

# OS7x00 no MGI Solution Introduction

March, 2009



# **R2. No MGI Solution**

## **Introduction**

- ④ **MPS Feature**
- ④ **SIP Embedded SBC Feature**
- ④ **Video Phone Feature**

# MPS

- **Feature Definition**
- **Feature Description**
- **How to Configure**
- **Check Point**

## ● MPS

- Means “*Media Proxy Server*”
- Supported in OAS and OS 7100/7030/7070

## ● Feature

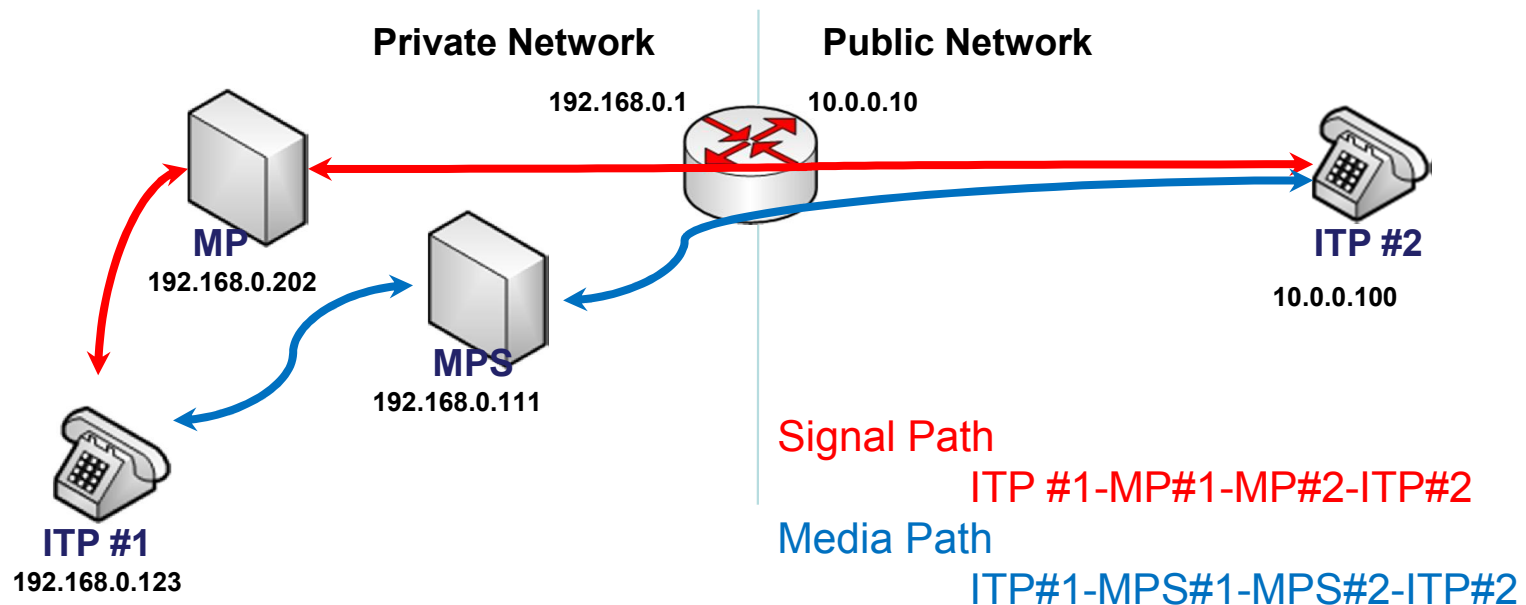
- Media Transmission
- NAT Traversal
- RFC 2833 DTMF Detection for MOBEX

# Feature Description : Media Transmission



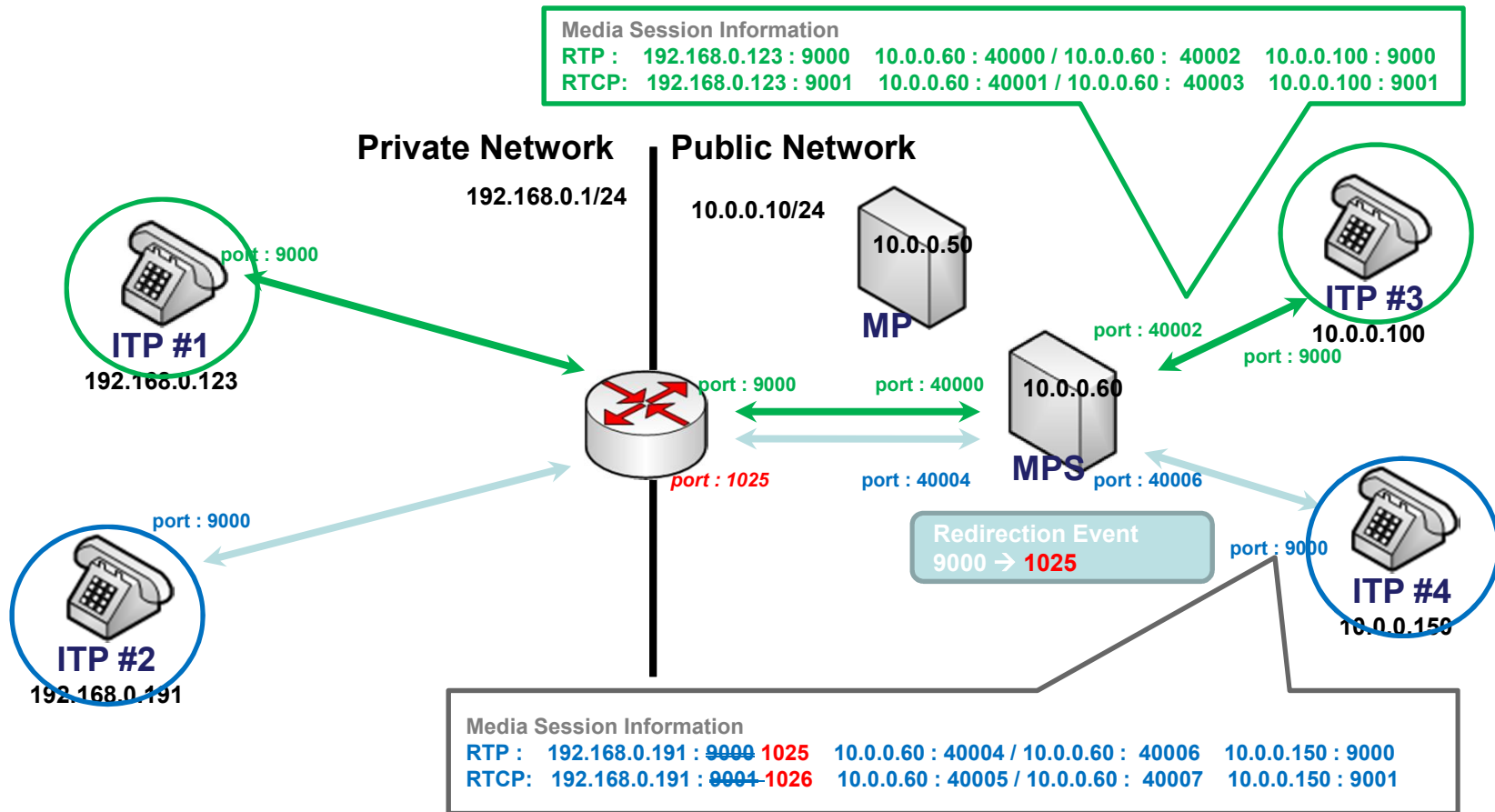
## ● **MPS Usage Rule**

- Call between SIP/SPNET Trunk and ITP/Video/SIP phone
- Call between non-local ITP/Video/SIP phones



# Feature Description : NAT-Traversal

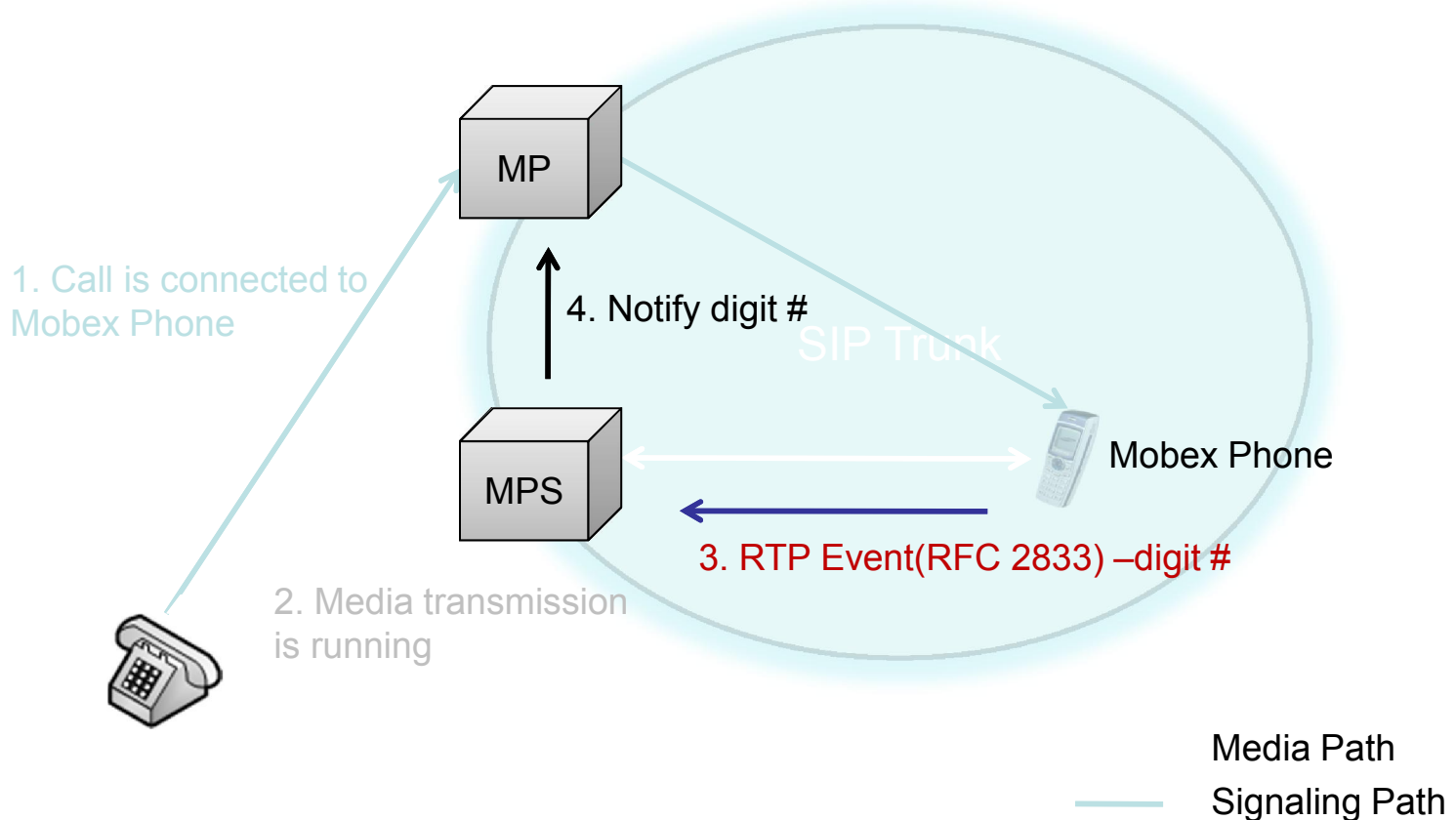
## Case 1: Between Remote ITP #1 and Local ITP #3



## Case 2: Between Remote ITP #2 and Local ITP #4



## ● MOBEX Feature in *SIP Trunk*





2.1.5		MMC 861, IT 2.1.5	
Item		Value	
System Language		Korean	
Hotel State		Disable	
Technician Password		4321	
Country Code		82	
Area Code			
Carrier Code			
Auto Insert Digit			
Daily Save DB	Hour	0	
	Min	0	
Alarm Overflow		Over Written	
System Speed Max		Max500	
System Speed Block		20	
Idle when enblock		Enable	
LCD2 Enblock		Disable	
Simultaneous Zone External Page		Disable	
Use Loud Bell For Page	1	None	
	2	None	
	3	None	
Loop Trunk Tone Disconnect		Disable	
SLI2 PRS Service		Disable	
Maximum Chain Forward All Step		1	
Pickup Group Ring Service		Disable	
SYRIA R2/RD Select		Disable	
MOBEX Executive Option	Auth by CLI	Off	
	Auth Hold Tone	Off	
	Tone Source	TONE	
	BLF by CLI	Off	
	Answer Delay Time (sec)	1	
Trunk To MOBEX CLI	ISDN	Received	
	SIP	Received	
VoIP RTP Option	DTMF	Inband(RFC2833)	
	MPS Service	On	
	No MPS -> MGI	On	

## Configure MPS Service

DTMF processing Type  
-In voice  
-RFC 2833  
-Outband

MPS Service On/Off.  
If MPS is off, MGI channel will be used

Indicate whether MGI will be used or not when there is no MPS channel



## Configure a network parameter for MPS

### MMC 843, IT 2.2.5

2.2.15

Item	Value
Card Type	OAS
IP Address	192.168.0.112
Gateway	255.255.255.0
Subnet Mask	192.168.0.1
IP Type	Private Only
Local RTP Port (start)	40000
Public IP Address	0.0.0.0
Public RTP Port (start)	40000

#### *Parameter Description*

- ✓Card Type
  - Indicate OAS-MPS or Embedded MPS
- ✓IP Address/Gateway/SubnetMask/IPType
  - OAS-MPS - depend on MGI network parameter
  - Embedded MPS – depend on System network parameter.
- Local RTP Port
  - Initial RTP(UDP) port of MPS channel
- ✓Public IP Address
  - a public address of MPS when system is located on NAT/Firewall, which is configured into NAT/Firewall.
- ✓Public RTP port
  - a public RTP port of MPS when system is located on NAT/Firewall NAT/Firewall, which is configured into NAT/Firewall.



## ● MPS Configuration in SPNET

3.3.1.

Entry Number	System ID	IP Address	System Name	Time Sync	No MGI	Audio Codec
Self		192.168.0.202				
Sys 01		192.168.0.201		Off	On	G.729a
Sys 02		0.0.0.0		Off	Off	G.729a
Sys 03		0.0.0.0		Off	Off	G.729a
Sys 04		0.0.0.0		Off	Off	G.729a
Sys 05		0.0.0.0		Off	Off	G.729a
Sys 06		0.0.0.0		Off	Off	G.729a
Sys 07		0.0.0.0		Off	Off	G.729a
Sys 08		0.0.0.0		Off	Off	G.729a
Sys 09		0.0.0.0		Off	Off	G.729a

## 🟡 Check MPS channel status in IT 6.2.7

Index	Status	Source			Target			Codec
		Tel Number	IP Address	RTP Port	Tel Number	IP Address	RTP Port	
513	Idle							
514	Idle							
515	Idle							
516	Idle							
517	Idle							
518	Idle							
519	Idle							
520	Idle							
521	Idle							
522	Idle							
523	Idle							
524	Idle							
525	Idle							
526	Idle							
527	Idle							
528	Idle							
529	Idle							
530	Idle							
531	Idle							
532	Idle							
533	Idle							
534	Idle							

## ● Refer to Alarm History Log about OAS (MMC 851, IT 5.8.1)

### ● IP Conflict problem

- OAS IP CONFLICT
- OAS IP Recovery

### ● Network Problem

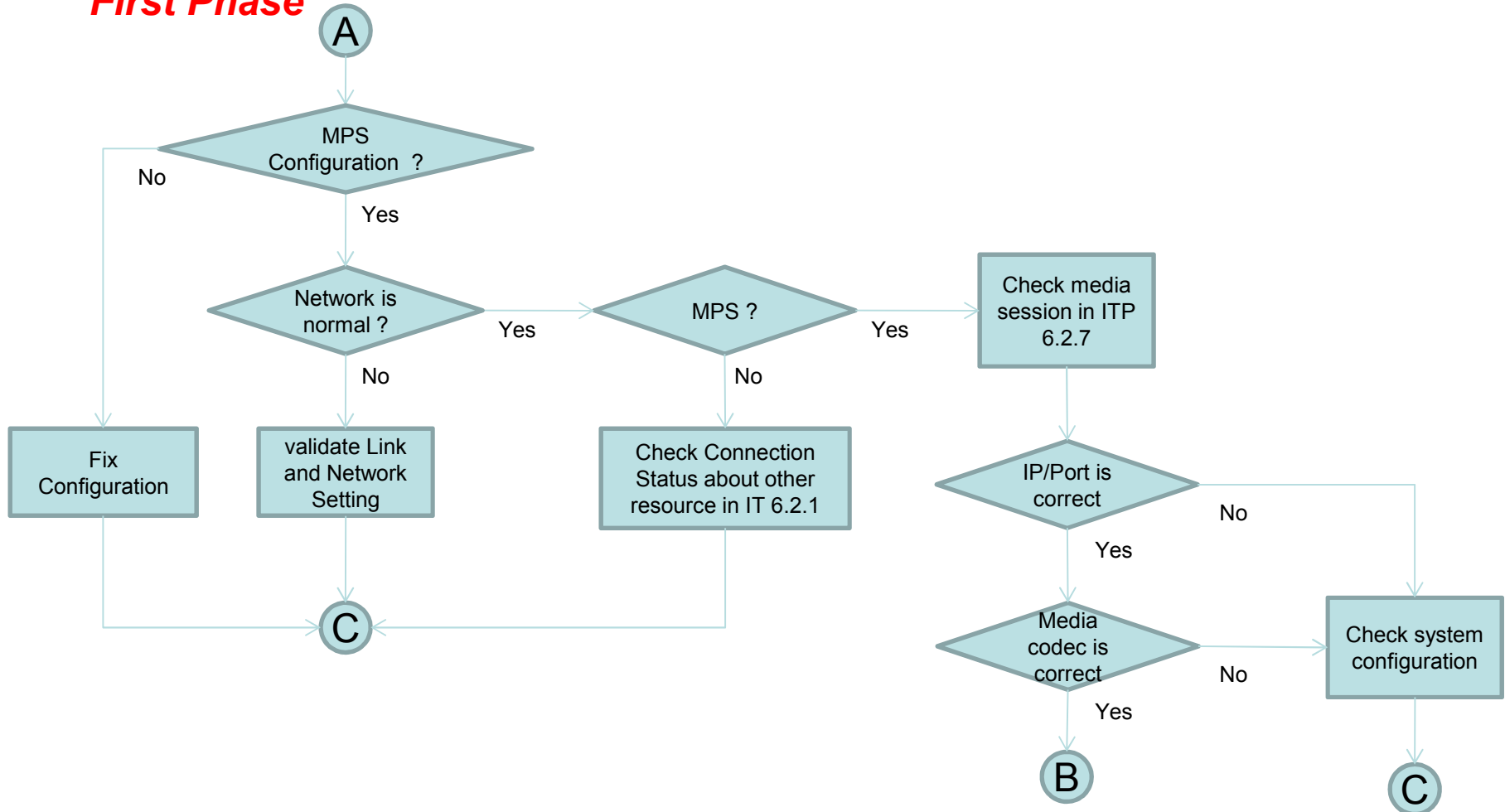
- OAS NTKW Error
- OAS NTKW Recovery

95	MJE16	OAS NTKW Error	No	Major
96	MJE17	OAS NTKW Recovery	No	Major
97	MJE18	OAS IP CONFLICT	No	Major
98	MJE19	OAS IP Recovery	No	Major

## ● Check network connectivity by “*Ping Test*”

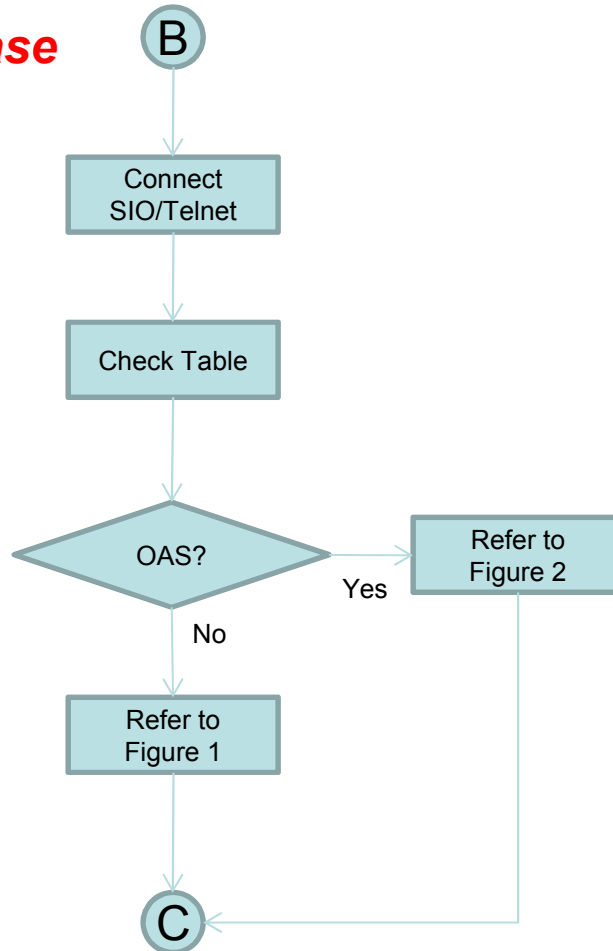
# Check Point : Voice Problem(1)

## First Phase



# Check Point : Voice Problem(2)

## Second Phase





## ● Third Phase

### ● Control Trace

- MPS log trace
  - OAS
    - » MpsSetLogLevel(4,3)
    - » MpsSetLogLevel(5,3)
    - » Try to call and Save Log information
  - Embedded MPS
    - » ./mps\_cli 127.0.0.1
    - » mps
    - » set
    - » add msg ipt
    - » add msg chan
    - » Try to call and Save Log information

### ● Media Trace

- By Ethereal

# Check Point : Figure 1

If count is zero, there is one-way or silence in call.

```
Token 2 [ com://5,38400,8,n,l ]
Address com://5,38400,8,n,l
Favorites Chatman HTel NewSurf
bash-3.00#
lnsh 3.00#
lnsh 3.00#
bash-3.00#
bash-3.00# ./mps_cli 127.0.0.1
MPS-CLI is RUNNING

MPS-CLI>chan

MPS-CLI\CHAN>all
00000402: before if sentence
MpsChan: DEBUG LOG
Num of Channel -16
*****
  ChId  reChId  State  Type  Mode  r-RTP  r-RTCP  t-RTP  t-RTCP  IS Addr  IS Port  ID  Addr  ID  Port  OS  Addr  OS
0000    0        1  CH-RESV  VOIP  Empty  259    1    248    1  9802000a  40000  7000a3c0  40022  980200
0022    1        0  CH-RESV  VOIP  Empty  248    1    250    1  9802000a  40002  7b00a3c0  90000  980200
0022    2        0  CH-IDLE  NONE  RX      0      0      0      0      0      0      0      0      0
0022    3        0  CH-IDLE  NONE  RX      0      0      0      0      0      0      0      0      0
0022    4        0  CH-IDLE  NONE  RX      0      0      0      0      0      0      0      0      0
0022    5        0  CH-IDLE  NONE  RX      0      0      0      0      0      0      0      0      0
0022    6        0  CH-IDLE  NONE  RX      0      0      0      0      0      0      0      0      0
0022    7        0  CH-IDLE  NONE  RX      0      0      0      0      0      0      0      0      0
```

## Procedure

- 1.Put “./mps\_cli 127.0.0.1”
- 2.Put “chan”
- 3.Put “all”
- 4.Check RTP count
- 5.Put “quit”
- 6.Put “quit”

# Check Point: Figure 2

If count is zero, there is one-way or silence in call.

```
Token 2 [ com://5,38400,8,n,1 ]
Address [ com://5,38400,8,n,1 ]
Favorites [ Chulhan, HiTel, NowNuri ]
OAS: 192.168.0.112>
OAS: 192.168.0.112>
OAS: 192.168.0.112>
OAS: 192.168.0.112>
OAS: 192.168.0.112>
OAS: 192.168.0.112>
OAS: 192.168.0.112>
OAS: 192.168.0.112>
OAS: 192.168.0.112> MpsChanShowAllTable
Num of Channel = 64
-----
ChId  reChId  State  Type  Mode  r-RTP  r-RTCP  t-RTP  t-RTCP  IS Addr  IS Port  ID Addr  ID Port  OS Addr  OS
-----
0     0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
1     0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
2     0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
3     0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
4     0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
5     0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
6     0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
7     0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
8     0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
9     0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
10    11    CH_RESV  VOIP  Empty  8701   34     8695   35c0a80070  40020c0a800c7  9000c0a80070
11    10    CH_RESV  VOIP  Empty  8695   35     8701   34c0a80070  40022c0a8000a  40000c0a80070
12    0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
13    0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
14    0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
15    0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
16    0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
17    0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
18    0     CH_IDLE  NONE  RX    0      0      0      0      0      0      0      0      0      0
```

## Procedure

1. Put "MpsChanShowAllTable"
2. Check RTP count

# Embedded SBC for SIP Station behind NAT

- **Introduction**
- **Feature Description**
- **System Configuration**

## ● Embedded SBC

### ● *Embedded*

- support one of SBC features without an external device

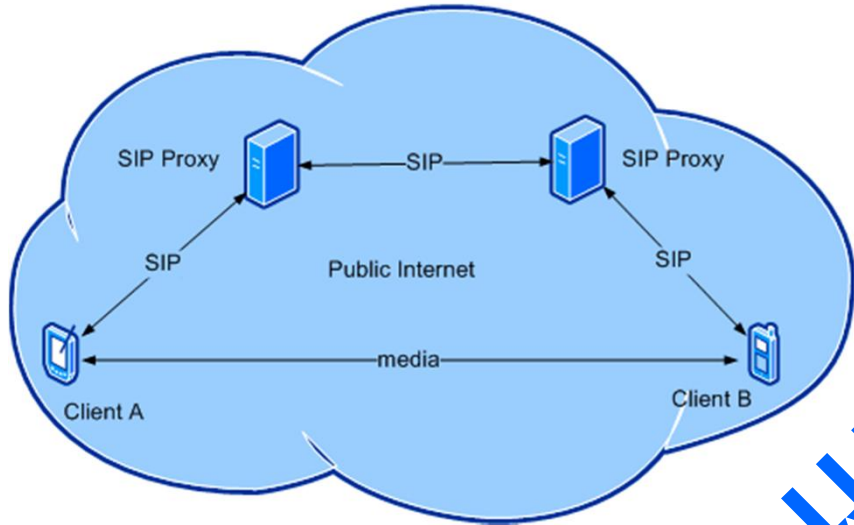
### ● *SBC Feature*

- Support SIP phone in NAT/Firewall Network

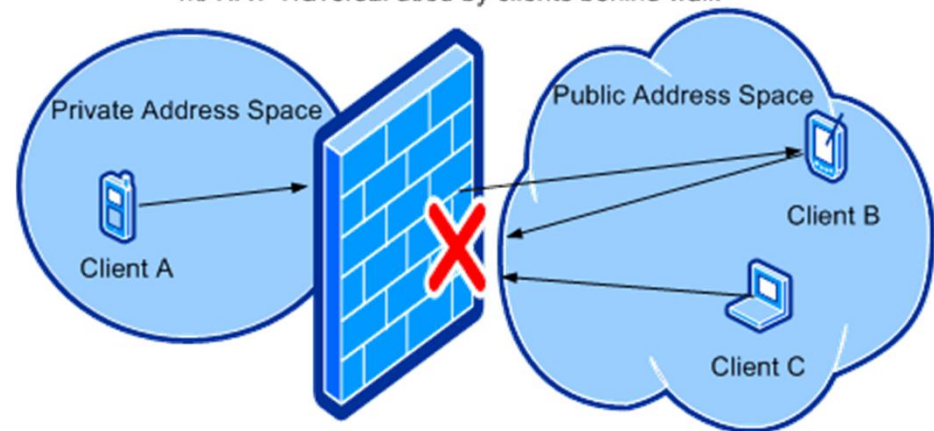


## NAT Problem

Normal call path, SIP and Media

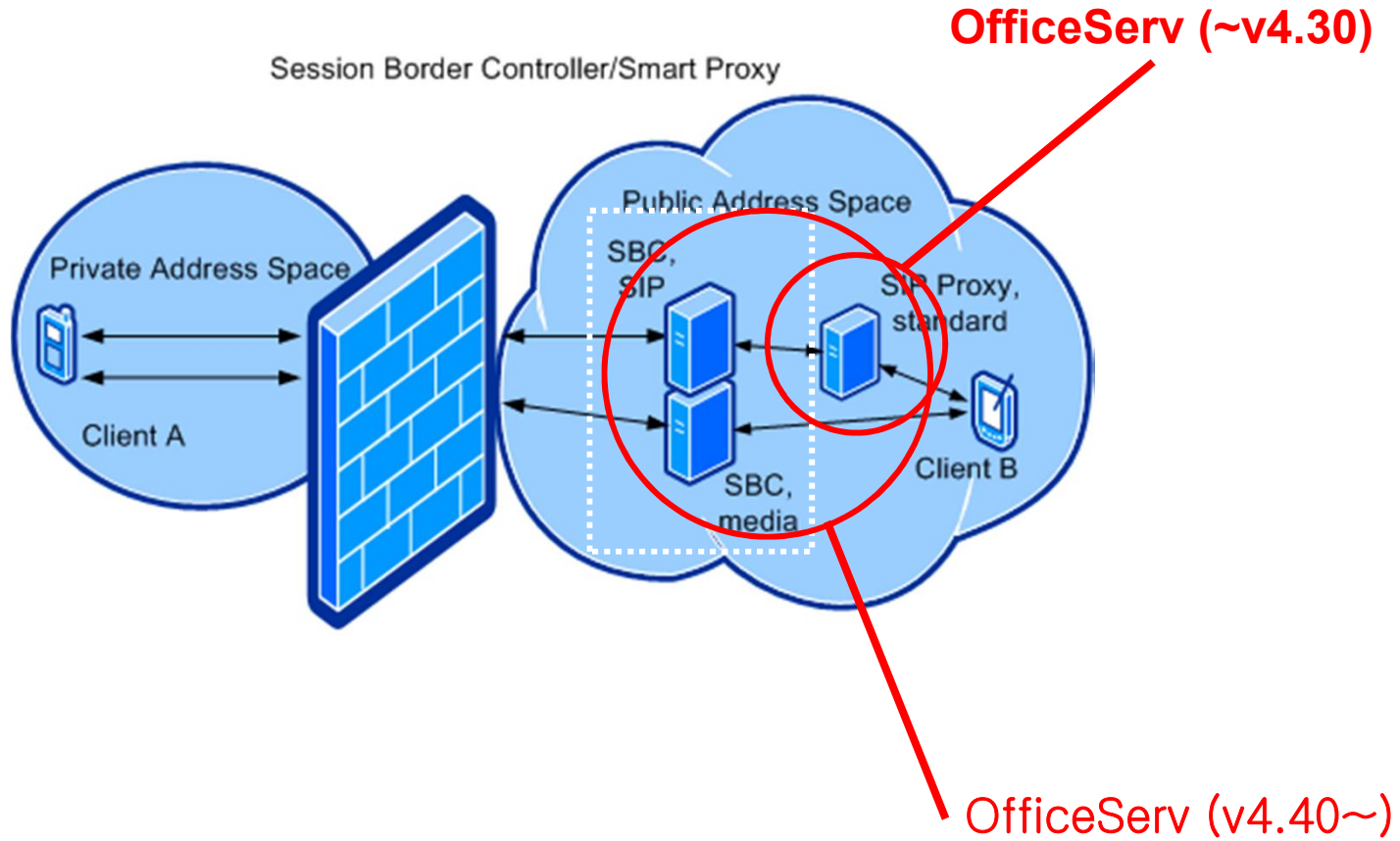


Firewall with NAT,  
no NAT Traversal used by clients behind wall.



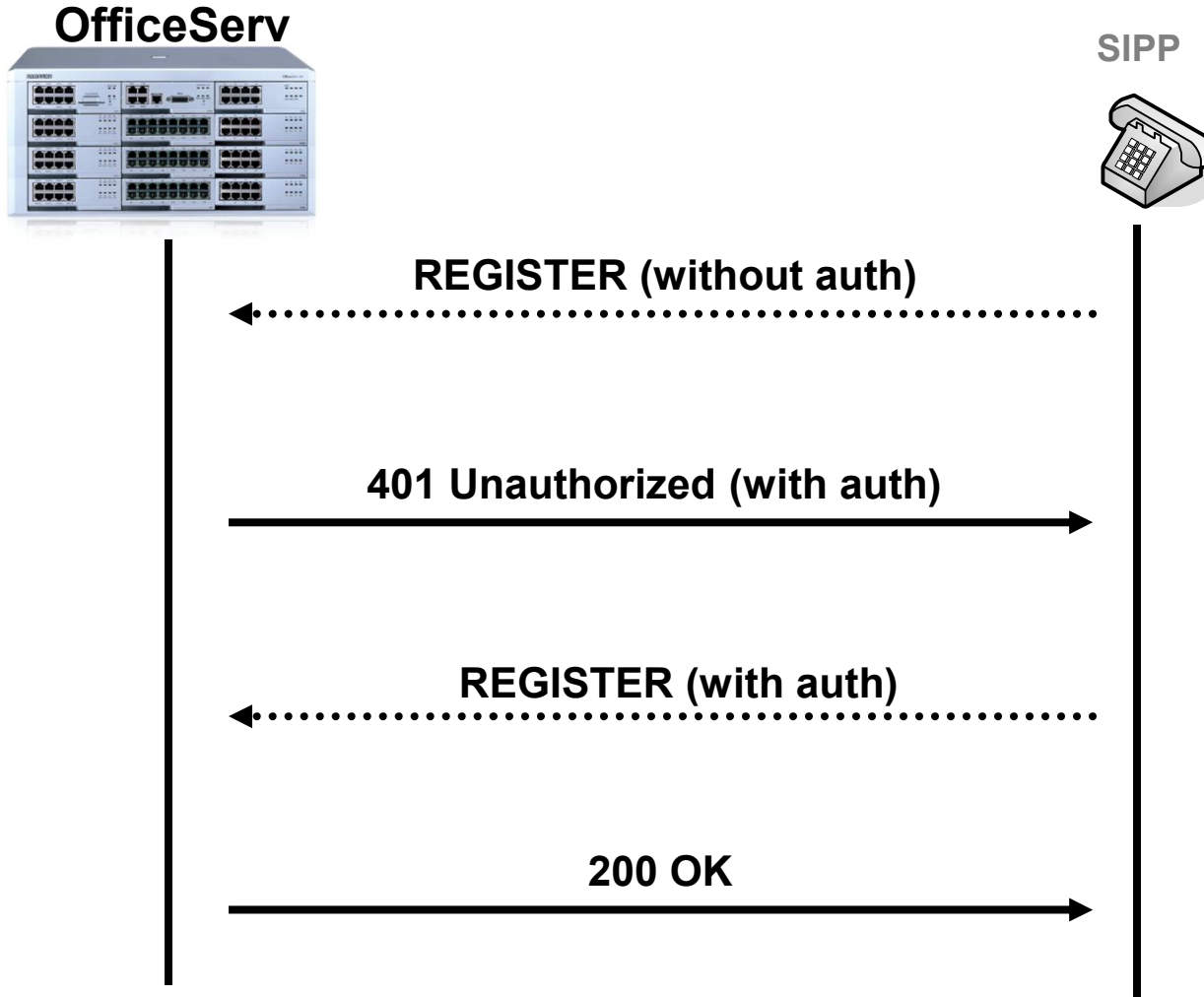


## Feature Comparison between V4.30 and V4.40

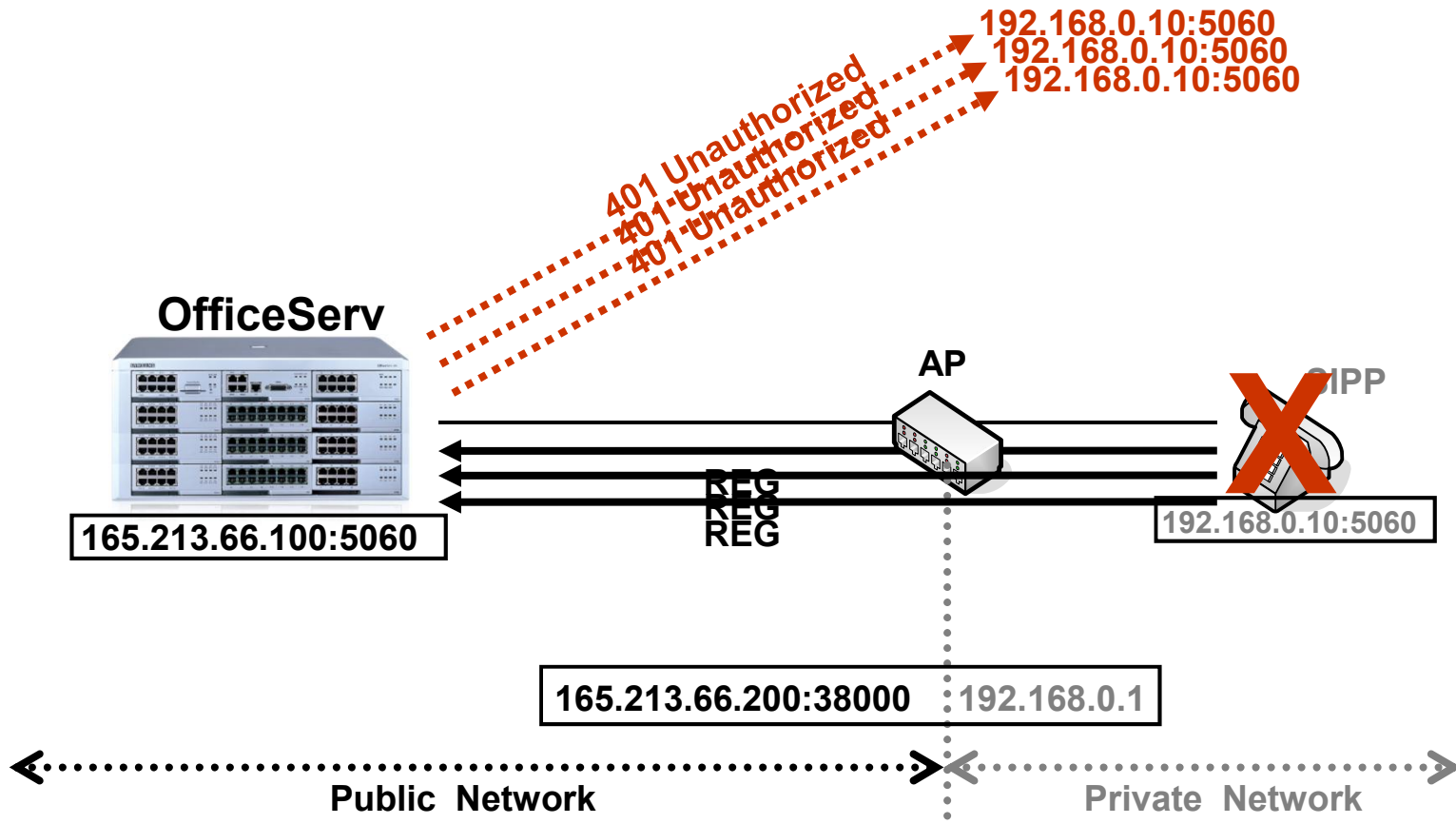




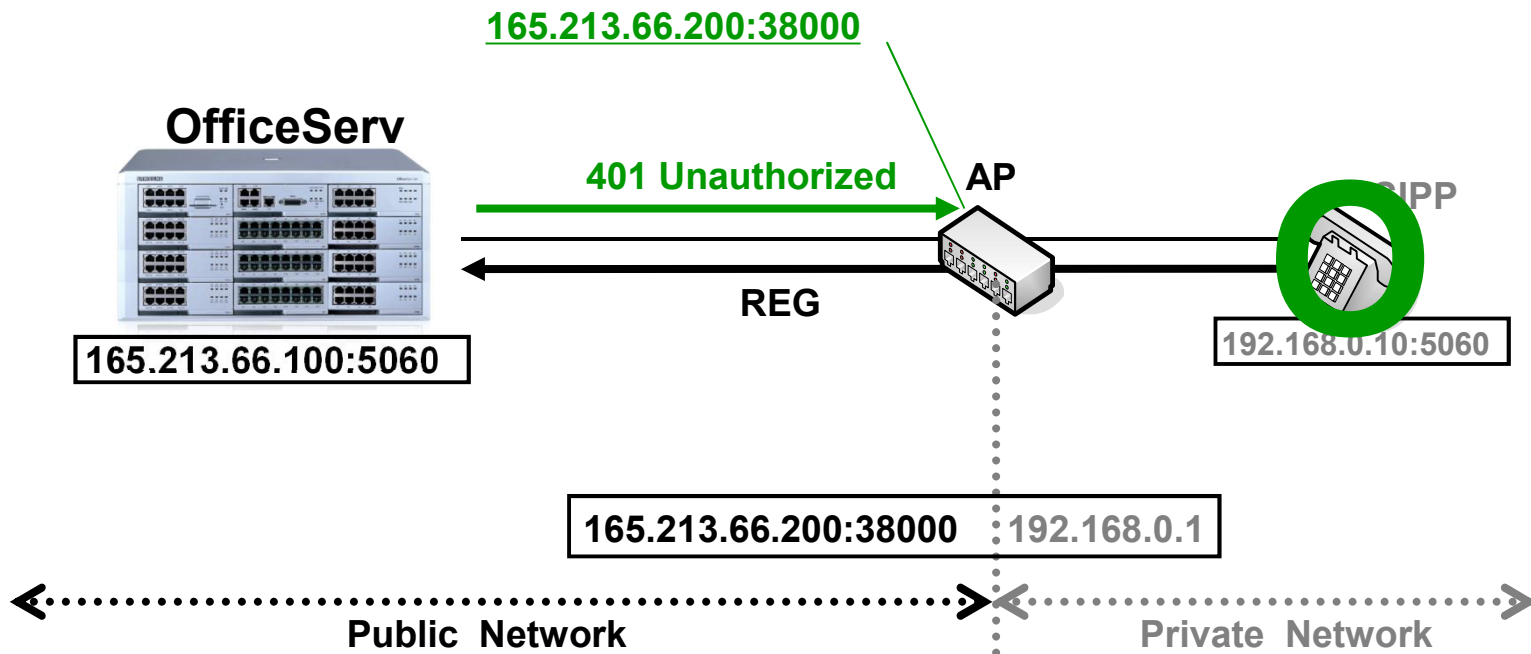
# Feature Description : SIP REGISTER Flow



# Feature Description : Operation Flow before 4.30



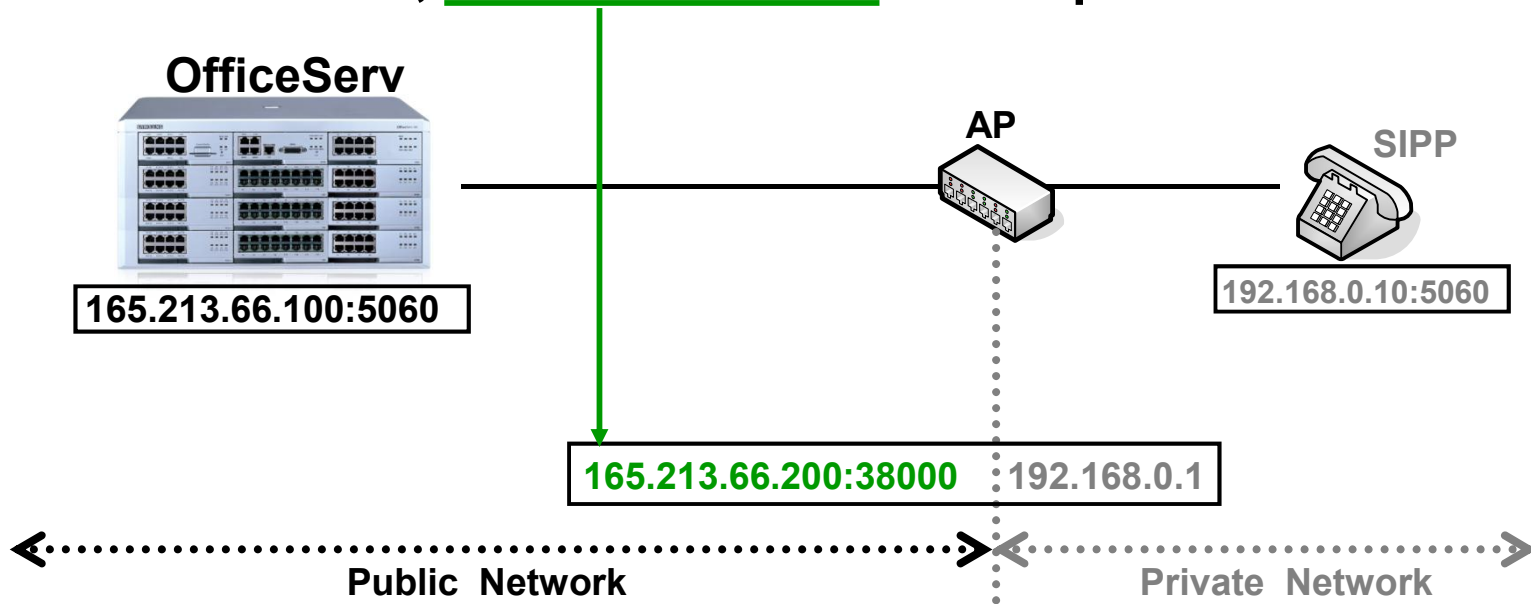
# Feature Description : Operation Flow after V4.40



# Feature Description : Related API Function



- RvSipTransactionGetReceivedFromAddress()
  - Get Source IP/Port of message.
  - In this case, IP and Port of AP are output.

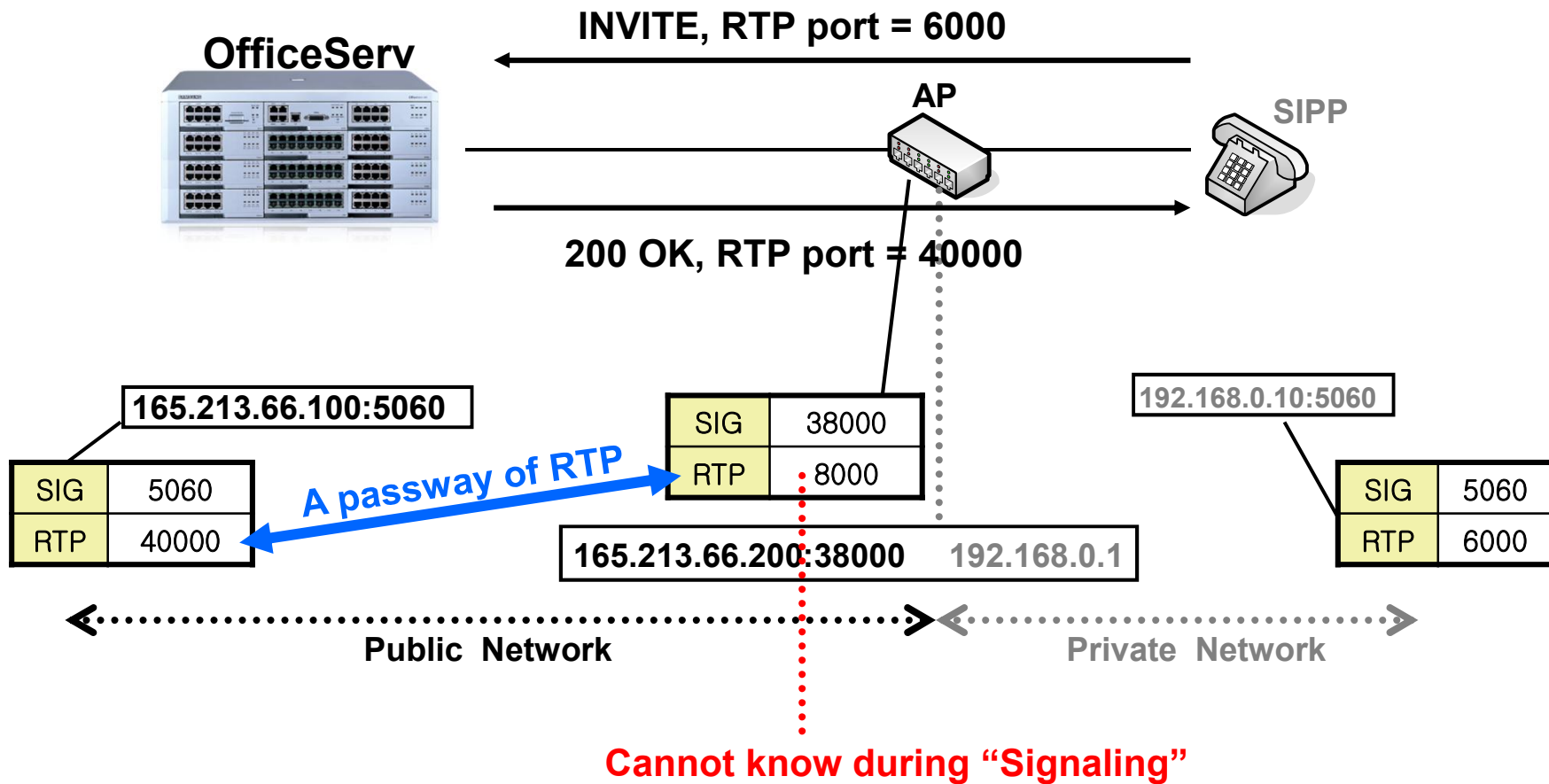




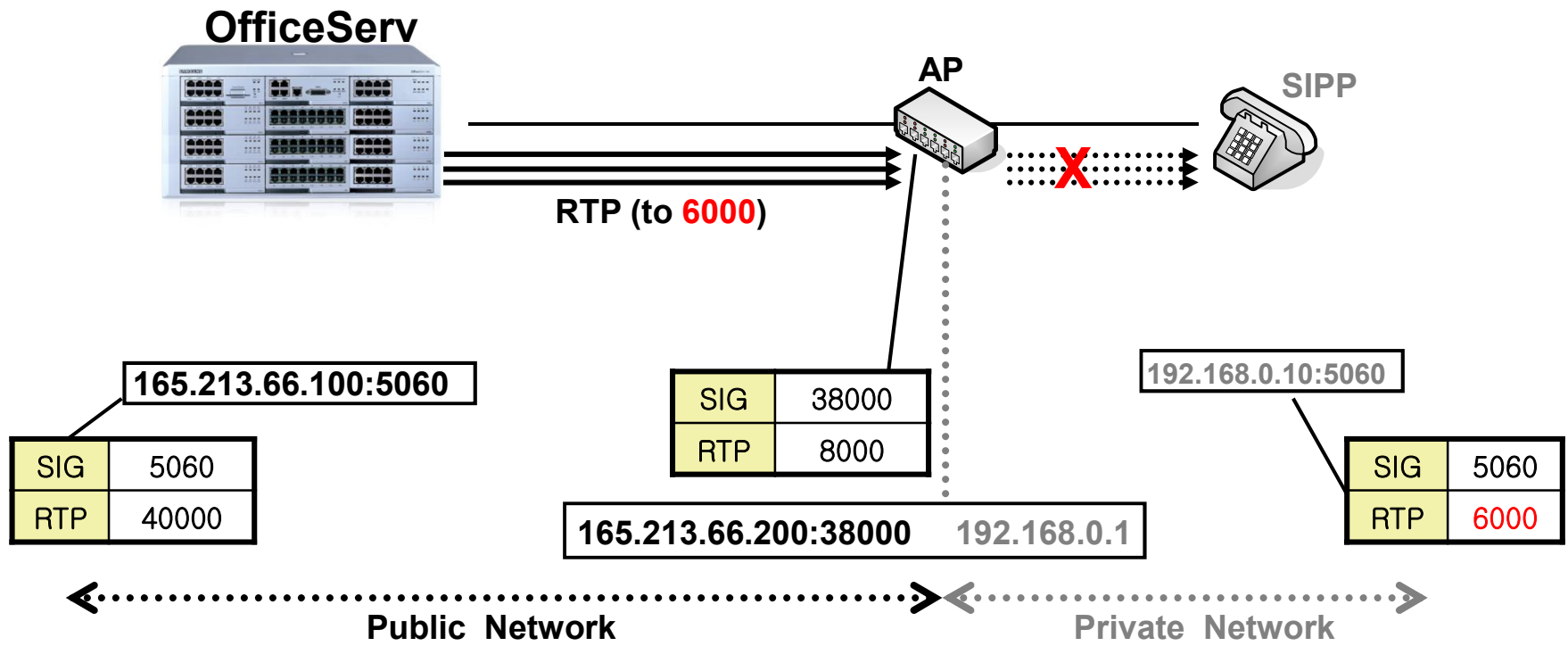
## ● MPS Enable.

- The necessity of MPS  
= “RTP Port Redirection”

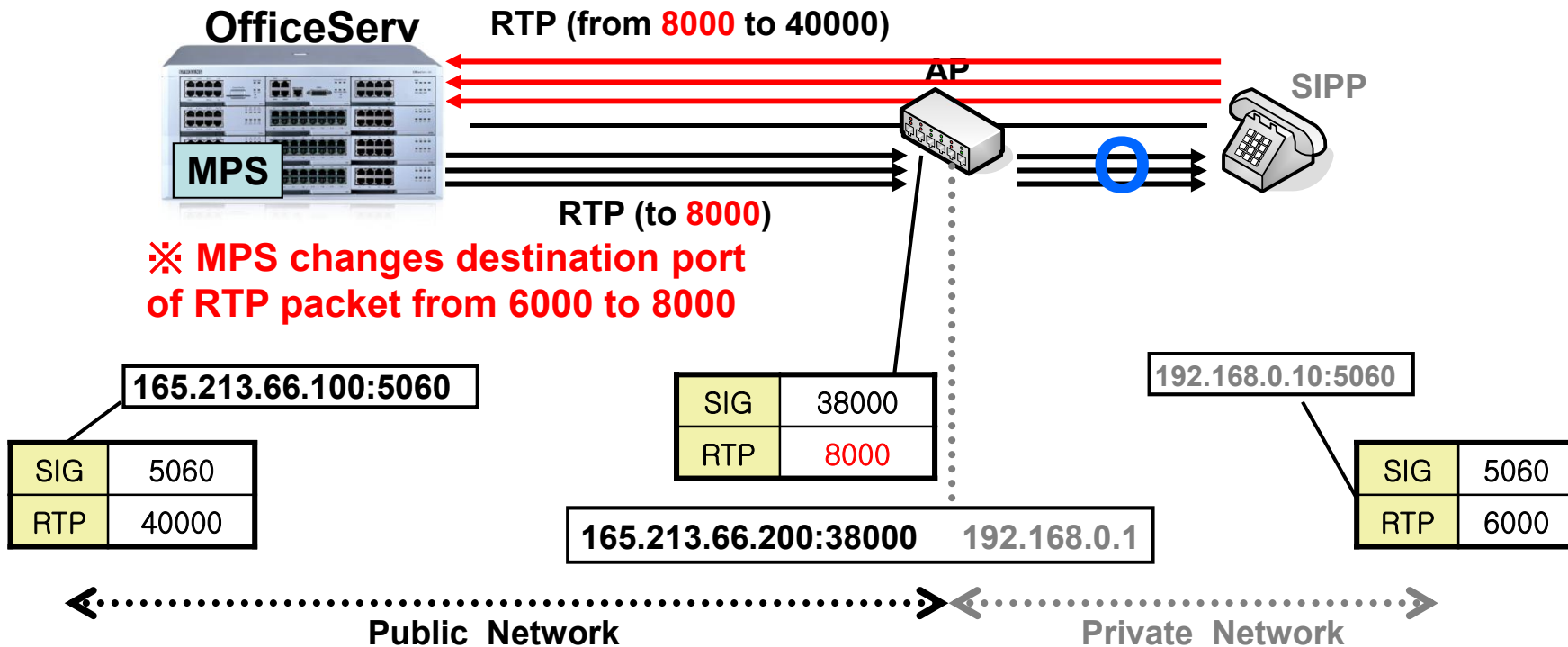
# Feature Description : RTP Port Redirection (I)



# Feature Description: RTP Port Redirection (II)



# Feature Description: RTP Port Redirection (III)





- Be sure that the **MPS** is set to **Enable** at **MMC 861** first.
- At **MMC 842**,
  - 'IP ADDRESS' **!=** 'PUB IP ADDR'
    - SIP terminal is in NAT
  - 'IP ADDRESS' **==** 'PUB IP ADDR'
    - SIP terminal is **NOT** in NAT



# Video Phone

● **Refer to Feature Guide**