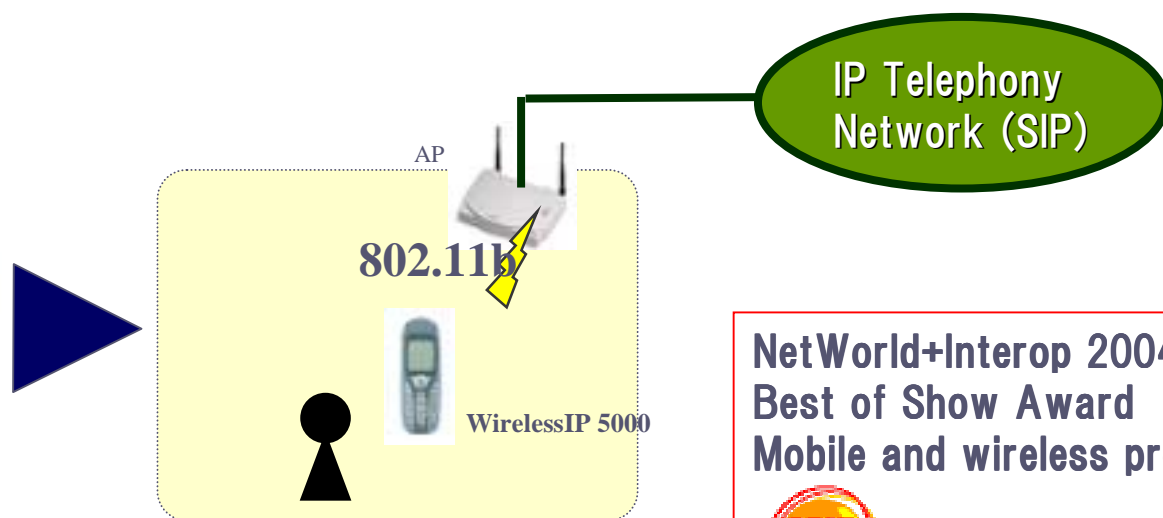
NetWorld+Interop 2004 Tokyo
Best of Show Award
Mobile and wireless products

Grand Prix

2. Consideration of
Wireless VoIP system

Hand over(Roaming) Type

IP Telephony Server

L3 SW

Segment A

Segment B

AP1   AP2   AP3   AP4

L3 Hand Over

(L3 Roaming)

L2 Hand Over

Handover or Roaming ?

※ I define Handover and Roaming as following in this session.

! **Handover**

Move in talking.
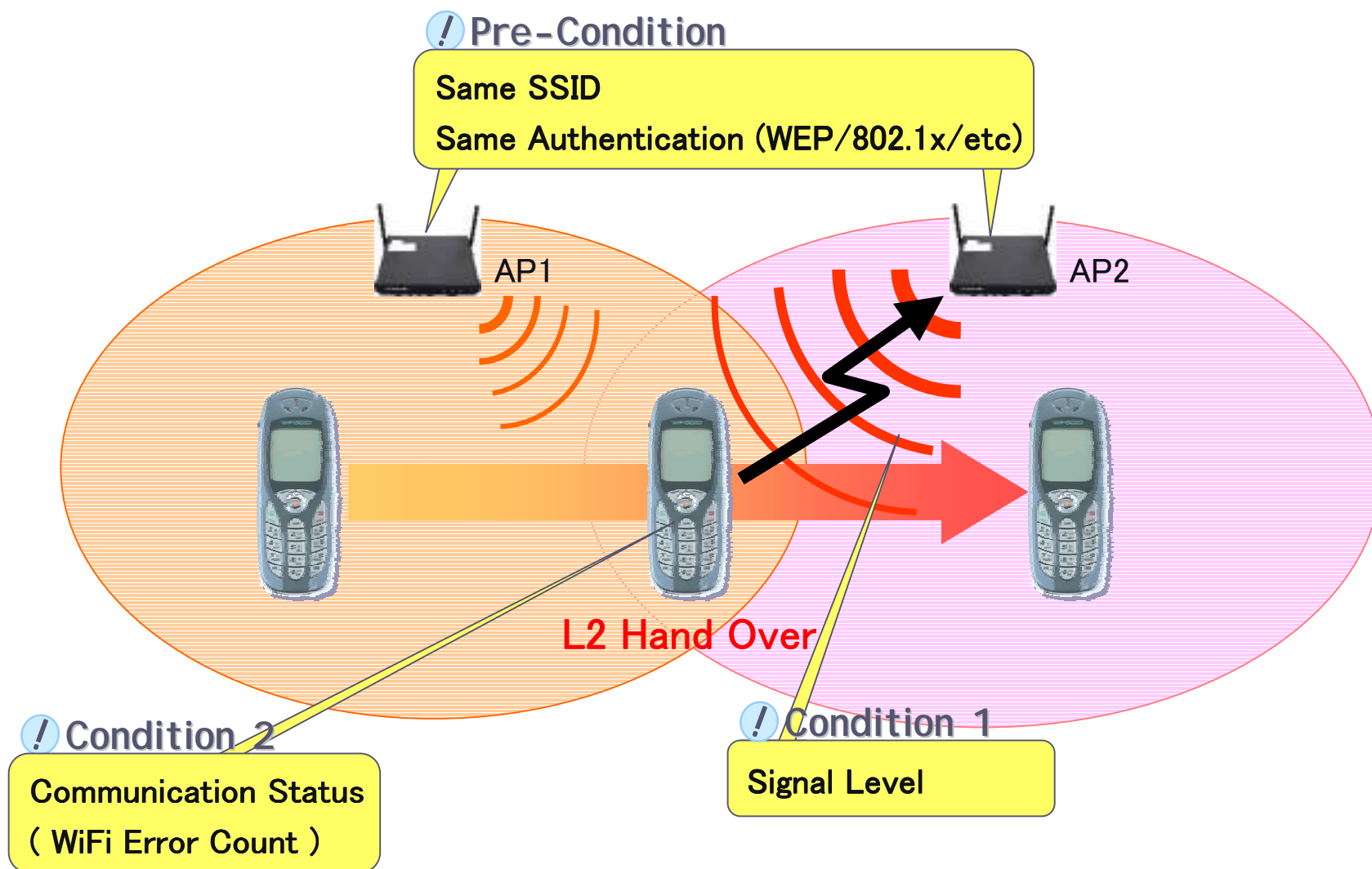
Talking

Talking

! **Roaming**

Move in waiting (NOT talking).
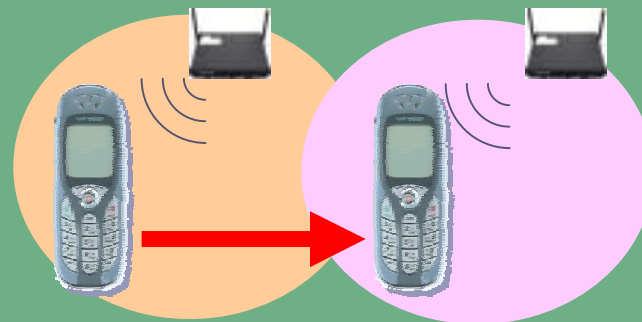
Condition of Handover/Roaming

Pre-Condition

Same SSID

Same Authentication (WEP/802.1x/etc)

AP1

AP2

L2 Hand Over

Condition 2

Communication Status

(WiFi Error Count)

Condition 1

Signal Level

Hand over and Roaming logic

Condition of Hand over

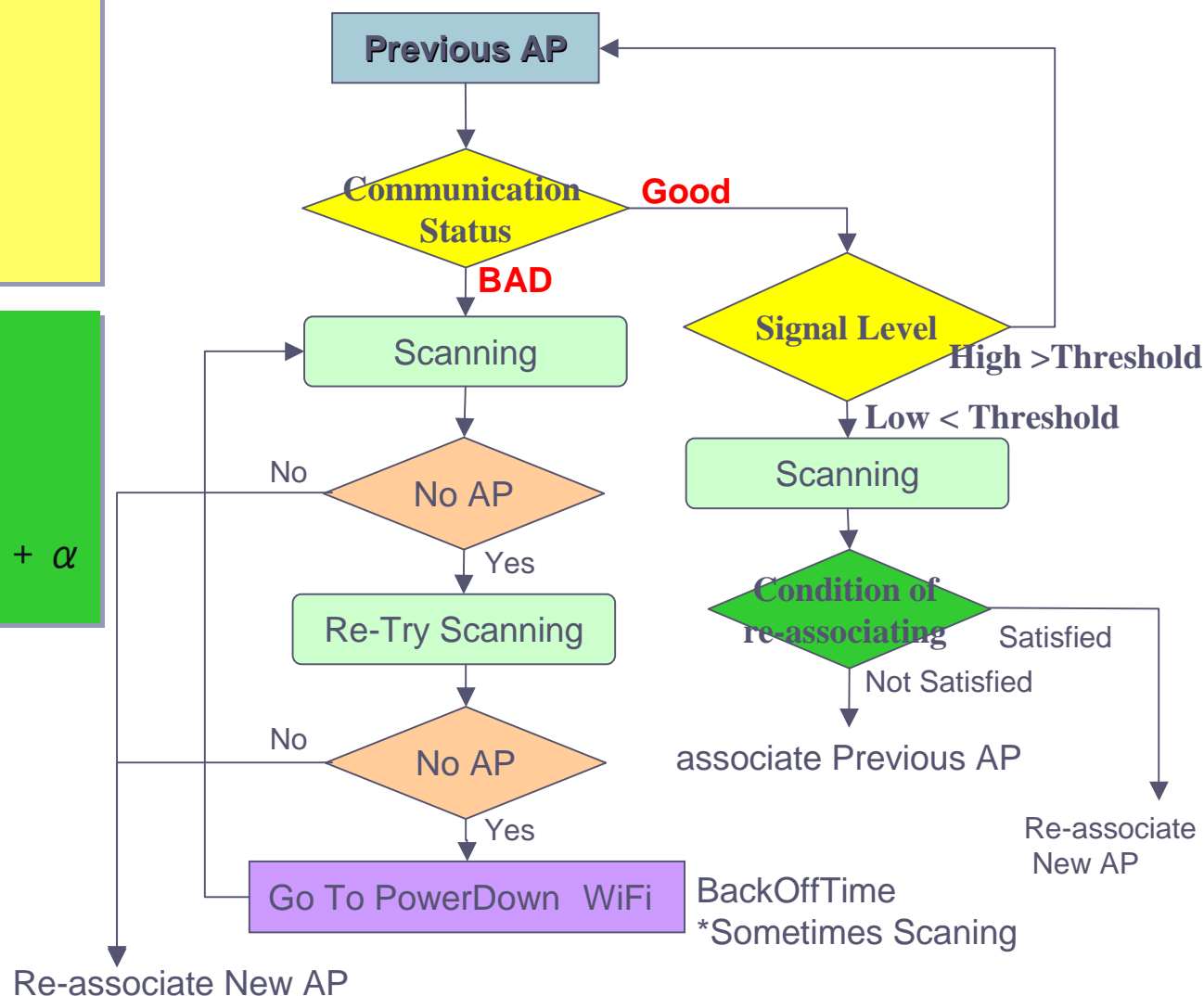■Signal level

Signal level > Threshold

■ Communication Status

Error count > Threshold
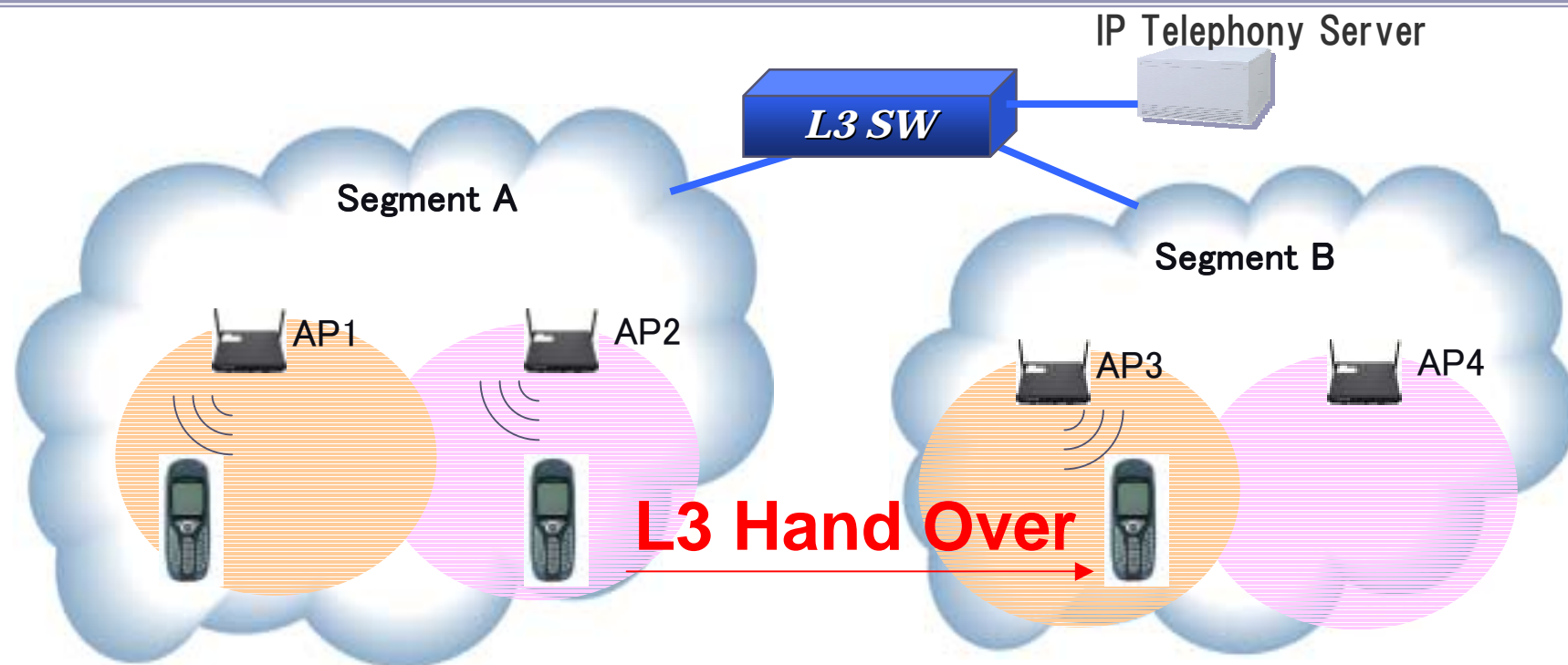
Condition of re-associating

■To be enough signal level

NewAP's Signal level

> NewAP's Signal level + α

Previous AP

Communication Status — **Good**

BAD

Signal Level — **High >Threshold**

Low < Threshold

Scanning

No AP — No

Yes

Re-Try Scanning

No AP — No

Yes

Go To PowerDown WiFi — BackOffTime *Sometimes Scaning

Scanning

Condition of re-associating — Satisfied

Not Satisfied

associate Previous AP

Re-associate New AP

Re-associate New AP

L3 Hand Over / Roaming

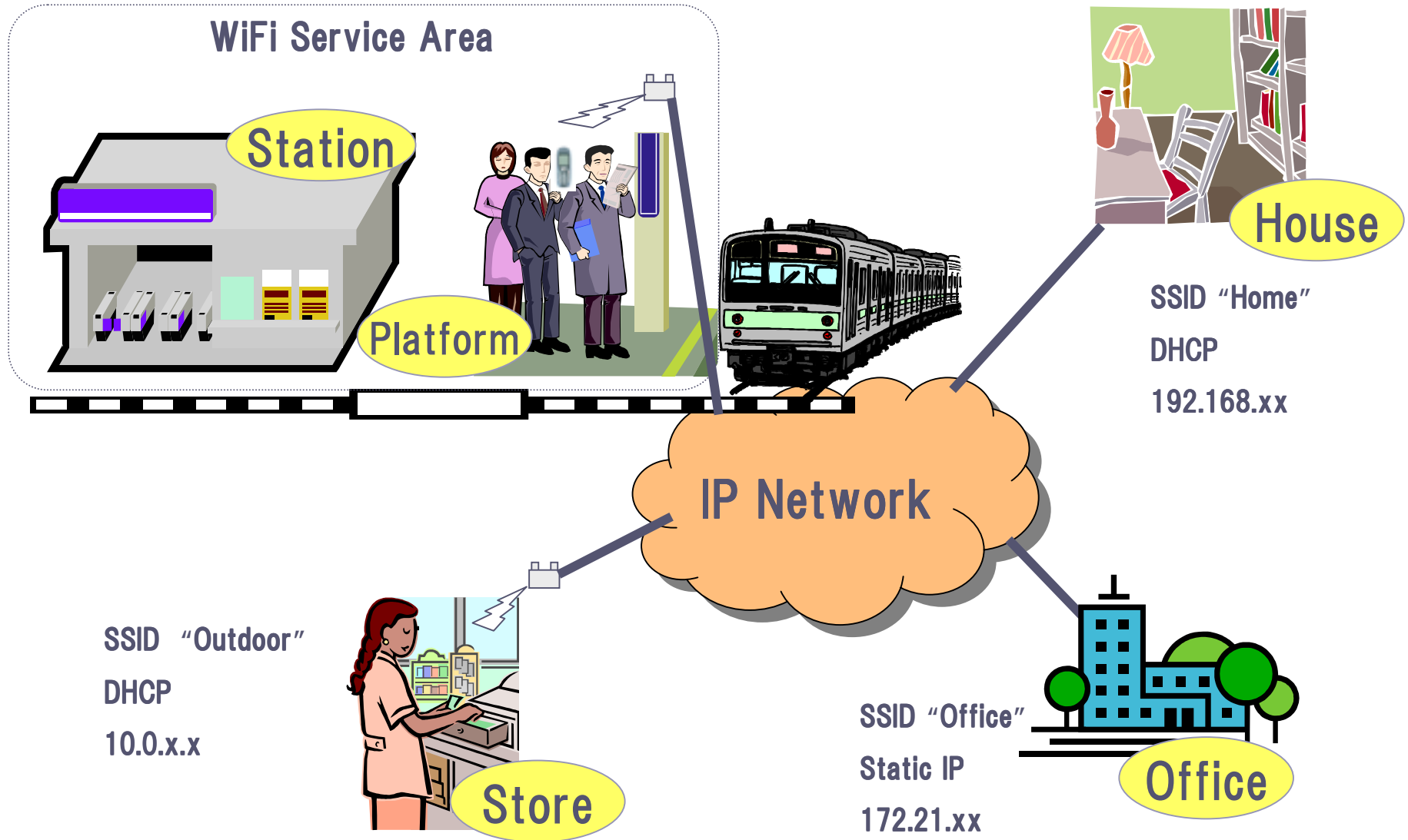IP Telephony Server

L3 SW

Segment A

Segment B

AP1

AP2

AP3

AP4

L3 Hand Over

※WirelessIP5000 don't support Mobile IP

① Maintenance of a Call state （DNB）

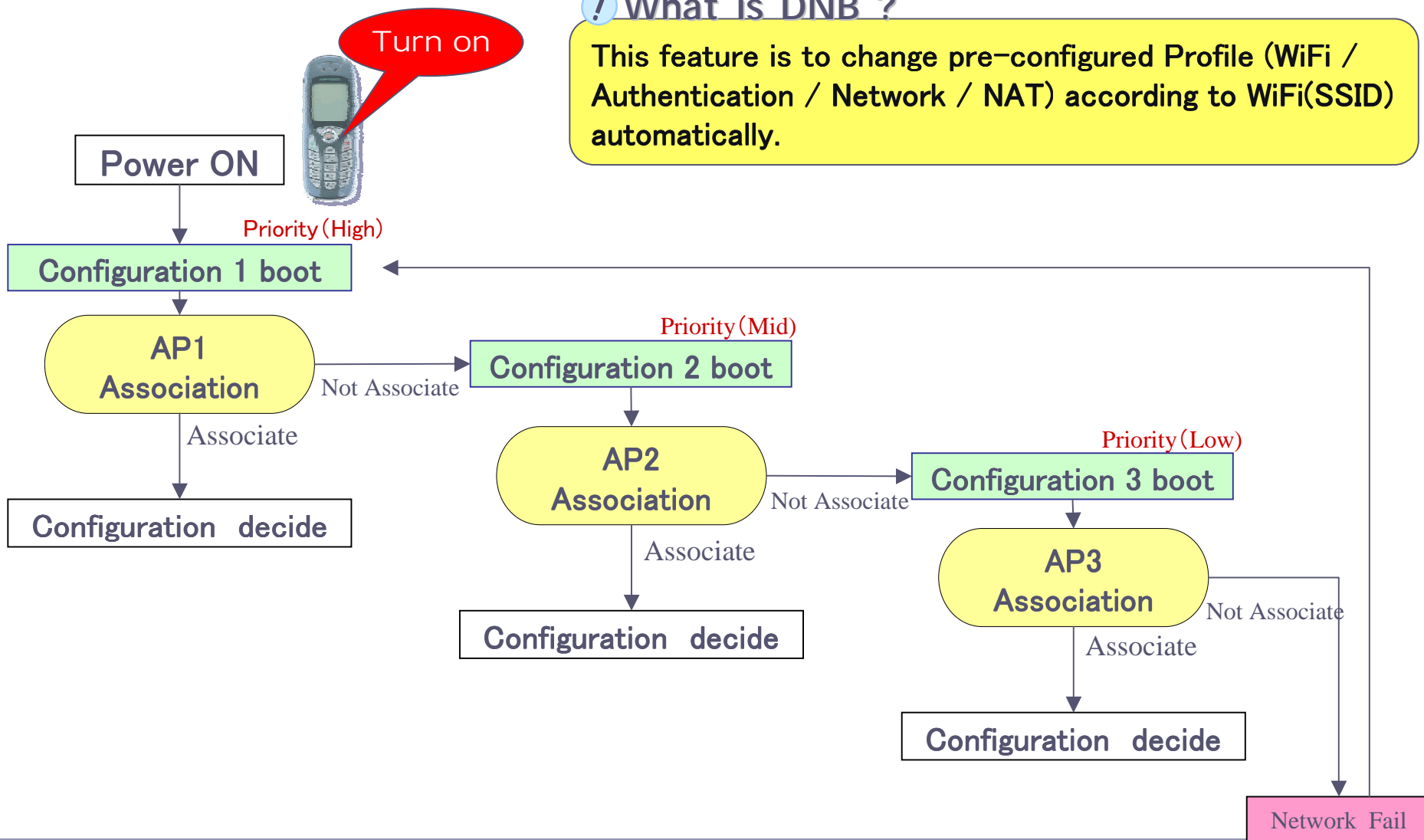② To be able to use as IP Phone immediately

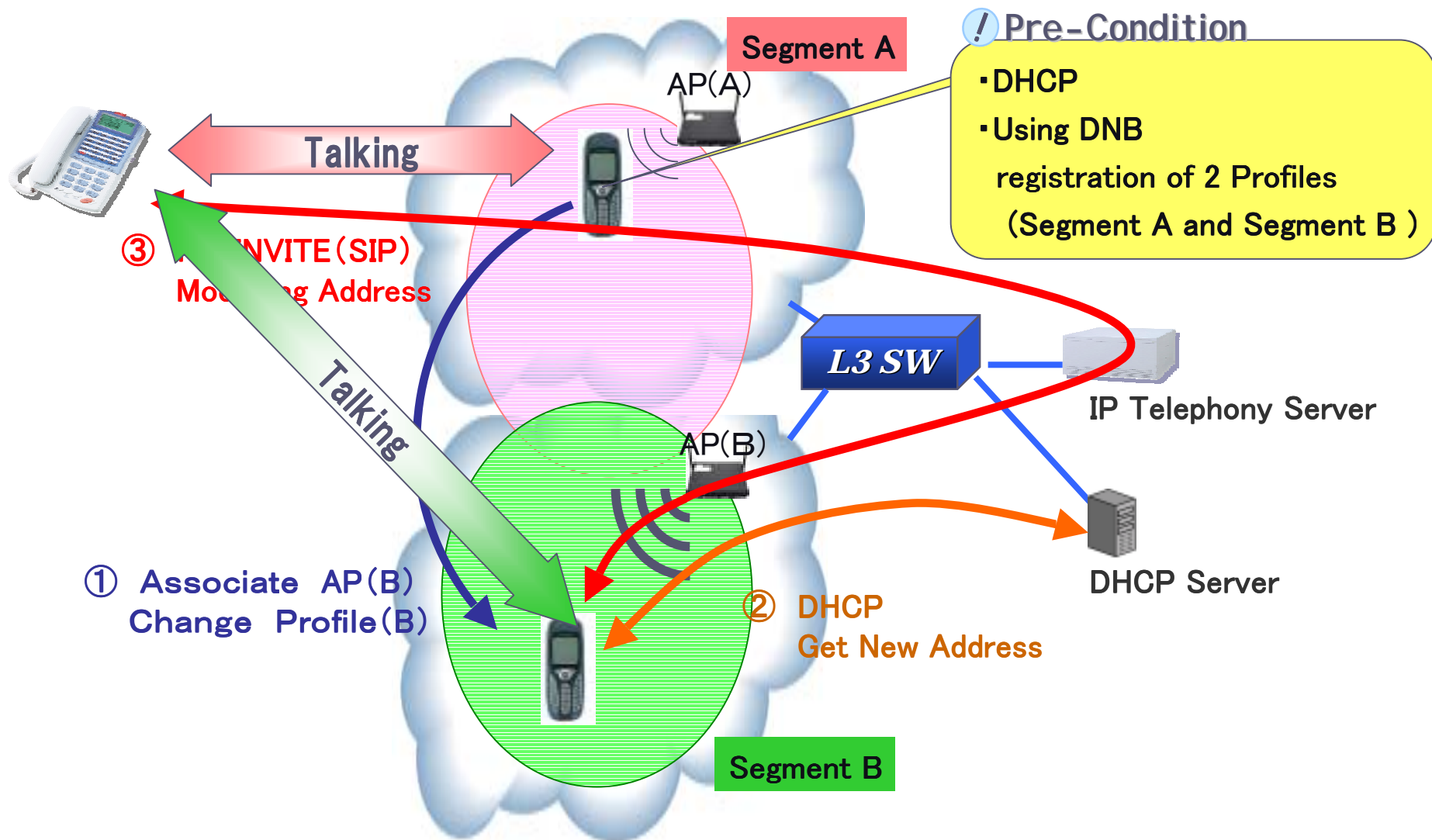at the time of Roaming

What is DNB

Turn on

Power ON

! **What is DNB ?**

This feature is to change pre-configured Profile（WiFi / Authentication / Network / NAT）according to WiFi(SSID) automatically.

Priority（High）

Configuration 1 boot

AP1 Association

Not Associate → Priority（Mid）

Configuration 2 boot

Associate

Configuration decide

AP2 Association

Not Associate → Priority（Low）

Configuration 3 boot

Associate

Configuration decide

AP3 Association

Not Associate

Associate

Configuration decide

Network Fail

② To be able to use immediately at the time of Roaming

AquaVocal

<Customer Environment>

Network : Different Segment every floor
　　　　（10 floor）
WiFi : Same E-SSID
　　＊Several WiFi service area of floor
　　　overlap.

! Problem Point

User can't use WirelessIP 5000 in moving floor.
Because it keeps before floor Address depending
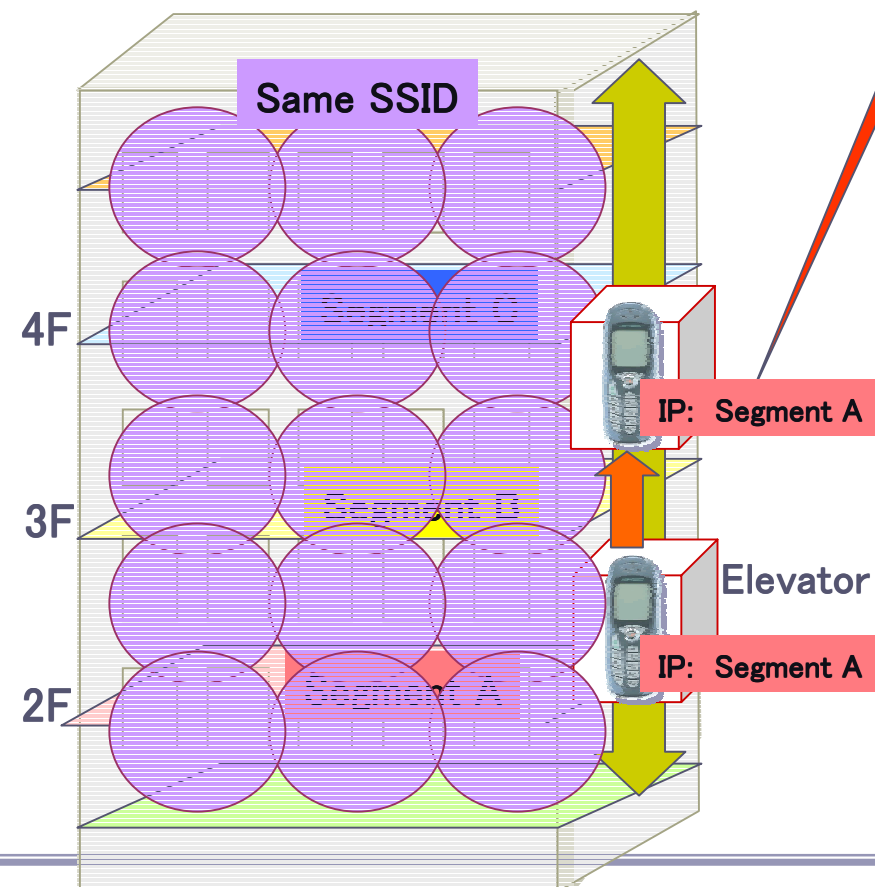on DHCP lease time.

Same SSID

4F   Segment C

IP: Segment A

3F   Segment B

Elevator

IP: Segment A

2F   Segment A

<Solution>

Solution: DNB ？？？

✕DNB can't make the problem solvable.
　Because DNB change profile by SSID.

Solution 2:
Wireless IP can judge Whether segment was
changed by send DHCP（request）after
Re-association（Roaming）.

⇒User can use WirelessIP 5000　with
　unconscious in moving other floor.

Thank you

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