Kádár Zsolt, Technikai tanácsadó

2008. február 7.

SYNERGON

Cisco Unified Communications updates

zsolt.kadar@synergon.hu

SYNERGON GROUP

SPAN

SAO

infinity

FibeX

SYNERGON

Cisco Unified Communications portfolio

SYNERGON

Endpoints

| Cisco Unified IP Phones | Wireless IP Phones | Unified IP Phone 7985 | Unified Personal Communicator | IP Communicator | Dual Mode Phones |

Applications

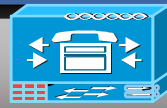| Cisco Unity Messaging | Unified MeetingPlace Conferencing | Unified Customer Contact | Unified Video Advantage | Unified Workspace Licensing | Unified CRM Connectors | Mobile Communicator |

(Call Control)

| Smart Business Communications System | Communications Manager Express | Cisco Unified Presence | Communications Manager Bus Edition | Communications Manager |

Infrastructure

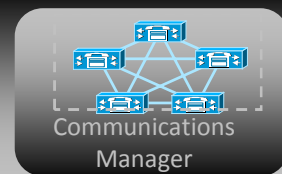| Routing | Switching | Voice Gateway | Messaging Gateway | QoS | Session Border Control | Security |

SYNERGON GROUP

SPAN SAO infinity FibeX SYNERGON

Cisco Unified Communications portfolio - Agenda

SYNERGON

Endpoints

Cisco Unified IP Phones | Wireless IP Phones | Unified IP Phone 7985 | Unified Personal Communicator | IP Communicator | Dual Mode Phones

Applications

Cisco Unity Messaging | Unified MeetingPlace Conferencing | Unified Customer Contact | Unified Video Advantage | Unified Workspace Licensing | Unified CRM Connectors | Mobile Communicator

(Communications)

Unified Communications System | Communications Manager Express | Cisco Unified Presence | Communications Manager Bus Edition | Communications Manager

Infrastructure

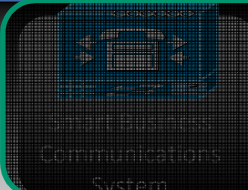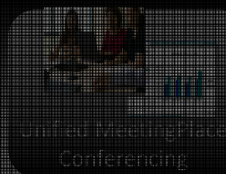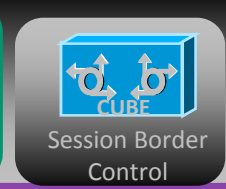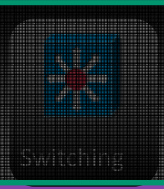Routing | Switching | Voice Gateway | Messaging Gateway | QoS | Session Border Control (CUBE) | Security

SYNERGON GROUP   SPAN   SAQ   infinity   FibeX   SYNERGON

Cisco Unified Communications Manager 6.1

Endpoints
- Cisco Unified IP Phones
- Wireless IP Phones
- Unified IP Phone 7985
- Unified Personal Communicator
- IP Communicator
- Dual Mode Phones

Applications
- Cisco Unity Messaging
- Unified MeetingPlace Conferencing
- Unified Customer Contact
- Unified Video Advantage
- Unified Workspace Licensing
- Unified CRM Connectors
- Mobile Communicator

- Unified Communications System
- Communications Manager Express
- Cisco Unified Presence
- Communications Manager Bus Edition
- Communications Manager

Infrastructure
- Routing
- Switching
- Voice Gateway
- Messaging Gateway
- QoS
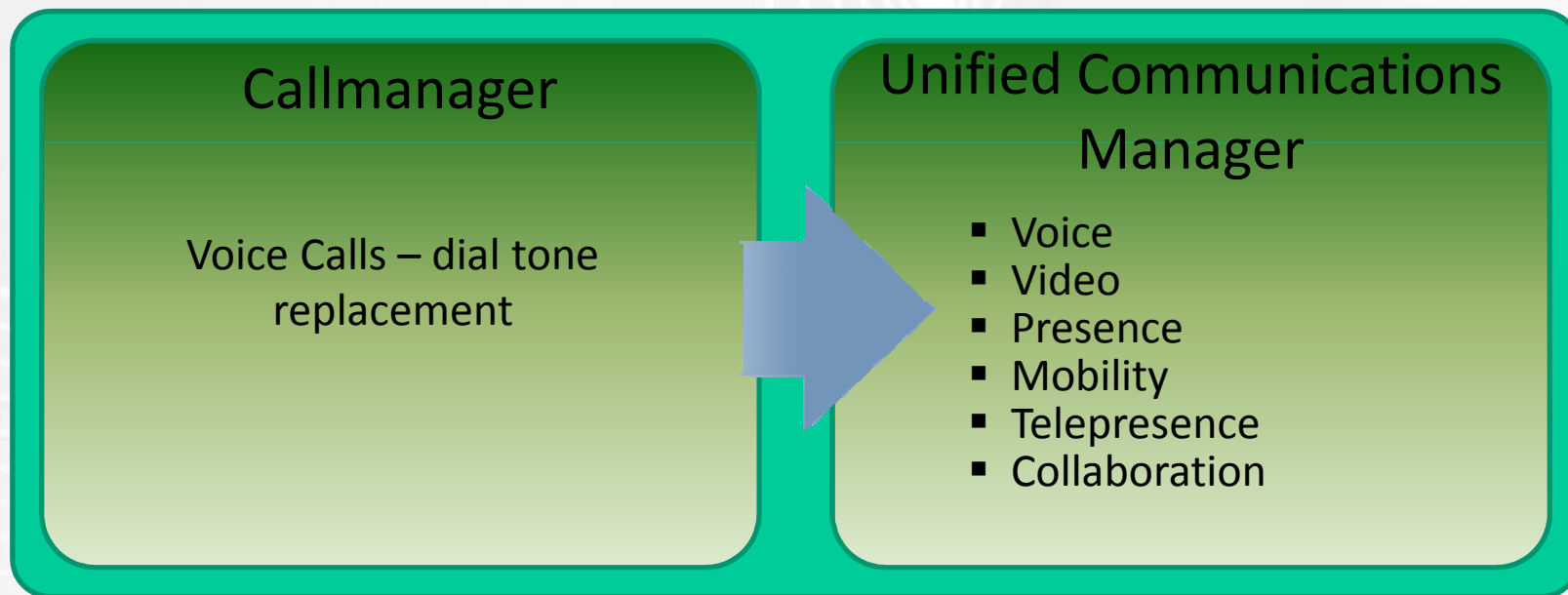- Session Border Control
- Security

4

SYNERGON

IPICS

Unified Mobile
Communicator

MOC

MeetingPlace -
Collaboration

UC Manager cluster

Cisco Unified
Contact Center

Unity

Telepresence

SYNERGON GROUP

SPAN

SAO

infinity

FibeX

SYNERGON

Cisco Unified Communications Manager - Roadmap

cont.

SYNERGON

CUCM Versioning & Upgrade Paths

CUCM 3.X — 3.3(5)

CUCM 4.X — 4.1(3) 4.2(3) 4.3(1)

CUCM 5.X — 5.1(2) 5.1(3)

CUCM 6.X — 6.1(1) 6.2(3)

CUCM 7.X — 7.0(1)

SYNERGON GROUP   SPAN   SAO   infinity   FibeX   SYNERGON

Cisco Unified Communications Manager - Roadmap

cont.

CUCM Versioning & Upgrade Paths

CUCM 3.X   3.3(5)

CUCM 4.X   4.1(3)   4.2(3)   4.3(1)

CUCM 5.X   5.1(2)   5.1(3)

CUCM 6.X   6.1(1)   6.2(1)

CUCM 7.X   7.0(1)

Cisco Unified Communications Manager - Roadmap

CUCM Versioning & Upgrade Paths
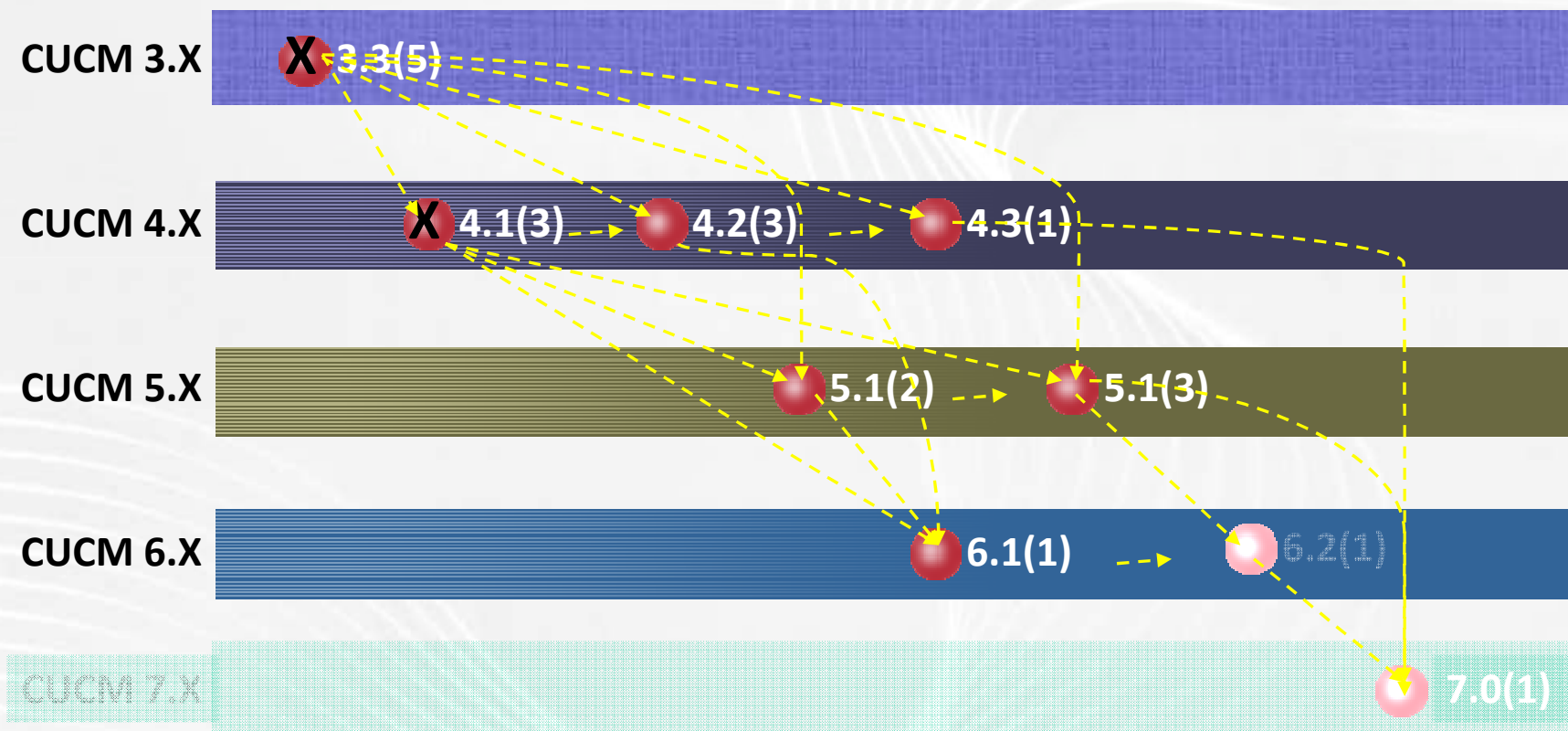
The future plan:

OS independent CUCM multi-platform support

CUCM 3.x – 4.2(x)   **CUCM 4.3(x)**

CUCM 7.x

CISCO
Appliance
CUCM 5.x – 6.x

or
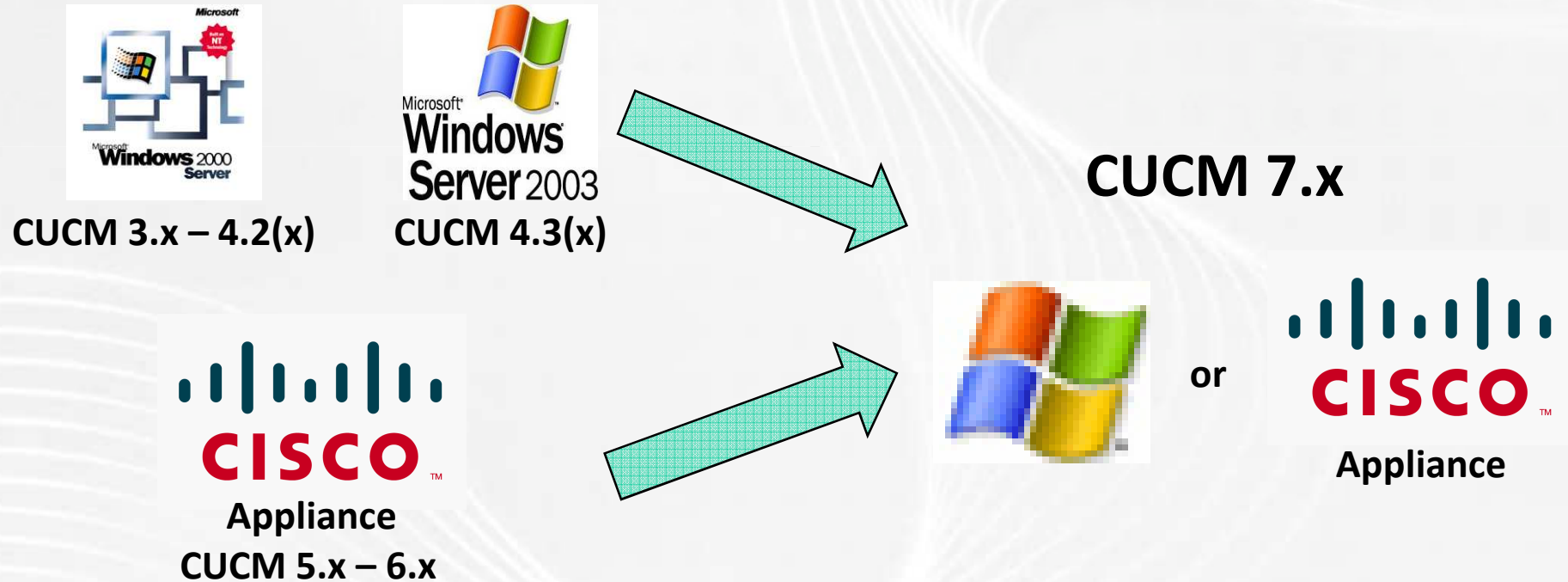
CISCO
Appliance

Features from 5.0

Call forwarding enhancements (Secondary CSS for CFA)

Call park

Call pickup group

CTI and CTI super provider

DHCP

LDAP Directory enhancements

Licensing

Presence

RSVP

SIP line side (endpoints) support !!!

SIP route pattern

SIP dialplan in phone

etc.

Cisco Unified Communications Manager - Roadmap

Features from 6.0

AAC, iLBC codec support

Advanced ad-hoc conference

Audible MWI

Barge enhancements

Call pickup notification

Connected number display

Device mobility

DND

Logout from hunt groups

MGCP T.38 enhancements (CA-controlled T.38 relay)

Intercom

CUCM 6.1(1a)

Cisco Unified Communications Manager – release 6.1

▪ Cisco Unified Communications Manager, Version 6.1 adds to the innovation brought forth in earlier versions through a set of new features.

▪ Cisco Unified Communications Manager 6.1 introduces two new features that help increase collaboration and improve access to coworkers. The first one is the Join Across Lines feature for connecting multiple calls or conferences and the second is a Single Button Barge feature that allows authorized users to enter a call as an additional party by pressing a single key.
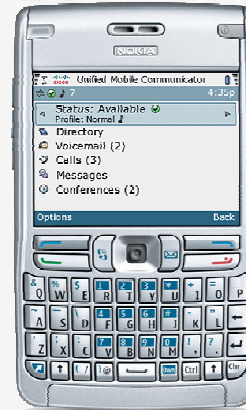
CUCM 6.1(1a)

Cisco Unified Communications Manager – release 6.1

- Full-featured system set for all customers
- Extensive protocol support for interoperability
    - SIP, H.323, MGCP, and SCCP
- Voice and Video telephony
- DND, Intercom, Audio MWI
- 8.3.3 Phone Firmware supporting LLDP-MED
- 7937G and 3911 phones
- 1861 ISR
- Secure conferencing
- Silent monitoring and recording
- Integrated Cisco Unified Mobility
    - Single number reach (SNR)
- Increased Resiliency
    - Ensures key features access during outages

CUCM 6.1(1a)

Cisco Unified Communications Manager – release 6.1

SYNERGON

A newer version of Cisco Security Agent 5.2 is available on Cisco Unified Communications Manager 6.1 to monitor and manage security threats. Cisco Security Agent software provides threat protection for server, desktop, and Point-of-Service (POS) computing systems. This security software goes beyond conventional endpoint security solutions by providing an industry-leading defense against targeted attacks, spyware, rootkits, and day-zero attacks.

Secure Unified Communications

SYNERGON GROUP   SPAN   SAO   i infinity   FibeX   SYNERGON

Cisco Unified Communications Manager Business Edition

SYNERGON

Endpoints
- Cisco Unified IP Phones
- Wireless IP Phones
- Unified IP Phone 7985
- Unified Personal Communicator
- IP Communicator
- Dual Mode Phones

Applications
- Cisco Unity Messaging
- Unified MeetingPlace Conferencing
- Unified Customer Contact
- Unified Video Advantage
- Unified Workspace Licensing
- Unified CRM Connectors
- Mobile Communicator

- Communications System
- Communications Manager Express
- Cisco Unified Presence
- **Communications Manager Bus Edition**
- Communications Manager

Infrastructure
- Routing
- Switching
- Voice Gateway
- Messaging Gateway
- QoS
- Session Border Control
- Security

SYNERGON GROUP

SPAN

SAO SYNERGON GROUP

i infinity

**FibeX** SYNERGON GROUP

SYNERGON

CUCM-BE

Cisco Unified Communications Manager – Business Edition

- Key Unified Communications Applications for 100-500 Person Companies on a Single Server
    - Cisco Unified Communications Manager, Cisco Unified Mobility, and Cisco Unity Connection
- Flexible Deployment Options for Growth
    - Single or multi-site centralized configurations
    - Expansion and migration paths
- Foundation for More Advanced Unified Communications Capabilities
- Unifies With Entire Cisco Unified Communications System of Products
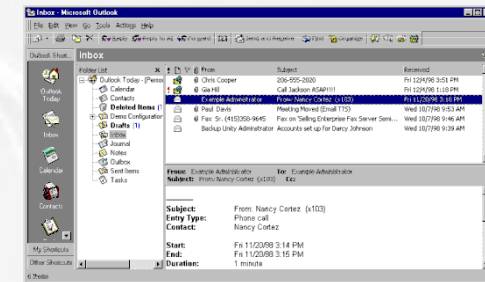
CUCM-BE

Cisco Unified Communications Manager – Business Edition

- ## New server hardware for this release - **MCS-7828**
  - Intel Dual-Core Xeon 2.13-GHz processor with a 1060-MHz front side bus (FSB) and 2 MB of Layer 2 cache
  - 6-GB PC2-5300 double-data-rate 2 (DDR2) Error Checking and Correcting (ECC) memory
  - Two 250-GB cold-swap serial advanced technology attachment (SATA) hard disk drives configured with Redundant Array of Independent Disks (RAID) 1
  - Dual-port Gigabit Ethernet controller (embedded)
  - Quick-deployment third-party rail kit

The server appliance is preinstalled with an operating system and the Cisco Unified Communications Manager Business Edition 6.0 software suite. Cisco Unified Communications Manager Business Edition is fully operational upon startup, requiring entry of just a few configuration variables such as IP address and domain.

- The Cisco Unified Communications Manager Business Edition consists of the following core components:
  - Cisco Unified Communications Manager 6.0 with integrated mobility features
  - Cisco Unity Connection 2.0
  - Cisco MCS 7828 Media Convergence Server

Cisco Unified Communications Manager Business Edition is based on the Cisco Unified Communications Linux-based appliance platform introduced with Cisco Unified Communications Manager Release 5.0.

The **Cisco Unified Mobility** (formerly **Cisco Unified Mobile Connect**) functions provide powerful capabilities previously available only to larger organizations. Cisco Unified Mobility provides the capability to have **up to four devices ring** when a call comes into a user's IP phone. Whether you are working from home or in a hotel room traveling for business, now your calls can follow you anywhere. Cisco Unified Communications Manager also **supports dual-mode devices**, which benefits customers who have mobile employees who need to move between campus wireless and external cellular network environments. These devices can manually hand calls from a cellular GSM network to an 802.11-based wireless LAN.
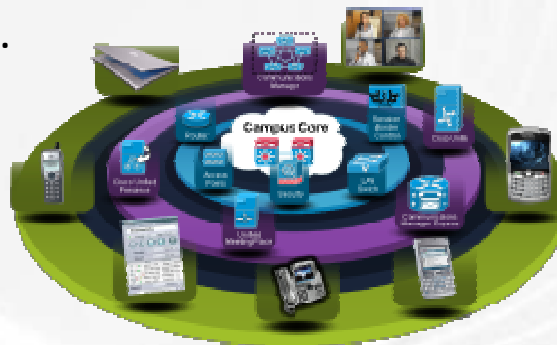**Cisco Unified Communications Manager Business Edition is available only on Cisco MCS 7828 servers.**

CUCM-BE

Cisco Unified Communications Manager – Business Edition

- **Ordering Information**
  - Organizations can select one of the base packages. The Cisco Unified Communications Manager Business Edition base packages bundle the Cisco MCS 7828 appliance with a preloaded software suite and seat licenses for the first 50 users. The seat licenses included in the base package cover the server licenses, mailboxes, and ports needed for the initial system. Note that these seat licenses do not cover phone or device licenses.
  - Organizations can then add more users by selecting the appropriate quantities of user packages, available in 10- or 50-seat increments, up to the total number of users. The add-on user licenses cover the server licenses, mailboxes, and ports and are cumulative.

- **Licensing**
  - Application and phone software licenses are enforced. The system manages the maximum number of devices that can be provisioned.
  - Each device (Cisco Unified IP Phones, third-party devices, and video devices) provisioned in the system corresponds to a number of device-license units (DLUs), depending on its capabilities; the total number of units is managed in Cisco Unified Communications Manager to determine capacity.
  - DLUs must be purchased to cover the number of devices connected to Cisco Unified Communications Manager.
  - Third-party SIP devices require DLUs for operation with Cisco Unified Communications Manager.

Cisco Unified Communications Endpoints

Endpoints

Cisco Unified IP Phones

Wireless IP Phones

Unified IP Phone 7985

Unified Personal Communicator

IP Communicator

Dual Mode Phones

Applications

Cisco Unity Messaging

Unified MeetingPlace Conferencing

Unified Customer Contact

Unified Video Advantage

Unified Workspace Licensing

Unified CRM Connectors

Mobile Communicator

Communications System

Communications Manager Express

Cisco Unified Presence

Communications Manager Bus Edition

Communications Manager

Infrastructure

Routing

Switching

Voice Gateway

Messaging Gateway

QoS

Session Border Control

Security

SYNERGON GROUP

SPAN

SAO

infinity

FibeX

SYNERGON

Cisco Unified Communications Endpoints

List Price ↑

Existing Portfolio of Best-Selling IP Phones

Additional Enhanced IP Phones

Manager — **Cisco Unified IP Phone 7960G**

Business — **Cisco Unified IP Phone 7940G**

Basic — **Cisco Unified IP Phone 7905G/7912G**

Executive — **Cisco Unified IP Phone 7970G**

Enhanced Manager — **Cisco Unified IP Phone 7961G**

Enhanced Business — **Cisco Unified IP Phone 7941G**

Enhanced General Purpose — **Cisco Unified IP Phone 7906G / 7911G**

Enhanced Power & Data Throughput Options

Enhanced Applications Capability

Unicode Support for Asian Localization

Features →

Cisco Unified Communications Endpoints

IP Phone Architectures

1999

7960G

Different architectures require parallel feature development

2004   **2005**   **2006**

7970G   **7961G**   **7931G**

7911G

2001

7905G

- Converging on common architecture
- Feature delivery consistent across portfolio
- Common code base

Cisco Unified Communications Endpoints

SYNERGON

Classic IP Phones

Manager
Cisco Unified IP Phone 7960G

Business
Cisco Unified IP Phone 7940G

Java-based '3rd-gen' platforms

Enhanced IP Phones

Executive

Cisco Unified IP Phone 7970G/71GE

Enhanced Manager

Cisco Unified IP Phone 7961G/GE

Enhanced Business

Cisco Unified IP Phone 7941G/GE

Advanced Media IP Phones

Cisco Unified IP Phone 7975G

Cisco Unified IP Phone 7945G/65G

Cisco Unified IP Phone 7942G/62G

Designed for Wideband/hi-fidelity voice (G.722), adds iLBC

Choice of models with Gigabit Ethernet and large backlit color displays

SYNERGON GROUP

SPAN

SAO

infinity

FibeX

SYNERGON

Cisco Unified Communications Endpoints

SYNERGON

7975G

Wideband (G.722) & iLBC	TFT Color display (touch)	KEM support	GigE ports	Nav button	Roadmap Hkswitch Control

7965G

Wideband (G.722) & iLBC	TFT Color display	KEM support	GigE ports	Nav button	Roadmap Hkswitch Control

7945G

Wideband (G.722) & iLBC	TFT Color display		GigE ports	Nav button	Roadmap Hkswitch Control

7962G

Wideband (G.722) & iLBC	Hi-Res grayscale	KEM support	Roadmap Hkswitch Control

7942G

Wideband (G.722) & iLBC	Hi-Res grayscale	Roadmap Hkswitch Control

SYNERGON GROUP   SPAN   SAO   infinity   FibeX   SYNERGON

Driving for SIP feature parity

CUCM 6.x
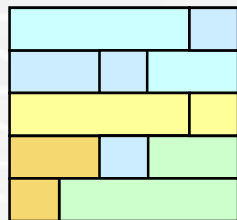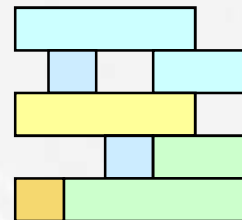
CUCM 7.x
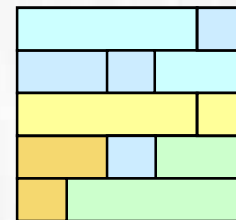
SCCP   **SIP**

SCCP   **SIP**
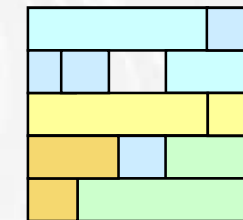
Enhancing the User Experience

G.722-64

Wider Audio Range - Same Bandwidth (64 kbps)

G.711 — 8kHz samples

G.722 — 16kHz samples

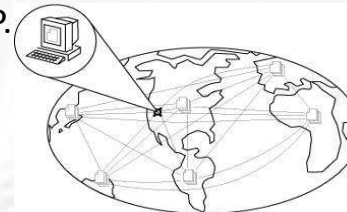150 Hz   300 Hz   3.4 kHz   7 kHz

Navigation and UI enhancements
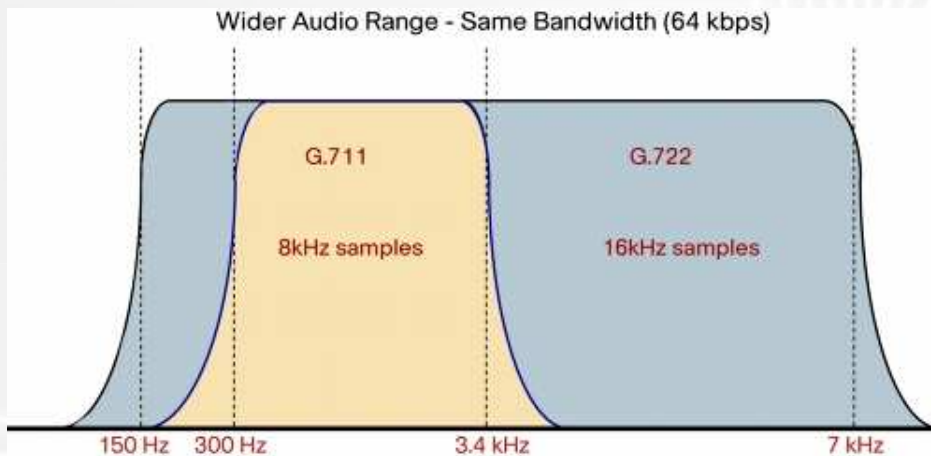
iLBC

The internet Low Bitrate Codec (**iLBC**) is a standard, high-complexity speech codec that is suitable for robust voice communication over IP. iLBC has built-in error correction functionality that helps the codec perform in networks with a high-packet loss.

7937G Conference Station

New industrial design, with 79XX color scheme

IEEE 802.3af line power or Cisco Power Cube 3

Expanded room coverage to ~ 9m X 12m room size

Optional Extension Mic Kit

Support for Wireless Lapel Mic Kit

Support for G.722 Wideband

XML services

Cisco Unified Communications Endpoints

Cisco 3911 Basic SIP Phone

Cost effective, entry level endpoint

Basic feature set only (Hold, Redial, Transfer, Conference, speakerphone, mute, voicemail)

Single line

No built-in switch

Full duplex speakerphone

802.3af POE only

No support for voice security features

Cisco Unified Communications Endpoints

Cisco 7921G ver 1.1

G.722 & iLBC codec support

Wireless security (802.1x, LEAP, PEAP MS-CHAPv2, EAP-FAST, EAP-TLS, WPA 1&2, Personal&Enterprise, CCKM, 40-128bit WEP, TKIP, MIC, AES)

QoS reporting per-call basis

SRTP and TLS support

SCCP only ☹

Desktop charger with speakerphone

Cisco Unified Border Element (CUBE)

SYNERGON

Endpoints

Cisco Unified IP Phones | Wireless IP Phones | Unified IP Phone 7985 | Unified Personal Communicator | IP Communicator | Dual Mode Phones

Applications

Cisco Unity Messaging | Unified MeetingPlace Conferencing | Unified Customer Contact | Unified Video Advantage | Unified Workspace Licensing | Unified CRM Connectors | Mobile Communicator

Infrastructure

Routing | Switching | Voice Gateway | Messaging Gateway | QoS | **CUBE** Session Border Control | Security

32

Cisco Unified Border Element (CUBE)

Highly recommended for Enterprise SIP Trunk deployments

Co-existence with other features such as MTP, SRST, TDM GW

Call Counting

Call Admission
Control
IP SLA

Demarcation

Troubleshooting
Billing
Topology Hiding

Cisco Unified Border Element

H323 to SIP
SIP to SIP
SIP Profiles and Variants

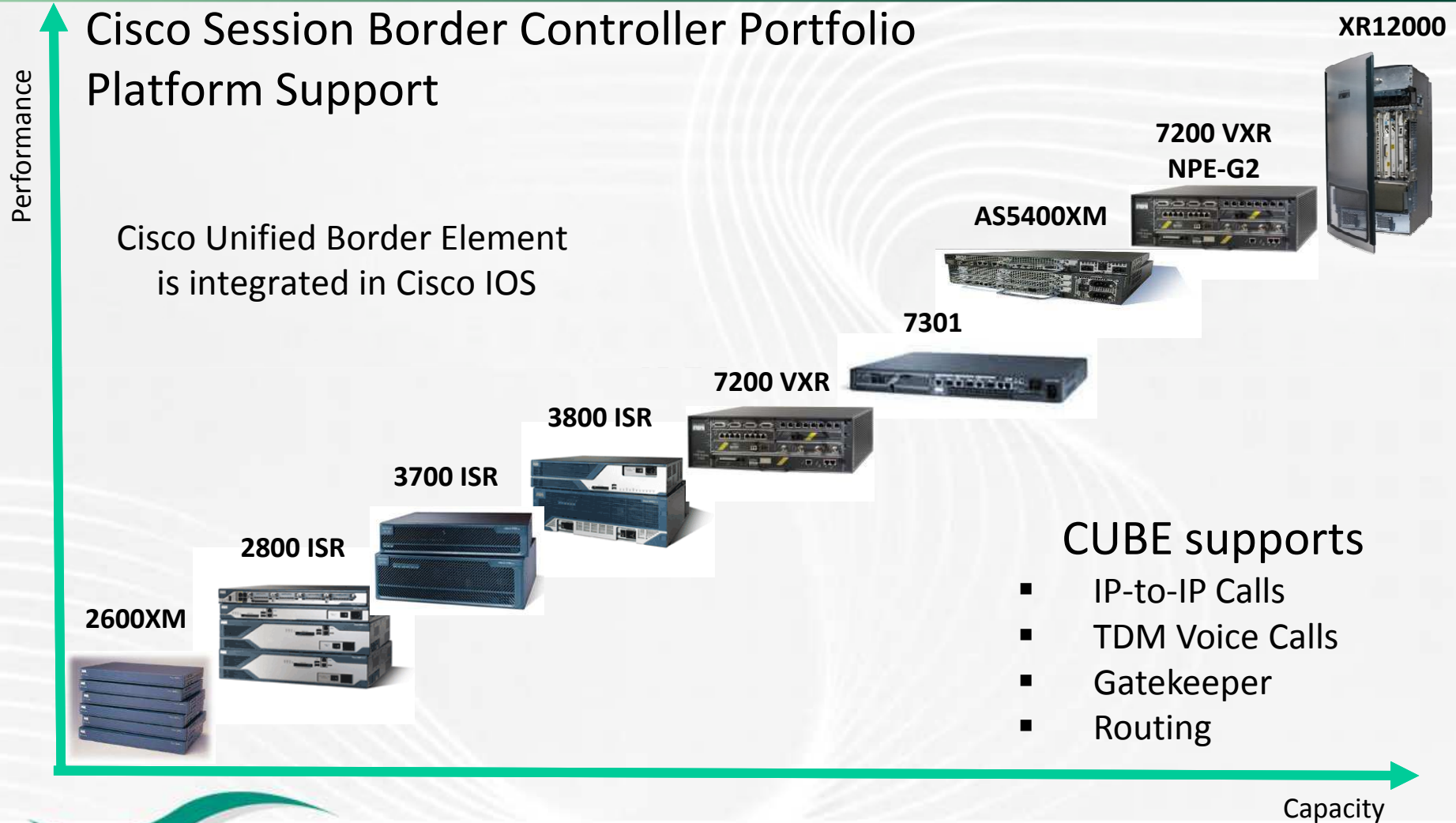Integrated with IOS FW
RTP Media Validation
Signaling protection

Interworking

Security

Cisco Unified Border Element (CUBE)

SYNERGON

Cisco Session Border Controller Portfolio Platform Support

XR12000

7200 VXR
NPE-G2

AS5400XM

Cisco Unified Border Element
is integrated in Cisco IOS

7301

7200 VXR

3800 ISR

3700 ISR

2800 ISR

2600XM

CUBE supports

- IP-to-IP Calls
- TDM Voice Calls
- Gatekeeper
- Routing

Performance

Capacity

SYNERGON GROUP   SPAN   SAO   i infinity   FibeX   SYNERGON
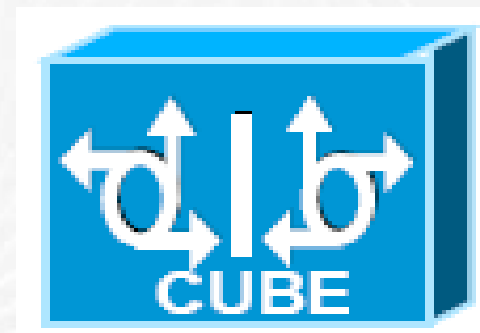
Cisco Unified Border Element (CUBE)

Previously the — multiservice IP-to-IP gateway or Cisco IOS SBC

CUBE enables IP-to-IP interconnect between multiple administrative domains for real-time interactive sessions

Cisco UBE is a tool kit of functions

Depending on the application and deployment scenario, a different set of functions can be turned on/off
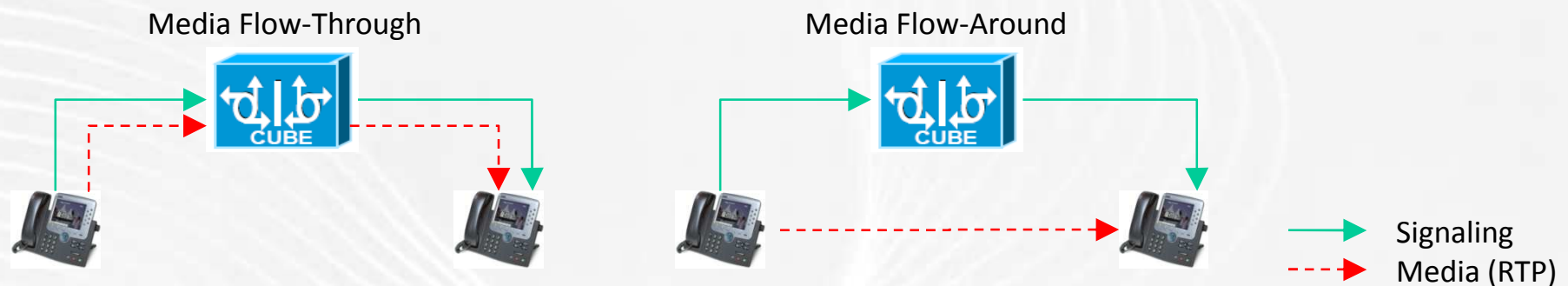
Cisco Unified Border Element (CUBE)

Architecture

- Back-to-Back User Agent or Back-to-Back H.323 Gateway
- Actively involved in the call treatment –for signaling and media packets.
- Signaling is terminated, interpreted and then re-originated.
- Media is handled in 2 different modes:
  - Media Flow-Through
  - Media Flow-Around
- Digital Signal Processors (DSPs) are only required for calls with dissimilar codecs.

Media Flow-Through   Media Flow-Around

→ Signaling
- - -→ Media (RTP)

Cisco Unified Border Element (CUBE)

Features

- Topology hiding and NAT/FW traversal
- Interworking between SIP and H.323
- Encryption on both call-legs (signaling and media)
- CUBE supports standard form of authentication methods on SIP and H.323 protocols
- Hostname validation on SIP endpoints
- Fax and modem call support (T.38, pass-through, cisco-relay)
- DTMF interworking
    - CUBE supports 7 commonly used DTMF methods and 22 DTMF interworkings
    - DSPs only required for the voice inband to RFC 2833 DTMF conversion
- Codec support and filtering (Audio and Video)
- Media transcoding
- Call Admission Control based on total calls, CPU, memory, RSVP, IP call capacity
- TOS bits remapping (DSCP)
- Billing records via Radius VSA, or syslog
- Redundancy (HSRP, GK, DNS srv)

Kérdések?

zsolt.kadar@synergon.hu

Cisco Unified Communications update

Köszönöm figyelmüket!

zsolt.kadar@synergon.hu

SYNERGON GROUP   SPAN   SAO   infinity   FibeX   SYNERGON