새로운 통신환경의 주역
"Cisco IP Communications"

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Cisco Systems

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Contents

Main Application - VoIP

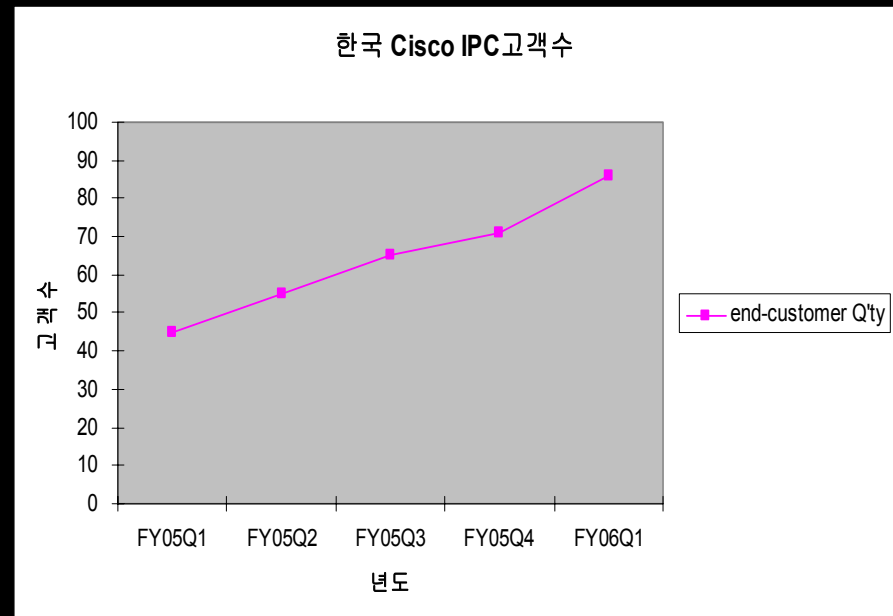**Cisco IP Communications 제품군**

Cisco IP PBX 소개 (CM, CME)

New IP Phone Products 소개

Cisco IPC Application 소개

IPC Real Cases

Cisco Confidential   2

What has Cisco done in 2005?

- **Market Share #1 – 32.3% (Forst & Sullivan)**

- 대형 **IPC Project** 수주
  - **SKC&C**
  - 서울도시철도공사
  - 다음커뮤니케이션
  - 유한양행
  - 팬택 & 큐리텔
  - 기타 중소규모 **project**

- 한국 **Cisco IPC** 고객숫자의 지속적 증가
  - 분기별 약 **20 ~ 25%** 씩 증가

한국 **Cisco IPC**고객수

— ■ —	end-customer Q'ty

고객수 / 년도

Cisco IP Communications 제품군

Integrated Management

Applications

Workplace Resources | Voicemail and UM | Mobile Connect | Customer Contact | Rich Media Conferencing

Endpoints

Cisco IP Phone | Wireless Phones | Video Phone | IP Communicator | VT Advantage

Call Control

CallManager | Survivable Remote Site Telephony on Cisco ISR | Cisco CallManager Express and Unity Express on Cisco ISR
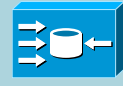
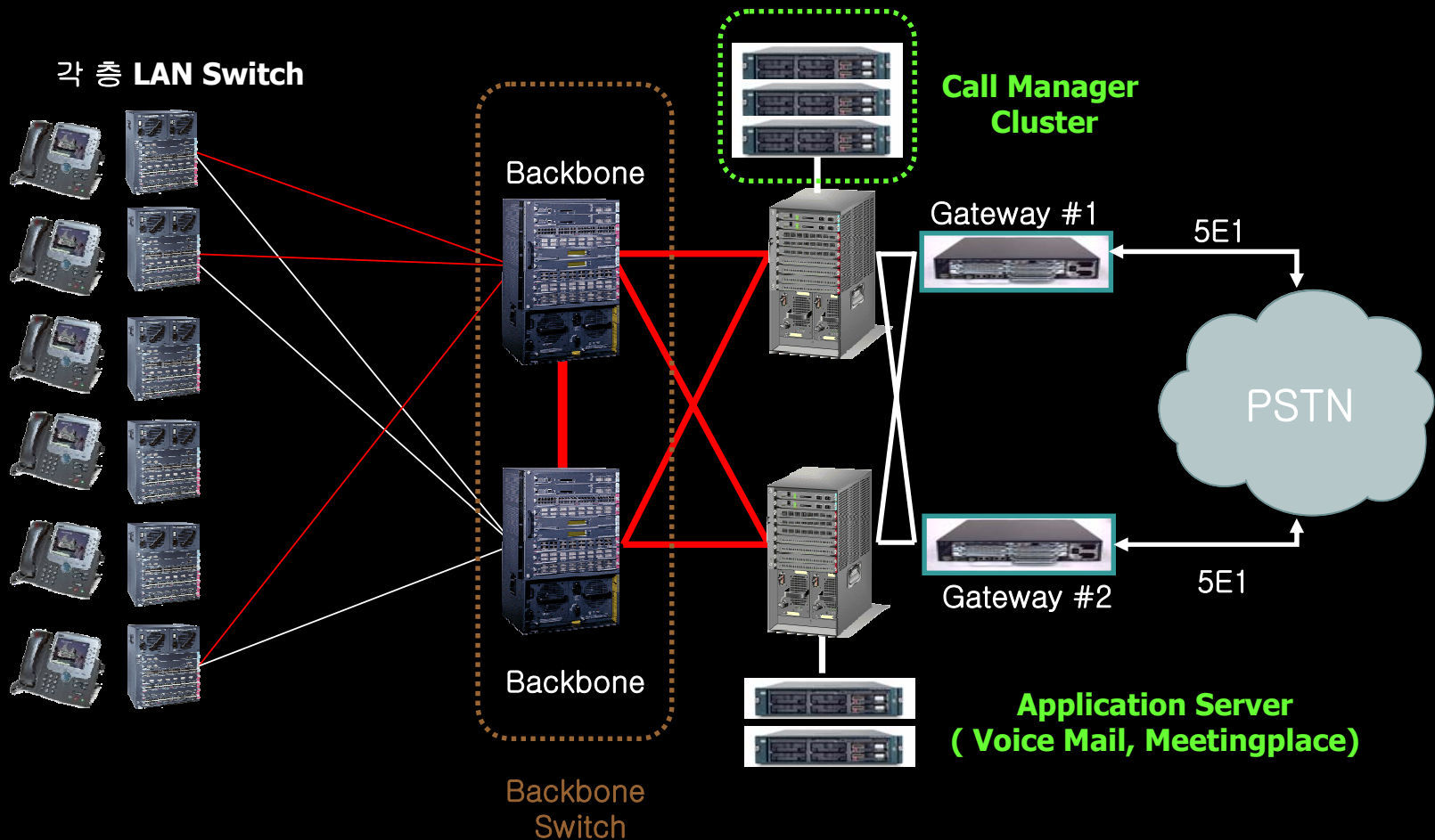### Infrastructure

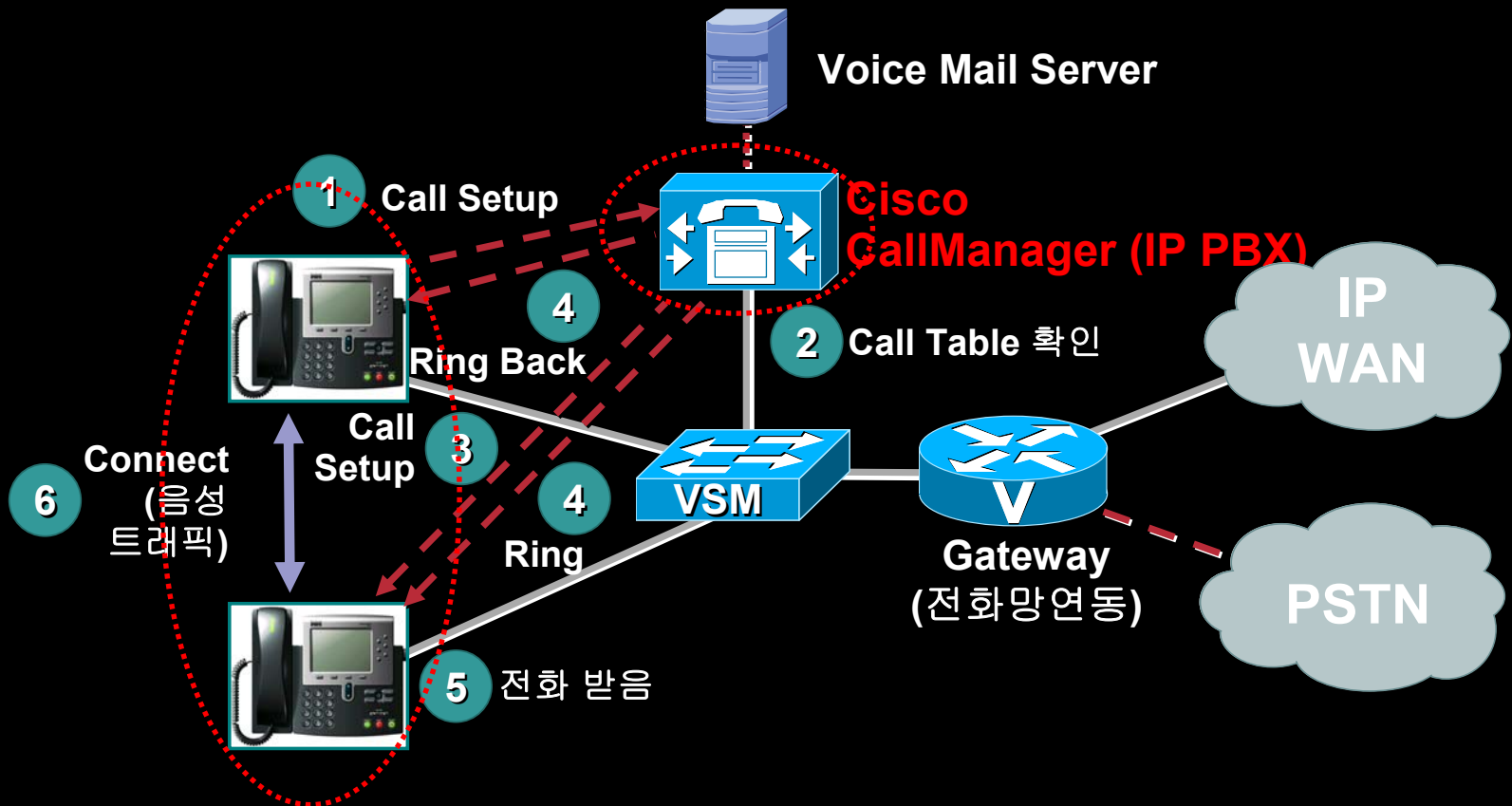Routing, QoS | Switching | Administration | Wireless | Security | Content Delivery

Cisco IPC 적용 예

각 층 **LAN Switch**

Call Manager Cluster

Backbone

Gateway #1

5E1

PSTN

Backbone

Gateway #2

5E1

Backbone Switch

Application Server (Voice Mail, Meetingplace)

All IP Cisco IP PBX 음성 신호 흐름

Single Site

Voice Mail Server

1 Call Setup

Cisco CallManager (IP PBX)

4

2 Call Table 확인

Ring Back

IP WAN

Call Setup **3**

Connect **6** (음성 트래픽)

4

VSM

Ring

Gateway (전화망연동)

PSTN

5 전화 받음

솔루션 포지션

Cisco® CallManager based platforms

**Cisco CallManager
on MCS 78XX**

Cisco Unity®, Personal Assistant

High-end PBX

Productivity Benefits
Voice Feature Focus
VM/UM/UC
VM

**Cisco CallManager Express
Cisco Unity
Express**

Small PBX

Hybrid/PBX

KSU

Centrex

| 0 | 25 | 100 | 200 | 500 | 2500+ |

Number of Users per System

**Cisco CallManager Express with
Cisco Unity Express for smaller site locations**
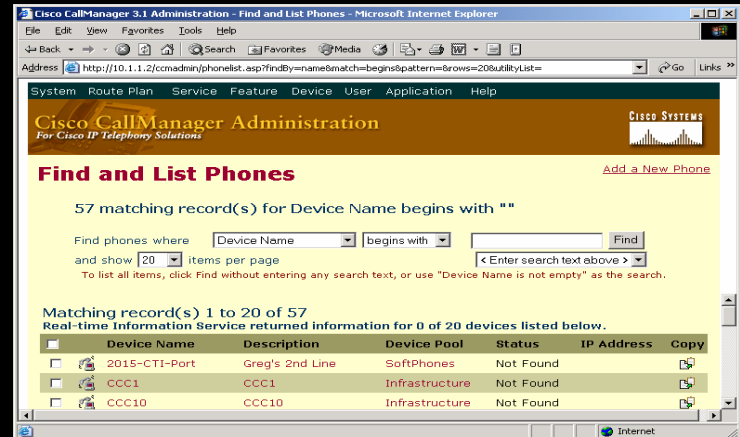
Cisco IP PBX Call Manager
- CM 5.0 (Linux OS, 한글 지원, SIP Lineside Features)

➢ **IP Telephony** 를 구성하는 가장 중요한 요소로써 **MCS Server** 에 설치되며, **Call-Processing** 을 담당한다. 특히 **Cisco Call Manager**의 경우 **Voice** 뿐만 아니라 **Video**도 지원하여 **Video Telephone, Video Conference**을 지원

- 표준 HTML을 이용하여 설치, 구성, 관리 가능
- 지원 Protocol (Skinny, SIP, H.323, MGCP)
- Media Convergence Server platforms에 기본으로 설치되어 제공 되며, 제공되는 CD를 이용하여 설치의 용이성을 제공한다.
- 일반적으로 사용되는 Telephone 관련 기능은 물론, 표준을 따르는 타사의 Application 사용 가능 (TAPI, JTAPI)
- 시간당 50,000 call 이상 지원
- Clustering를 이용하여 Load Sharing 및 Fail over 지원 – 최대 8 대
- 한 cluster 당 30,000 IP Phone 지원

voicecomm
2005

High

Availability

Low

- 확장, **Load Balancing, Redundancy** 목적으로 **Cluster**구성
- 한 **Cluster**당 최대 **30,000 IP Phone (MCS7845)**
- **Cluster**는 마치 하나의 교환기와 같은 역할을 함

(Dual processor)

Cisco MCS 7845H-3000
(7500명)

Cisco MCS 7835H-3000
Cisco MCS 7835I-3000
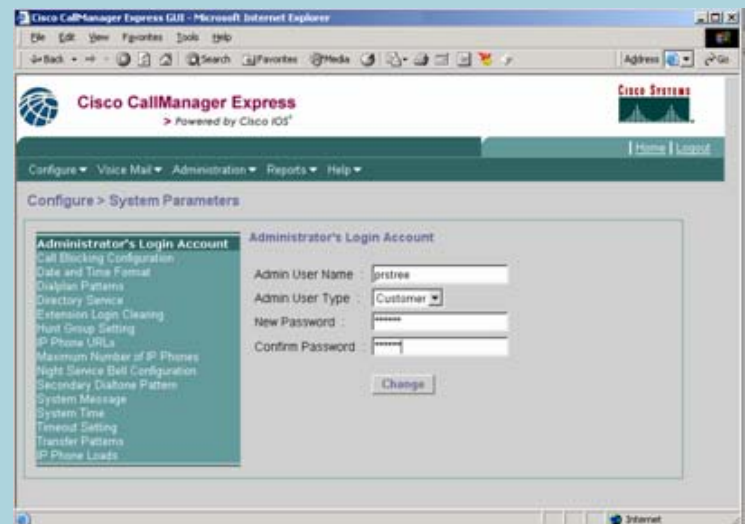(2500명)

Cisco MCS 7825H-3000
(1000명)

Cisco MCS 7815I-2000
(300명)

Performance & 용량 →

Cisco CallManager Express v3.3 (키폰대체)

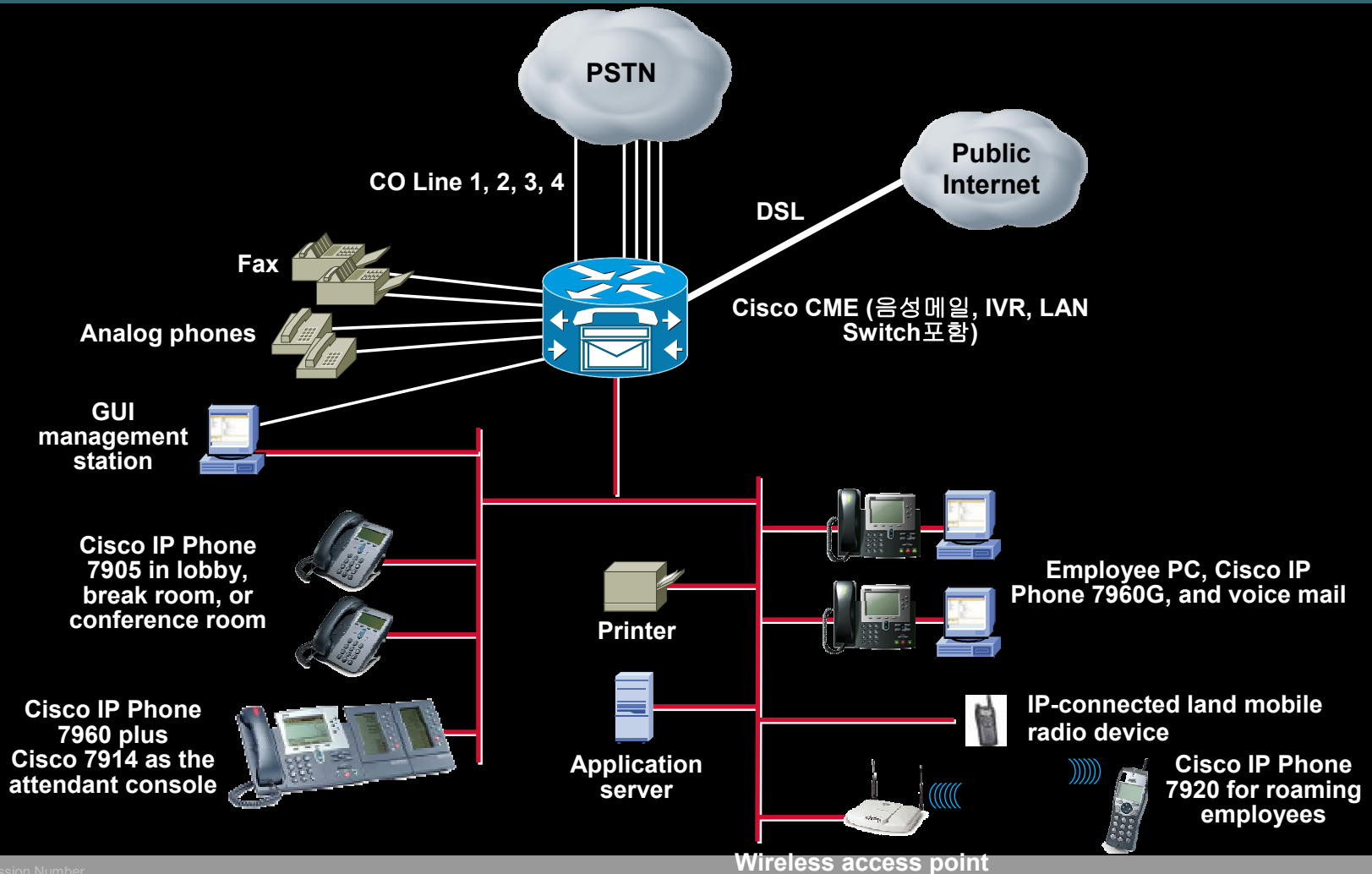## Simple, Affordable All-In-One Communications

- **Cost effective, converged data and voice solution inside Cisco Integrated Services Routers**

- <u>**Key system/small PBX features**</u> **PLUS innovative convergence applications for up to 240 users**

- **Unmatched investment protection for future growth**

- **New features:**

  Embedded Meet Me conferencing for 20-96 users

  Enhanced call routing and queuing

  Increased security

Cisco Call Manager Express로 구성한 경우 - All in one 솔루션

PSTN

Public Internet

CO Line 1, 2, 3, 4

DSL

Fax

Analog phones

Cisco CME (음성메일, IVR, LAN Switch포함)

GUI management station

Cisco IP Phone 7905 in lobby, break room, or conference room

Printer

Employee PC, Cisco IP Phone 7960G, and voice mail

Cisco IP Phone 7960 plus Cisco 7914 as the attendant console

Application server

IP-connected land mobile radio device

Cisco IP Phone 7920 for roaming employees

Wireless access point

Cisco IP Communications 제품군

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Call Control

CallManager

Survivable Remote Site Telephony on Cisco ISR

Cisco CallManager Express and Unity Express on Cisco ISR
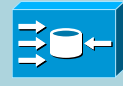
Infrastructure

| Routing, QoS | Switching | Administration | Wireless | Security | Content Delivery |

Cisco IP Phone 종류

Features

NEW

NEW

10/100/1000

Cisco IP Phone 7970G/7971G-GE

Cisco IP Phone 7961G
Cisco IP Phone 7960G

Cisco IP Phone 7941G
Cisco IP Phone 7940G

Cisco IP Phone 7985G

NEW

Update

Cisco Wireless IP Phone 7920

Cisco VT Advantage

Cisco IP Phones 7905G/7912G

Cisco IP Communicator

Cisco VG248/244 Analog Phone Gateway

Cisco IP Phone 7902G

Cisco IP Conference Station 7936

Cisco ATA 186/188

Cisco Confidential

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Cisco IP Phone 7985G (Video Phone)

Personal Desktop Video Phone for Rich, High-Touch Communications

NEW

- Integrated voice, video, web and data communications

- 8.4" Color LCD—executive friendly form-factor

- Speaker-phone with a head-phone jack and a handset

- Two-port Ethernet switch with IEEE PoE

- All the audio features and functionality of a full featured Cisco IP phone

- H.264 video

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Cisco IP Phones
7941G (-GE)/ 7961G (-GE)

Affordable, Feature Rich Business IP Phones for Small to Medium-Sized Offices and Enterprise Branches

- 한글지원 IP Phone

- New higher resolution display (320x240 vs. 145x100)

- Display will benefit XML app developers

- Gigabit Ethernet Port 지원 (-GE 모델)

- Display supports double-byte characters/Unicode (fully w/SD-GA release)

- Lighted line keys

- IEEE standard 802.3af inline power, and will support Cisco legacy power

NEW

17 36 08/24/05   2223

Welcome guest

Update

CISCO IP PHONE 7940 SERIES

23888

18 18 08/25/05   2223

Caller : 8464,Lanka, Vani
Called : 2310
Description: Auto 2217
Date : Thu Aug 25 18:11:29
EDT 2005
Callingsearchspace :
<None>

IPCELERATE®

IPsession Alert

Exit
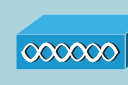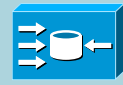
영상 회의 및 전화 교환기

voicecomm 2005

Enterprise-class IP telephony and video is delivered over a single Cisco IP Communications infrastructure

Cisco Call Manager 4.1

Cisco IP Communications Network

Professional

Color

Business

Wireless

Executive Desktop

IP Phone with PC Video

Standards Based H.323 System

Small Group System

High-end Video systems
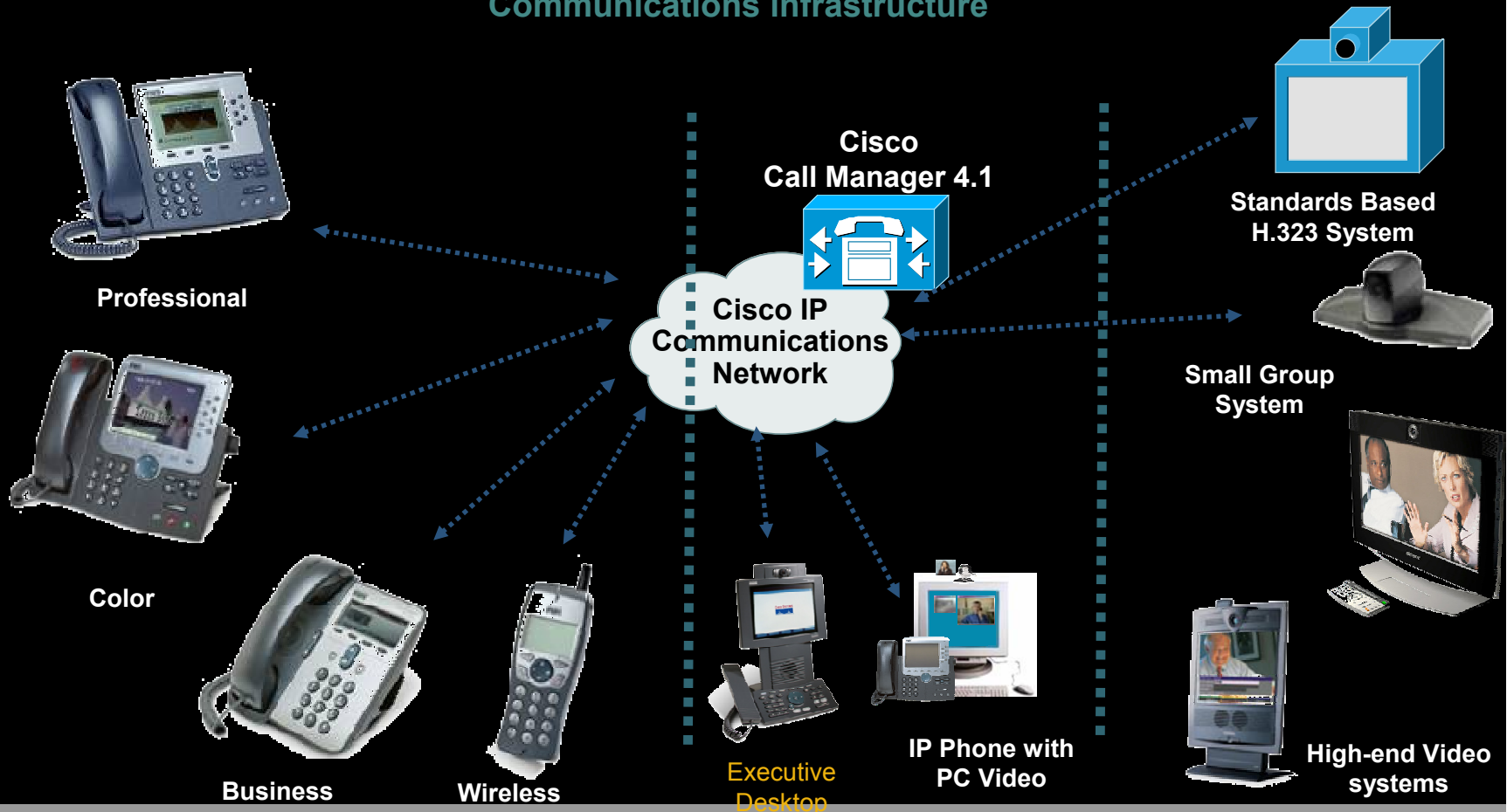
Video Phone & 영상회의 통합 사용편리성!!

Cisco IP 영상회의장비
(IPVC 3540)

Video

Video

Cisco VTA

Sony 영상회의 단말

Answer

CALL ON HOLD

Video

Conference

Answer
Video

Cisco IP PBX

7985 Video Phone

IPC Mobile Connect
- Cell Phone에서 IPC기능 연동

ENTERPRISE

OUTSIDE | **INSIDE**

Mobile Operator's Wireless Network

MobilityManager Server

Cisco CallManager IP-PBX

JTAPI

Enterprise Network

Unity Server

IP Phones

Standard Mobile Phone (CDMA, TDMA, GSM)

Standard Mobile Phone (CDMA, TDMA, GSM)
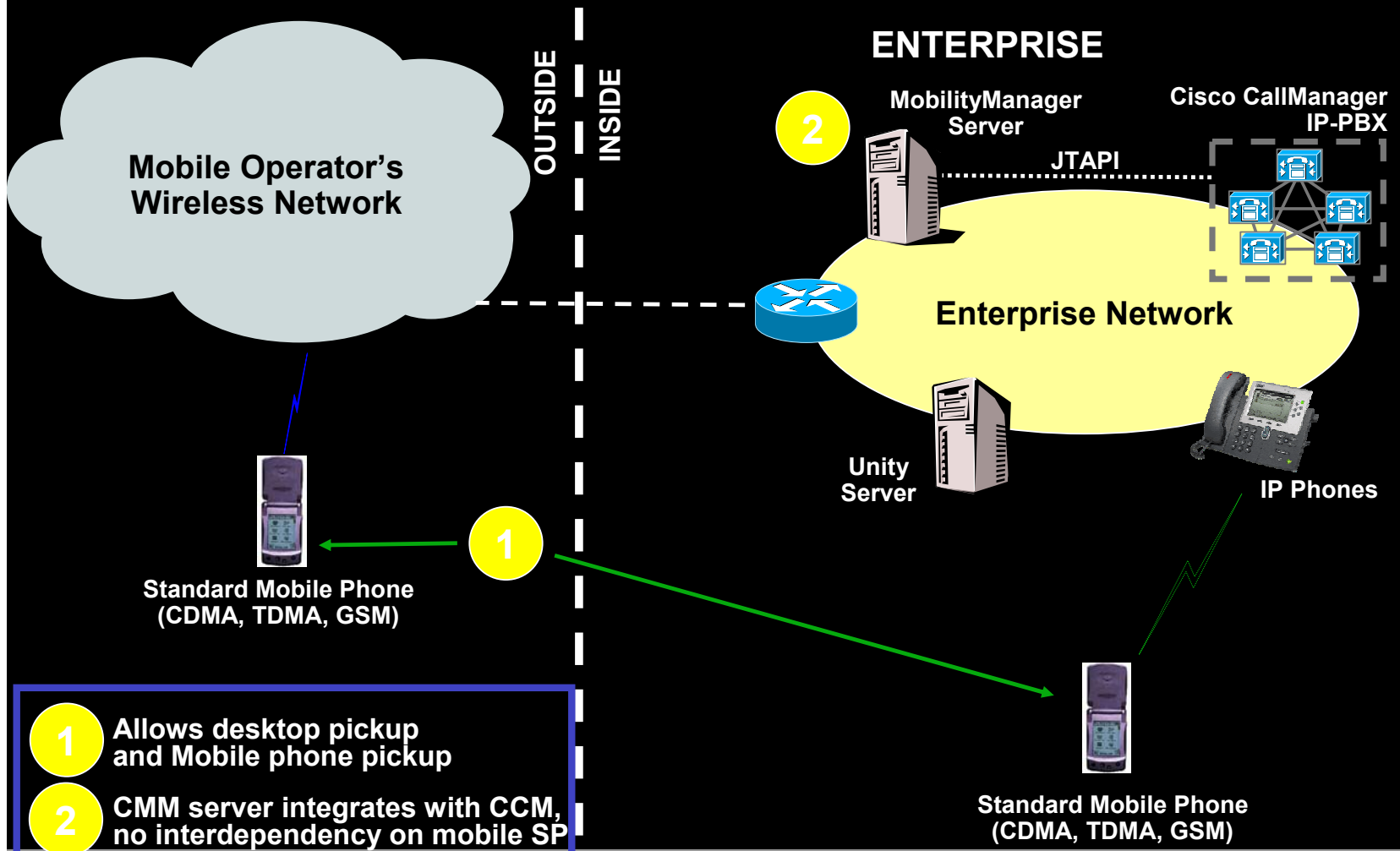
1. **Allows desktop pickup and Mobile phone pickup**
2. **CMM server integrates with CCM, no interdependency on mobile SP**

Cisco Confidential 19

Cisco MeetingPlace Express
- 음성 및 데이터 협업 솔루션

Voice and Web Conferencing Solution

- **Deploy conferencing with CallManager for cost savings and productivity**

- **Simple, powerful functionality**

  Extensive voice conferencing capabilities

  Control meetings and share content from web

  Simple setup and attend from web and phone

- **Simple to deploy and manage**

  Software solution on single MCS server

- **IP voice—H.323 and SIP**

  120 concurrent users

NEW

Messaging – Mid market≗ Cisco Unity Connection

Integrate your most useful business tools to maximize productivity, reduce cost, and create competitive advantage for your business

Cisco Unity - unified messaging and intelligent voice mail for enterprise and mid-market customers with Exchange and Domino environments

Cisco Unity Connection - integrated messaging, speech recognition and call routing rules into an easy-to-manage system for mid-market customer

Cisco Unity Express - cost-effective integrated voice messaging and auto attendant for small and medium branch office environments
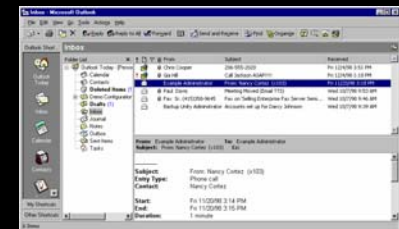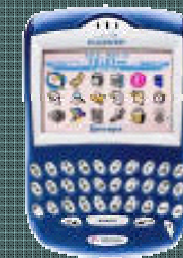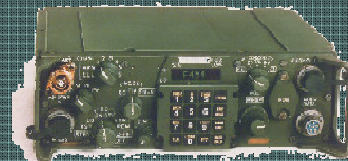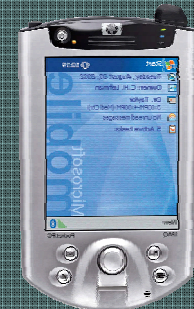
Product	Users	Messaging Type	Platform	Networking	Redundancy
Cisco Unity Express	**Less than 250**	**Voice Mail**	**Router Based**	**Yes**	**No**
Cisco Unity Connection	**Up to 1500**	**Voice Mail** **Integrated Messaging**	**Server Based**	**No**	**No**
Cisco Unity	**7,500 per server**	**Voice Mail** **Integrated Messaging** **Unified Messaging**	**Server Based**	**Yes**	**Yes**

Converge with RF voice devices – Cisco IPICS

"Push-to-Talk Everywhere"

Any voice to any voice

Video and data integration
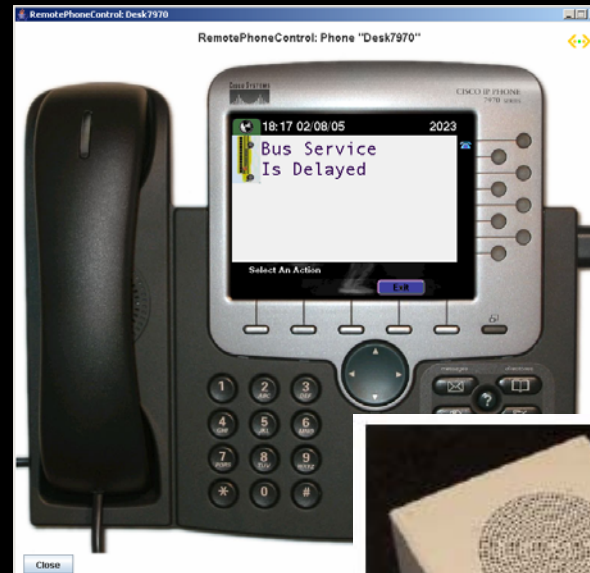
Bridging the old and the new

IPICS Components Phase I (FCS Nov/Dec 2005)

- **IPICS Server (Appliance) MCS Platforms**

- **Media Services**

  RMS Router Media Services (Router DSP Release 1.0)

- **Incident Management Console**

- **PMC (Push to Talk Management Center)**

- **IP Phone with Radio PTT capability**

- **Customization of PMC and Incident Management Console**

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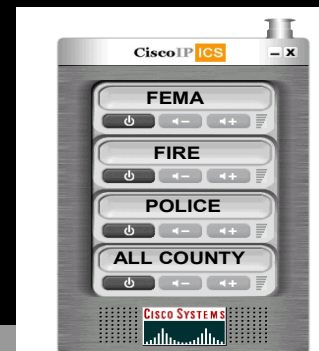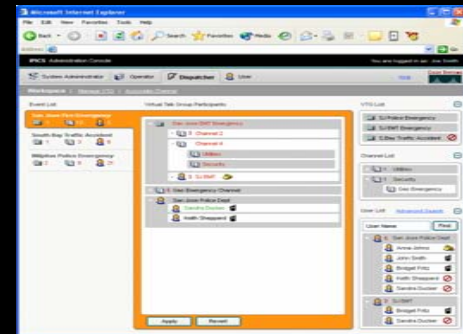
IP Paging System - InformaCast

- <u>공공 기관, 운송, 공장 등의</u> **paging**시스템을 <u>**IP**기반으로</u> 전환할 수 있는 음성, 문자 **paging**시스템

- 모든 **Cisco IP Phone, PC** 및 **Berbee IP Speaker**에서 동작

- **PC** 또는 **Phone**에서 **paging**가능

- **Live**, 등록된 **message**나 **schedule**에 따라 운영

- <u>장점</u>

    – 비용절감 **(IP**망으로 통합운영**) – 70% down**

    – 하나의 서버로 모든 기업의 모든 **paging** 시스템 관리, 운영

    – 기존의 **Data, voice**망 운영가능

    – 다양한 **application** 접목 용이 **(**인터넷기반**)**

RemotePhoneControl: Desk7970
RemotePhoneControl: Phone "Desk7970"
18:17 02/08/05   2023
Bus Service
Is Delayed
Select An Action
Exit
CISCO IP PHONE
Close

Speaker with Optional Clock Display

Simple Tools to Manage, Monitor, Report

- **Cisco Voice Provisioning Tool** **Provides Common System Administration Interface: Many Daily Provisioning Activities Now 1 Min or Less Compared to 4 Minutes!**

- **CiscoWorks IP Communications Operations Manager 1.0:** **Service Level Monitoring And Diagnostics Across Entire Business Communications Solution**

- **CiscoWorks IP Communications Service Monitor 1.0:** **SLA Information About Actual User Quality Of Voice Experiences**

- **Cisco Network Assistant 3.0:** **Intuitive Network Wide Configuration of Switches, Security and PoE Ports**

Cisco Voice Provisioning Tool

CiscoWorks IP Communications Operations Manager 1.0

CiscoWorks IP Communications Service Monitor 1.0

Cisco Network Assistant 3.0

Cisco IP Communications

Real Cases

Cisco Confidential

Cisco IPC in Iraq

- 미국 **JITC (Joint Interoperability Test Center)**에서 **PBX1 (Control & Command),** **PBX2 Certification**을 받은 유일한 **All IP PBX**업체

  – **Iraq**에 **Cisco IP Phone 20,000**대를 실제 전장에서 사용 중

  – 미군 내 총 **Cisco IP Phone 40,000**대를 사용 중

- 전장의 실제 군인들이 **Cisco IP Communications**을 **driving**하고 있음

- 호환성, 보안성, 편리성, 이동성

- **Integrated Digital Voice Data and Video System**

- **Brigade and above**

- **In use with RNLA for 2+ years**

- **COTS/MOTS integration using Cisco IP Phones and Cisco Call Manager with MOTS Communications Systems**

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Summary

- <u>시장에서 입증된 **IP**교환기 시스템</u>
  - 시장 최초로 **All IP PBX sales (First mover)**
  - **100**개 고객, **50,000 IP Phone** 판매
  - 다양한 요구 및 환경 충족
- <u>다양한 솔루션 **package**</u>
  - **Small market (Cisco BCS** 솔루션, **CCME)**
  - **Mid market (Cisco BCS)**
  - **High end market**
- <u>강력한 보안 기능</u>
  - **IP PBX**업체 중 유일하게 **CCRA EAL1** 인증
  - **Total** 보안 솔루션 제공 **(Network + IPC)**
  - 음성, 신호 암호화 및 인증 솔루션
- <u>다양한 부가 **application**</u>
  - **Video Conference**
  - **Web Conference**
  - **Mobility** 솔루션
  - **Unified Messaging, Client** 솔루션