

Cisco  
Connect

Praha, hotel Clarion  
10. – 11. dubna 2013

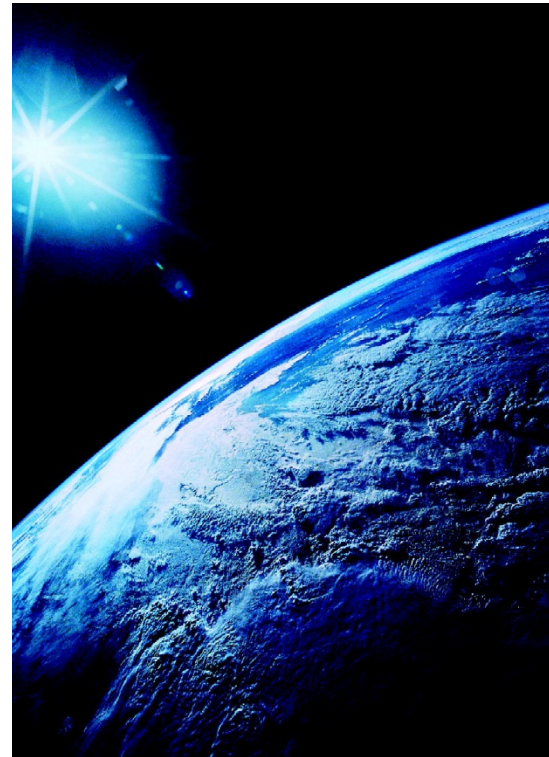
**ANECT 93 | 20 | 13**

# Business to Business Business to Consumer

L2 / L1

Jaroslav Martan, CCIE #5871, [jmartan@cisco.com](mailto:jmartan@cisco.com)

Jan Drnek, Specialista UC – Anect, [Jan.Drnek@anect.com](mailto:Jan.Drnek@anect.com)



# Agenda

## Business to Business Communication

Instant Messaging & Presence

Voice + Video

Collaboration (Content Sharing)

## Česká Pojišťovna Case Study

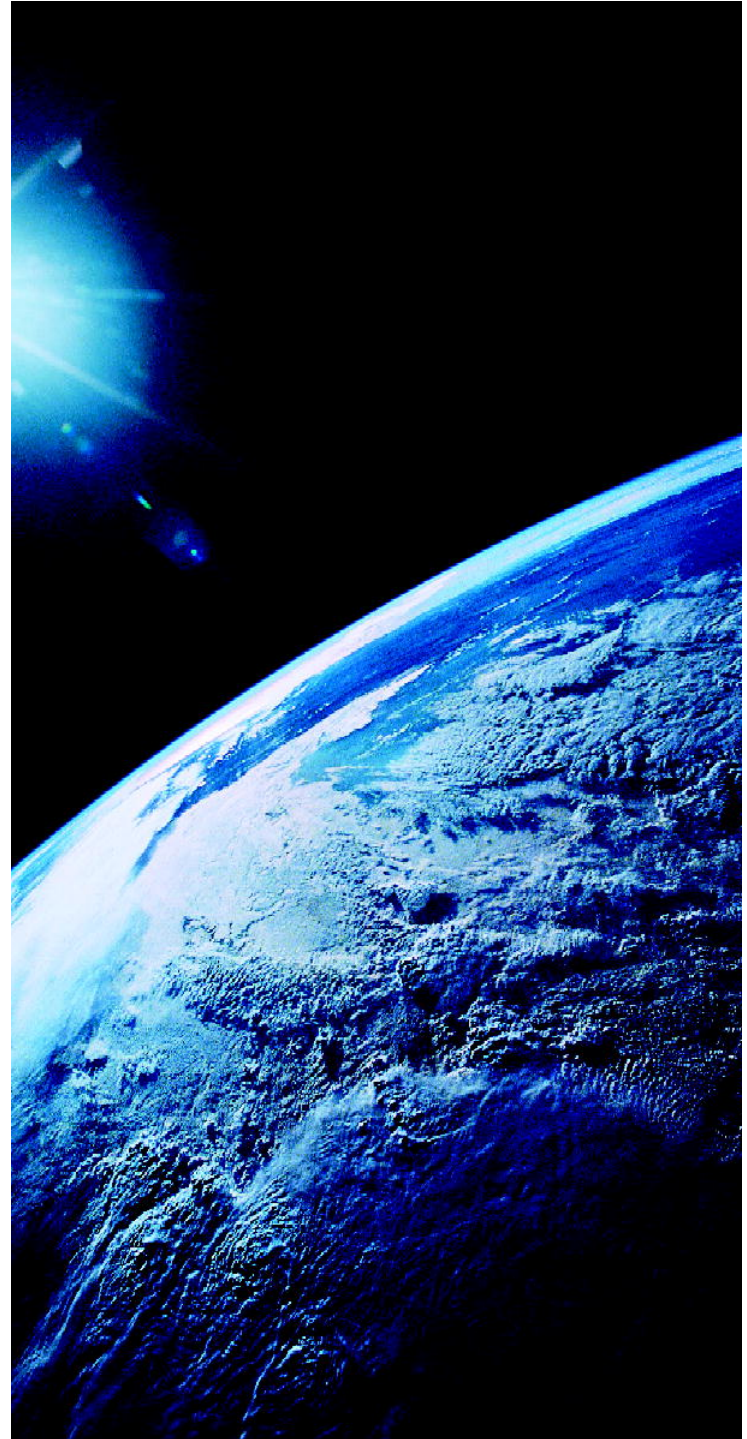
## Business to Consumer

Voice + Video

Collaboration

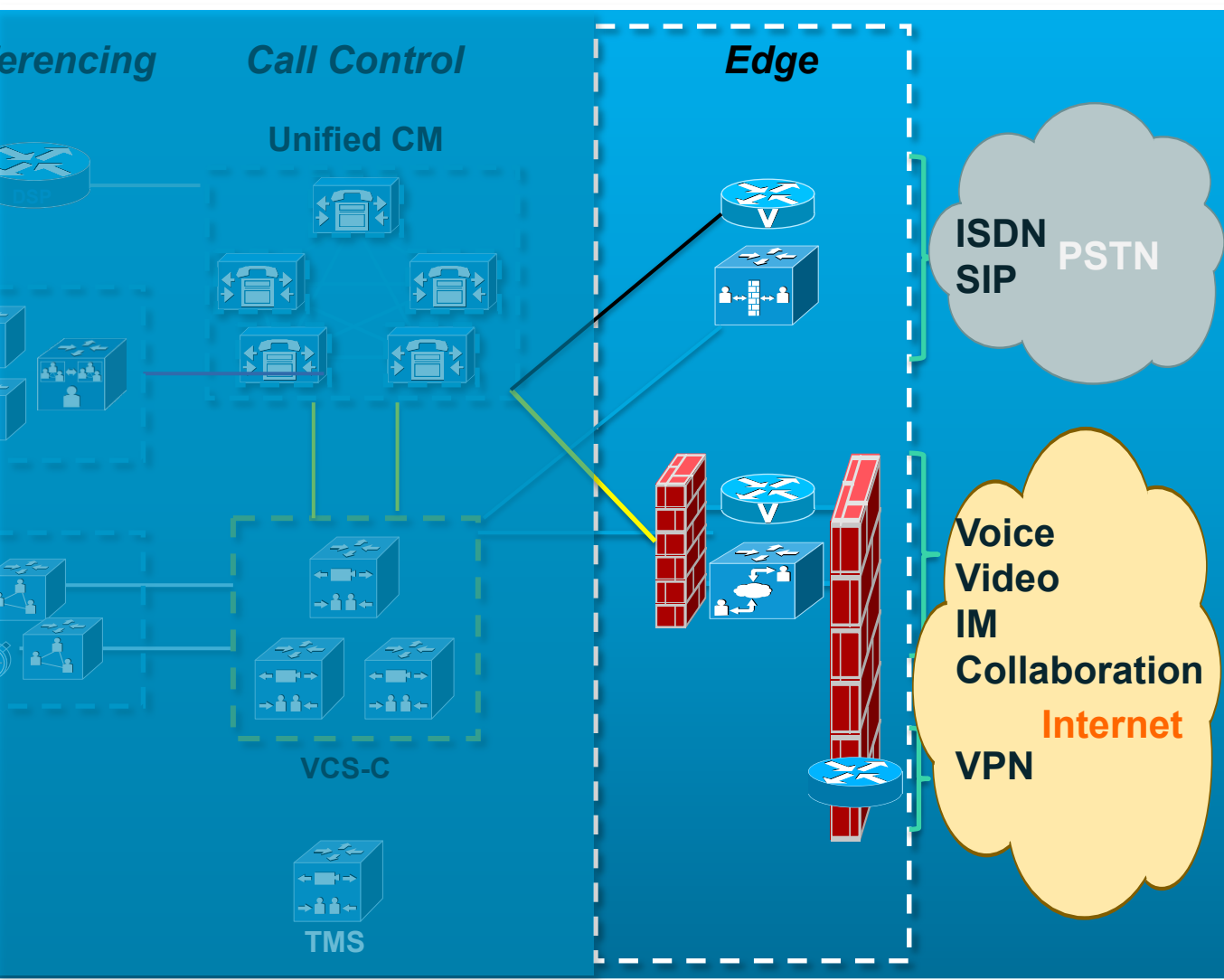
Future - WebRTC

# Business to Business



# Services at Network Edge

## Overview



## External Communications:

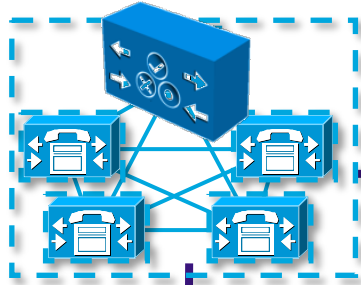
- PSTN
  - ISDN or SIP trunk – voice only
- Internet
  - URI dialing – voice+video
  - Instant Messaging – XMPP, SIP
  - Collaboration – Webex
  - Remote Access – VPN, Edge gateway

# Instant Messaging & Presence

XMPP

```
_xmpp-server._tcp IN SRV 0 0 5259 xmpp-public.abc.com.  
xmpp-public      IN  A   201.1.2.3
```

UC Manager IM&P  
(ABC.COM)  
192.168.1.2



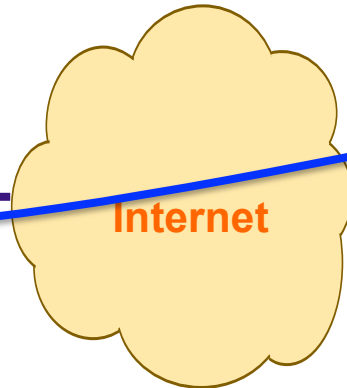
joe@abc.com



DNS



Firewall



Internet



bill@gmail.com



```
201.1.2.3 port 5269 NAT  
to 192.168.1.2
```

```
_xmpp-server._tcp IN SRV 5 0 5269 xmpp-server.l.google.com  
xmpp-server.l    IN  A   173.194.65.125
```

# B2B Voice+Video over Internet

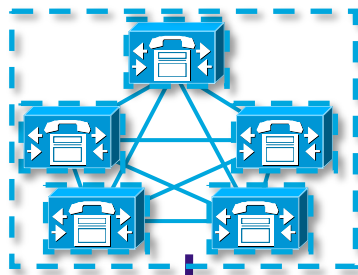
SIP

```
_sip._tcp IN SRV 0 0 5060 vcs.abc.com.  
vcs IN A 201.1.2.4
```

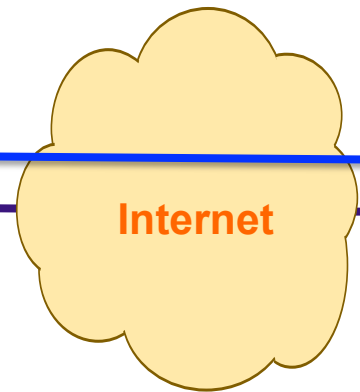
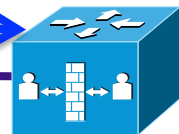
DNS



UC Manager  
(ABC.COM)  
192.168.1.4



VCS-E

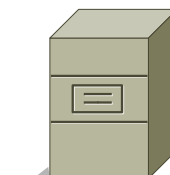


sip:meeting-room@xyz.com

Generic SIP B2BUA  
(XYZ.COM)



DNS



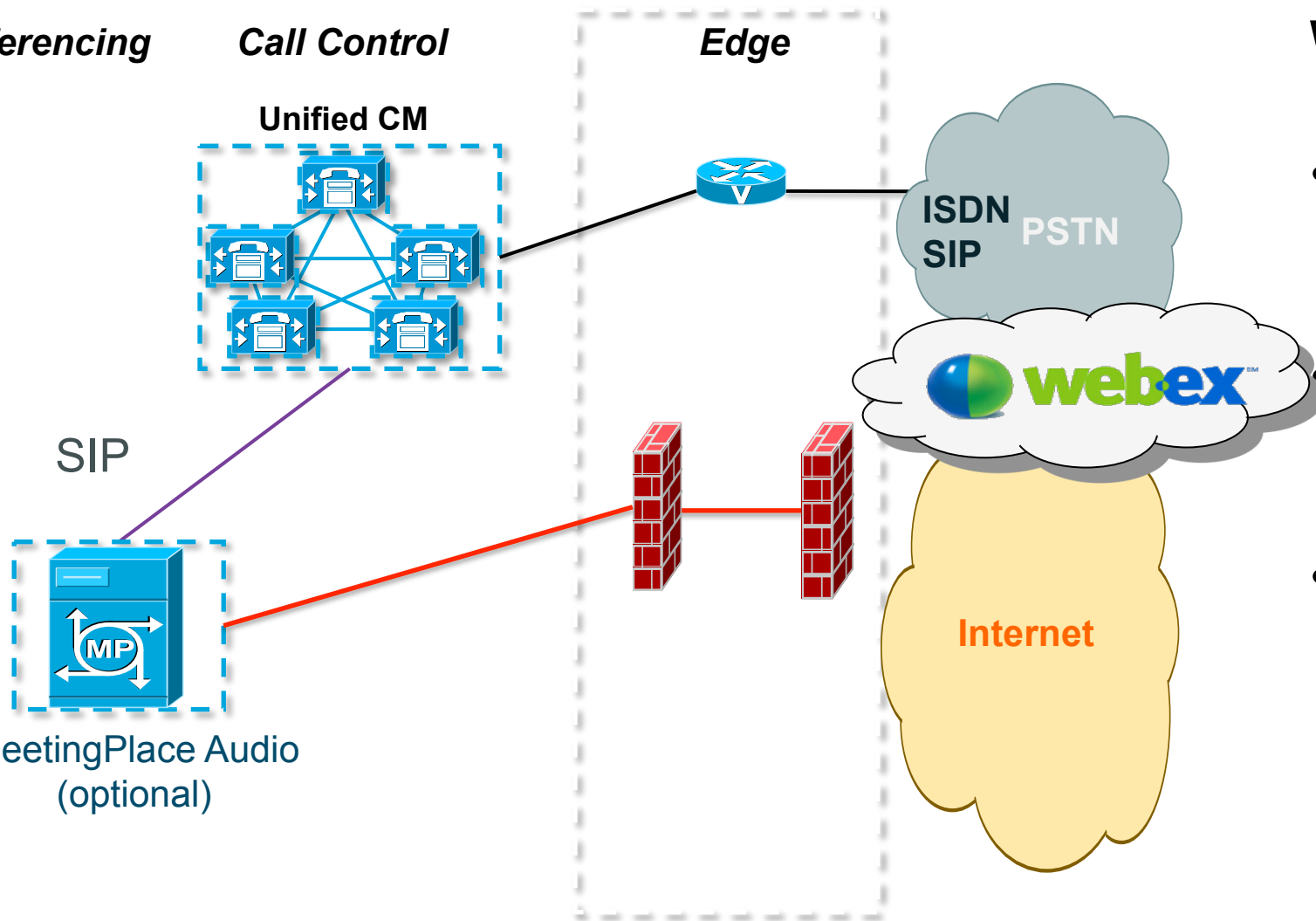
201.1.2.4 port 5060

joe@abc.com



```
_sip._tcp IN SRV 5 0 5060 edge.xyz.com.  
edge IN A 198.10.2.4
```

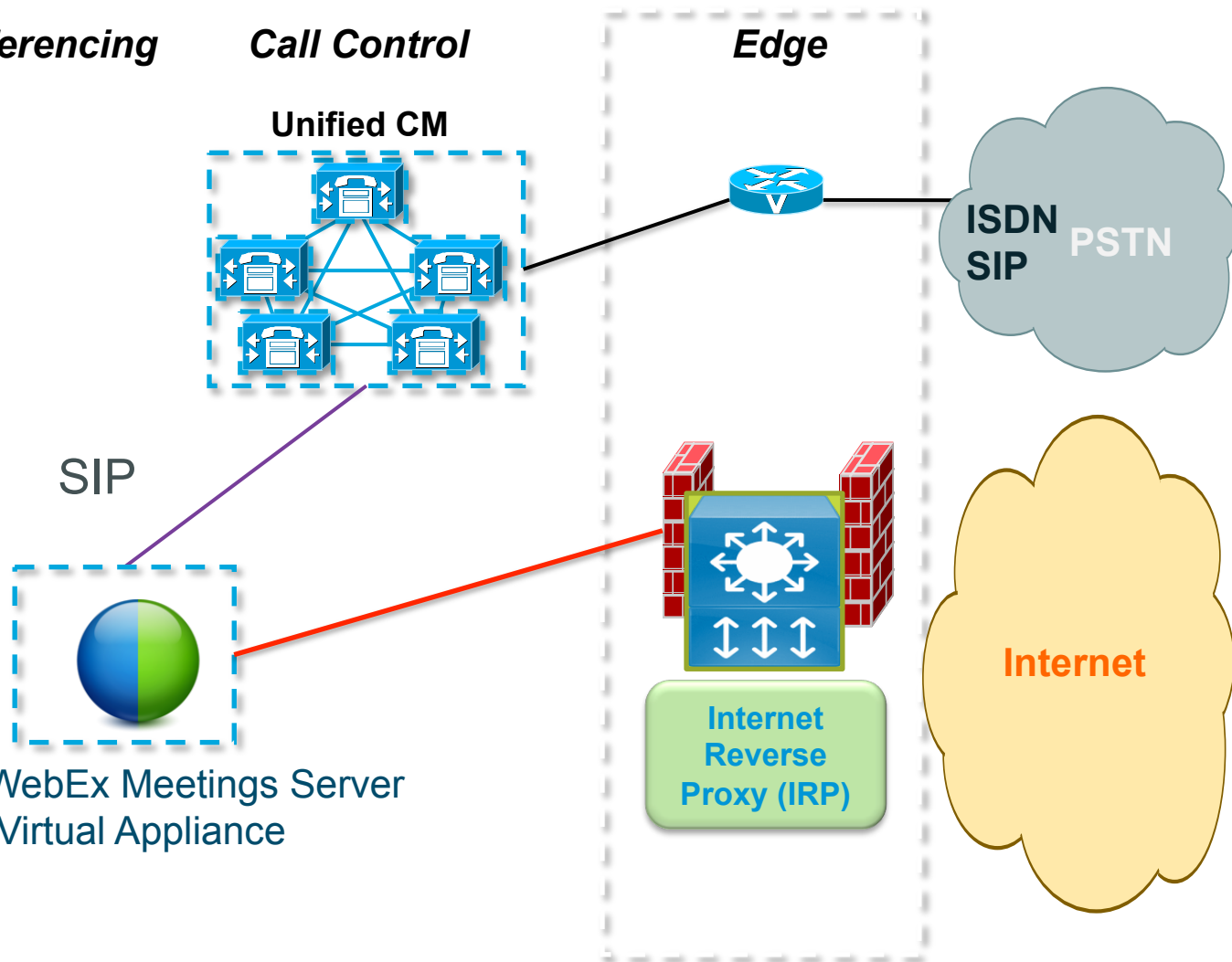
# Collaboration – Webex Cloud Architecture



## Webex Cloud:

- PSTN
  - Webex voice
  - MeetingPlace audio
- Internet
  - Collaboration tools – Mac, iOS, Android
- Voice
  - PSTN audio
  - Integrated VoIP

# Collaboration – Webex Meetings Server Architecture



## Webex Meetings Server:

- PSTN
  - ISDN or SIP trunk – voice only
- Internet
  - Collaboration tools – PC, Mac, iOS, Android
- Voice
  - PSTN audio
  - Integrated VoIP

# TelePresence and WebEx Working Together

Cisco TelePresence



Live, face-to-face communication experience over the network

Share content

Personal, desktop, multipurpose, integrated, and immersive endpoints

Cisco WebEx



- Meet anytime, anywhere, in real time
- Deliver presentations, show documents, and demonstrate applications
- Pass meeting control or control a remote desktop

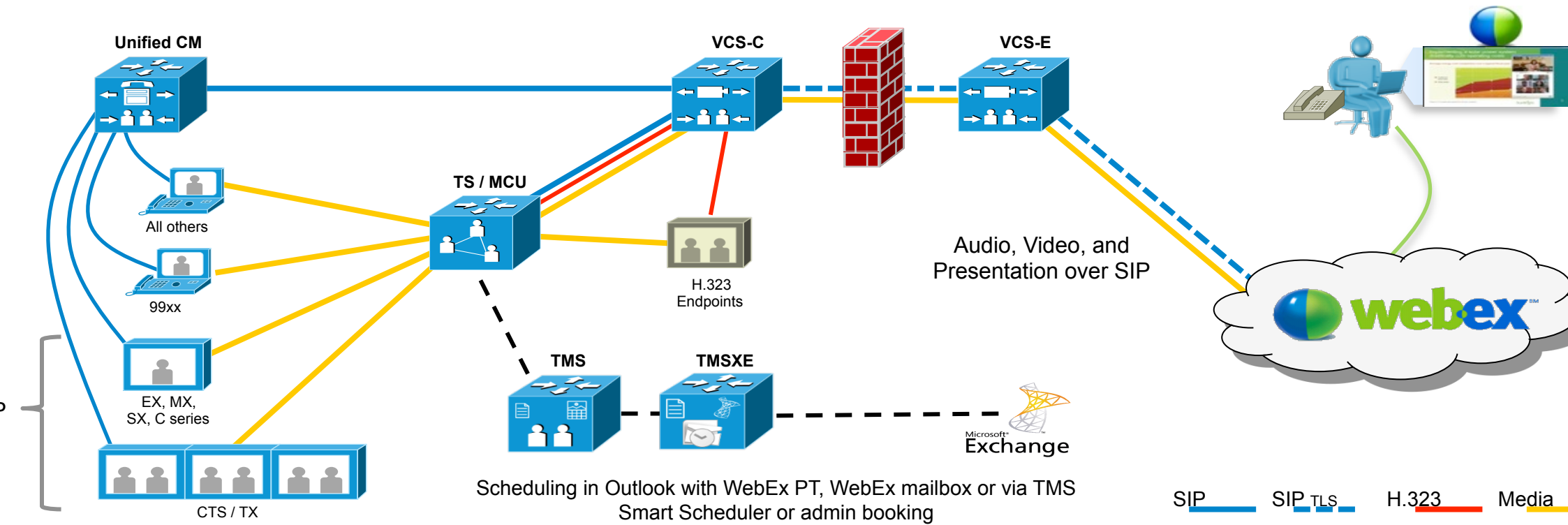
The background features a white top-left section, a blue top-right section, and a light green bottom section. A diagonal line separates the white and blue areas. The light green section contains a large, stylized arrow pointing to the right, composed of overlapping geometric shapes in various shades of green.

# **WebEx**

# **OneTouch**

# Cisco TelePresence WebEx OneTouch

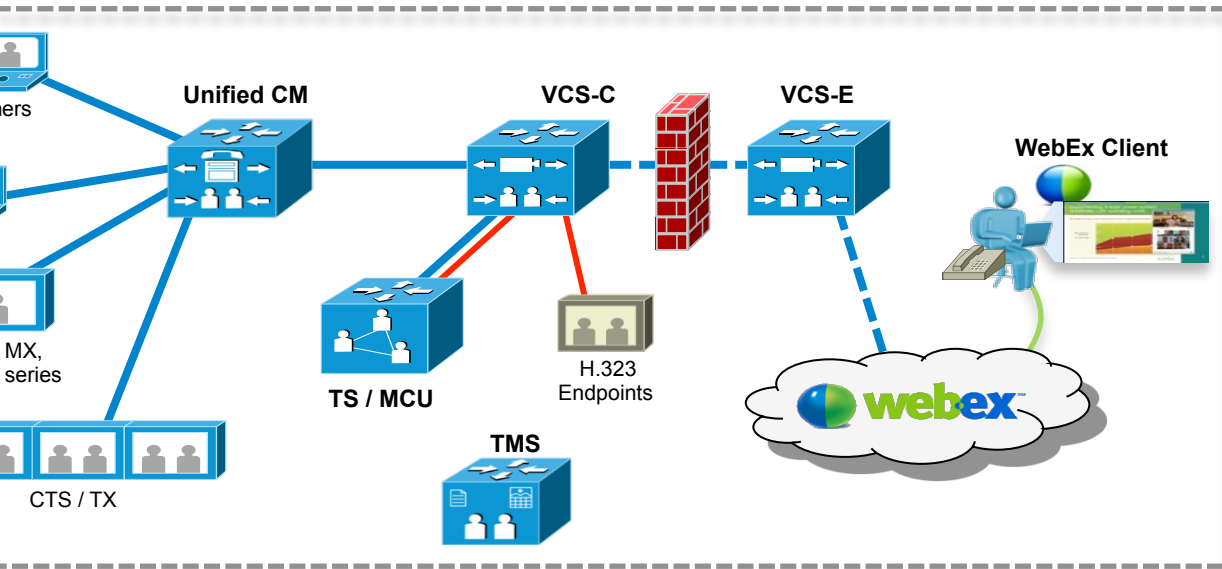
## Evolution Overview



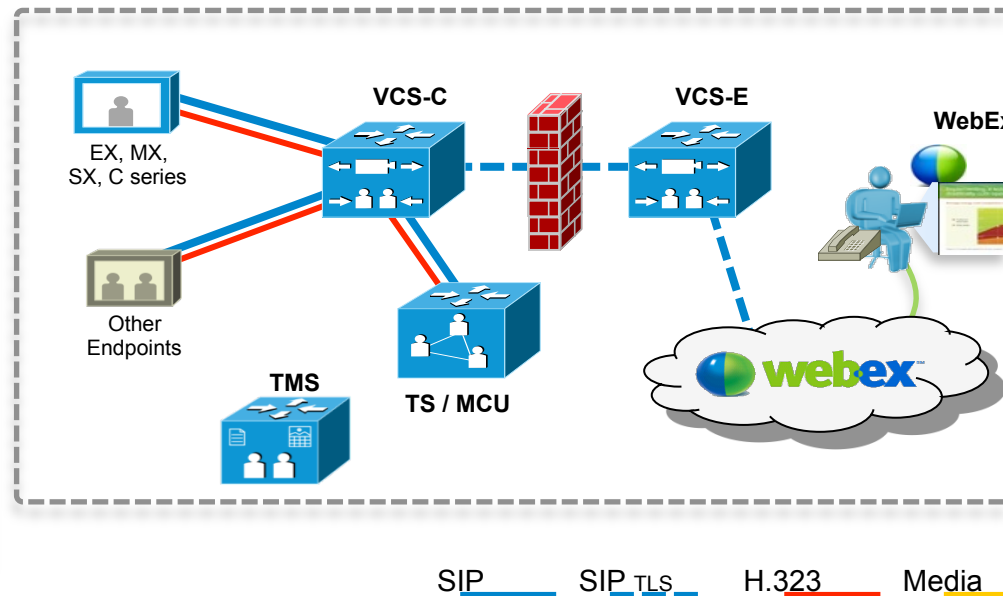
# Detailed Architecture

## Call Control

Preferred Architecture



Also supported with VCS only



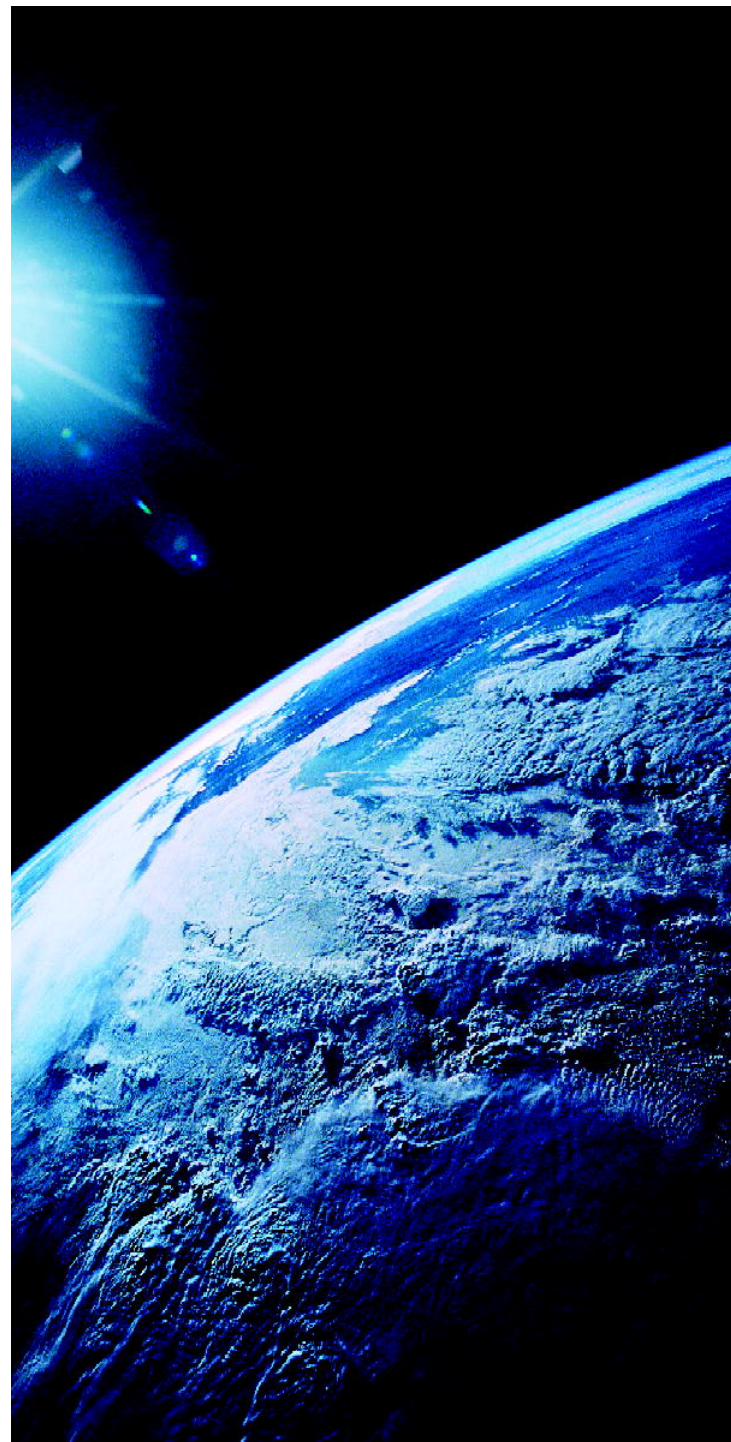
# Conclusion

## Standards-based solutions

- Session management protocols – SIP, XMPP, verified interoperability
- Standard codecs – H.264 AVC, H.265

On-premise or Cloud (or Hybrid)

# Případová studie České Pojišťovny



# Multikanálová komunikace v Kontaktních centrech

Jan Drnek

Cisco Connect 2013

# Multichannel KC



voice



email



fax



dokument

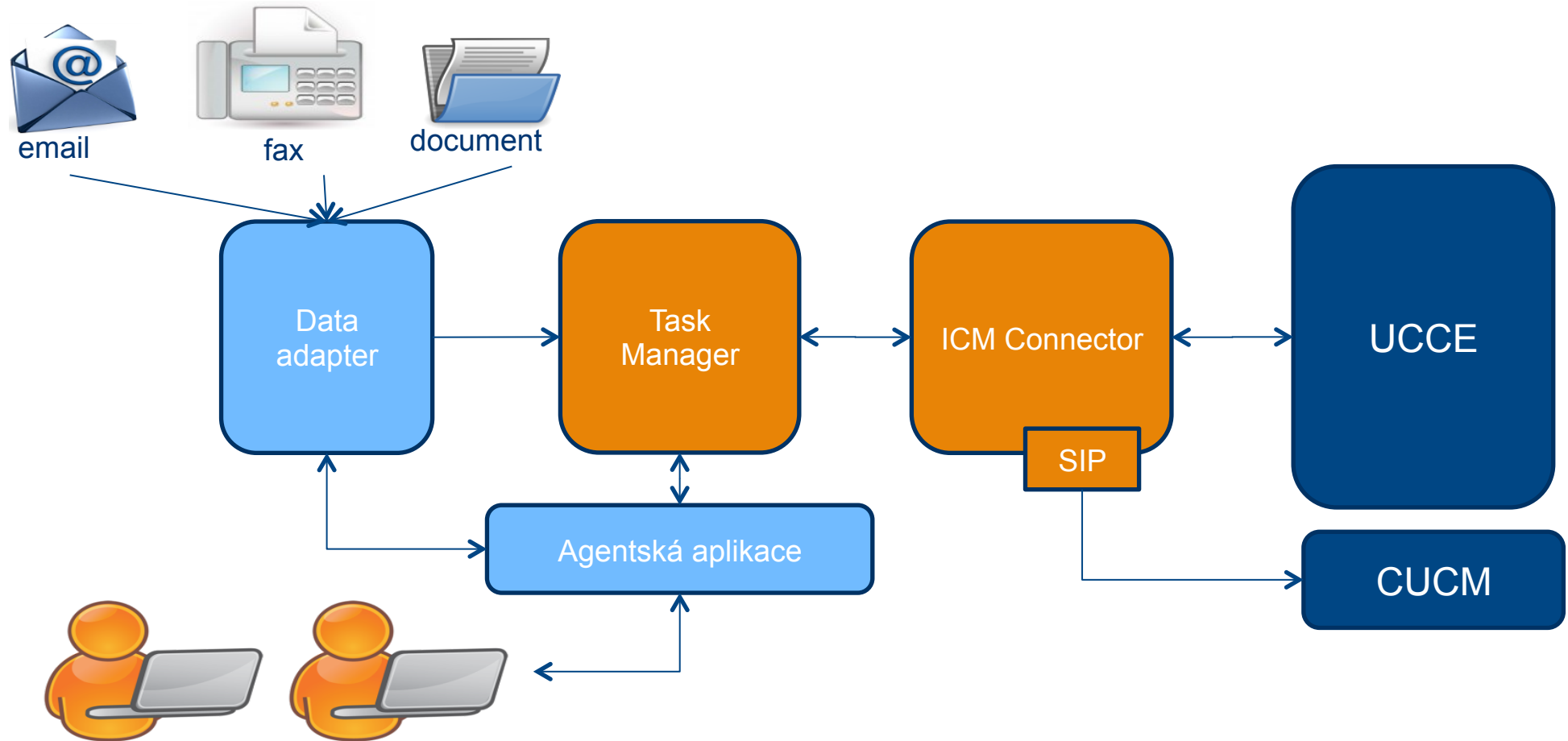


video

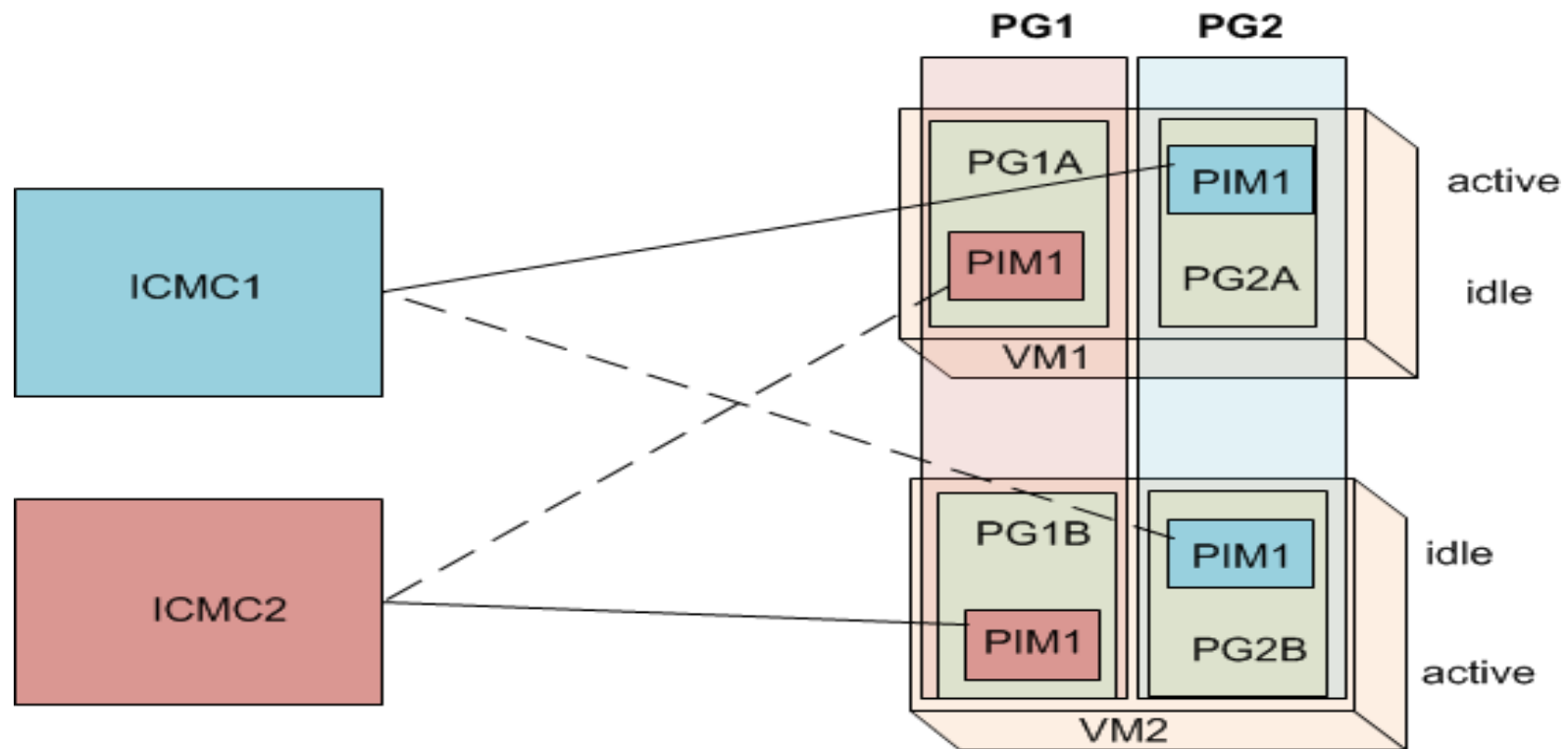


UCCE

# System zpracování nehlasových úkolů



# Napojení ICM Connectoru na UCCE



# Task Manager

- **Aplikace Task Manager zodpovídá za správu úkolů**
- Evidence informací o úkolech a postupu zpracování a řešení úkolů v rámci kontaktního centra
- Řízení směřování úkolů do UCCE na základě definovaných pravidel
- Uživatelské prostředí pro řízení toku úkolů do UCCE
  - Dispečerský cockpit
  - Pravidla pro kategorizaci a prioritizaci úkolů
  - Nastavení řídicích parametrů pro fronty úkolů
  - Přehledy a reporty (pohledy podle stavu úkolu, skill group, doby řešení...)
- Real-time statistická data
- Obnovení front v IPCC
  - Opětovné odeslání klasifikovaných úkolů do IPCC po řízeném zastavení ICM Connectoru, např. z důvodu výpadku komunikace s PG
- Informace o vlastním stavu, logy, umožnění monitoringu

# ICM Connector

- **Komponenta ICM Connector slouží jako rozhraní pro komunikaci UCCE**
- Navázání a udržení (a ukončení) komunikace s ICM
  - Protokol GED-125
- Předávání úkolů včetně atributů ICM a obsluha čekání na předání úkolu operátorovi
- Generování „phantom call“ na telefon operátora
- Vyjmutí úkolů z front v IPCC
- Notifikaci zpět aplikaci Task Manager
  - Stav předání úkolu, významné provozní stavy
- Informace o vlastním stavu, logy, umožnění monitoringu

# Video v kontaktním centru – Remote Expert

- Face to face HD video
  - Dotyková obrazovka + periferie
  - Kolaborace nad dokumenty
  - Audio -> video
- 
- Odborníci i pro menší pobočky
  - Centrální team s WFM
  - Využití stávajících expertů pro ostatní pobočky
  - Vytížení přepážek na pobočce



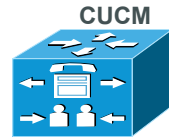
Product Expert



TP



Data Center



Call Control

CCE/CCX



Queuing/Routing

RE Manager

Rules Engine  
Task Orchestration  
Session Management

Interactive Experience Manager

Media Sense



Recording



Cisco MCU



Conferencing

Customer Pods



Write pad



TouchScreen



Scan/Print/Copy



Payment Cards



IEC 4610



TP



# Remote Expert - komponenty

## Integrated Collaboration



Session Control

This block shows four components for session control: a telephone, a large flat-screen monitor displaying a video call with a woman, a white printer, and a black network device.



Interactive Touch Panel

The touch panel displays the 'FRANCISCO Finance' logo and the text 'Talk to an Expert'. Below this, there are six touchable icons for services: Home Mortgage, Small Business, Retirement Savings, Commercial Lending, Problem Resolution, and Private Banking.

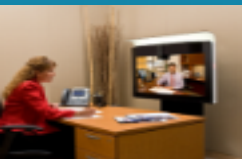





Experts (anywhere)



Unified Communications

This block illustrates unified communications with three circular icons of experts and several software icons: a blue 'CC' icon, an 'ICM' icon with a headset, a 'CVP' icon with a headset, a server rack icon, and a 'Media' icon.

## Integrated Video Experience

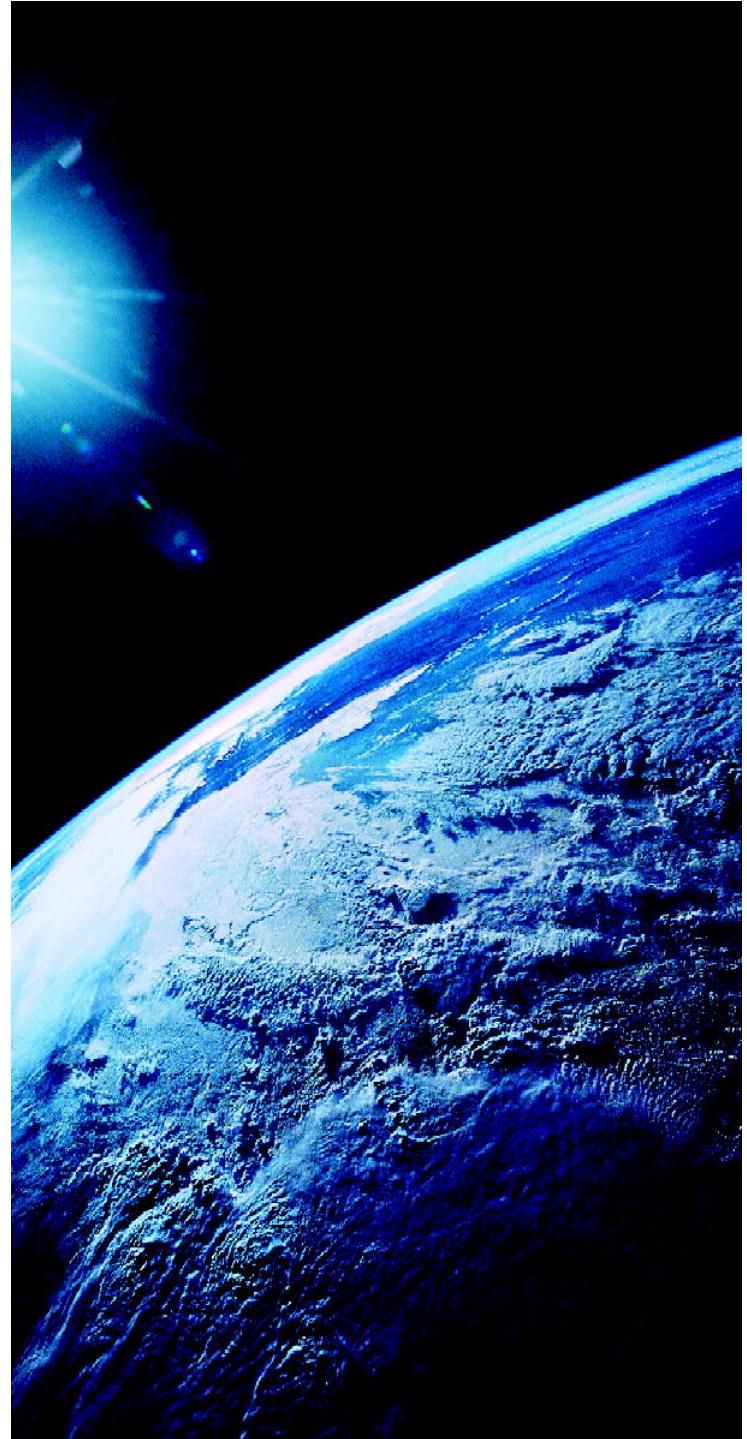
Personal			Multi-Purpose		Dedicated
					
500 Series	EX 60/90 Series	Profile Series	1100 Series	1300 Series	3000 Series



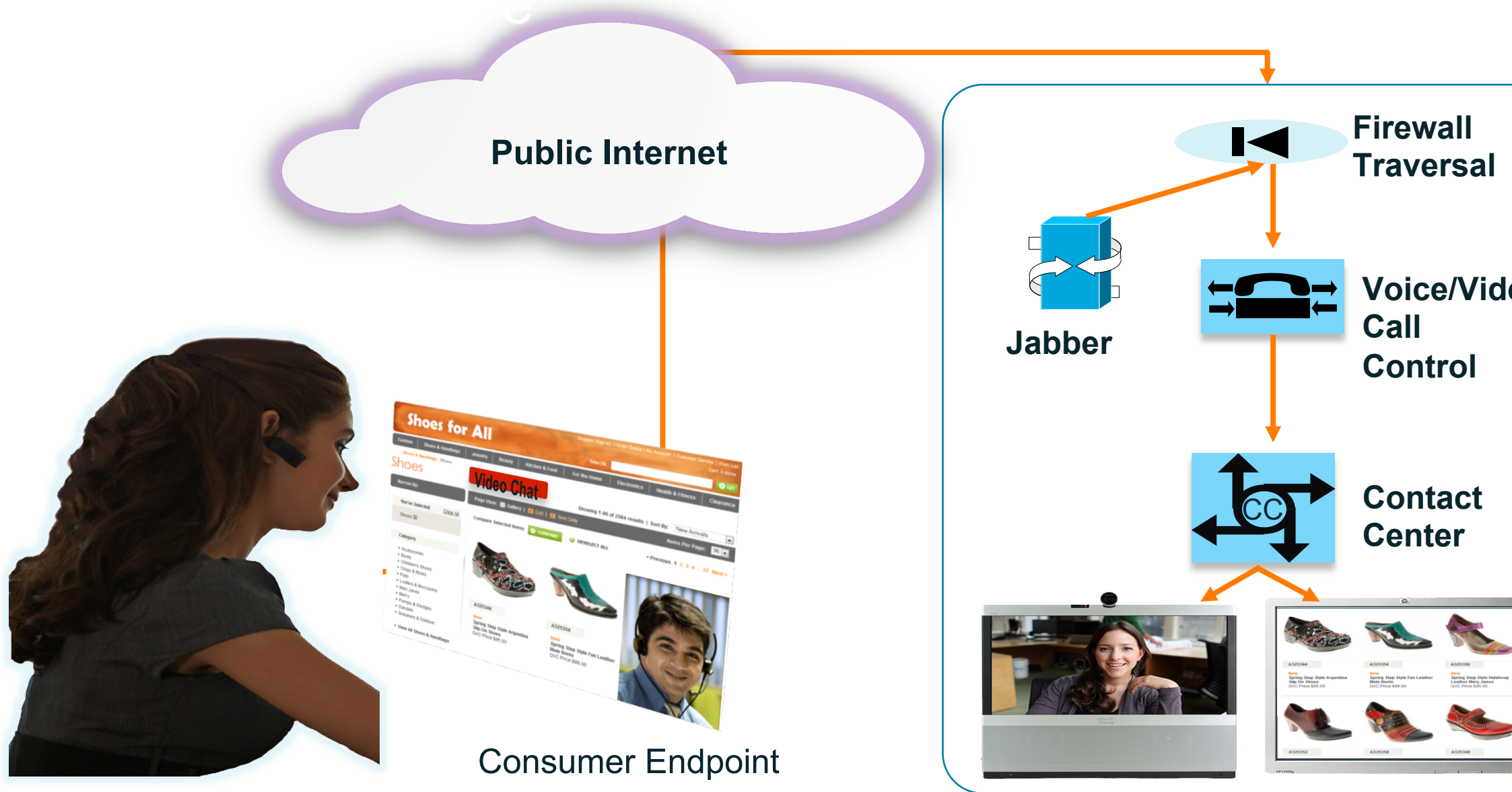
Děkuji za pozornost!

[Jan.drnek@anect.com](mailto:Jan.drnek@anect.com)

# Business to Consumer



# Consumer to Video Expert



# C enabled Customer Portal

Presence enabled

M / Chat enabled

Click 2 WebEx enabled

Click 2 Call enabled

Click 2 Video\* enabled

The screenshot displays the CWI Company Portal interface. At the top left is the CWI logo and the text "Company Portal". Below this is a search bar. The main content area features a profile for Scott McDaniel, including a photo, name, email (smcdaniel), title (Thermal Analyst, Motor Engineering), and phone number (+1 408 555 0197). A status indicator shows he is "On the phone". Below the profile are sections for "Expertise" and "Reporting Structure" with lists of colleagues and their availability. A video call window is open, showing Scott McDaniel on the video. Two sets of communication controls are circled in purple: one above the profile (Email, Call, Chat, WebEx) and one below the video call window (End, Mute, Hold). On the right side, there is a "Contact List" with sections for "Coworkers" and "Design Team", listing various employees and their current status (e.g., Available, On the phone, Busy, In a meeting, Sharing desktop).

# olution Options

abber SDK

IM+Presence

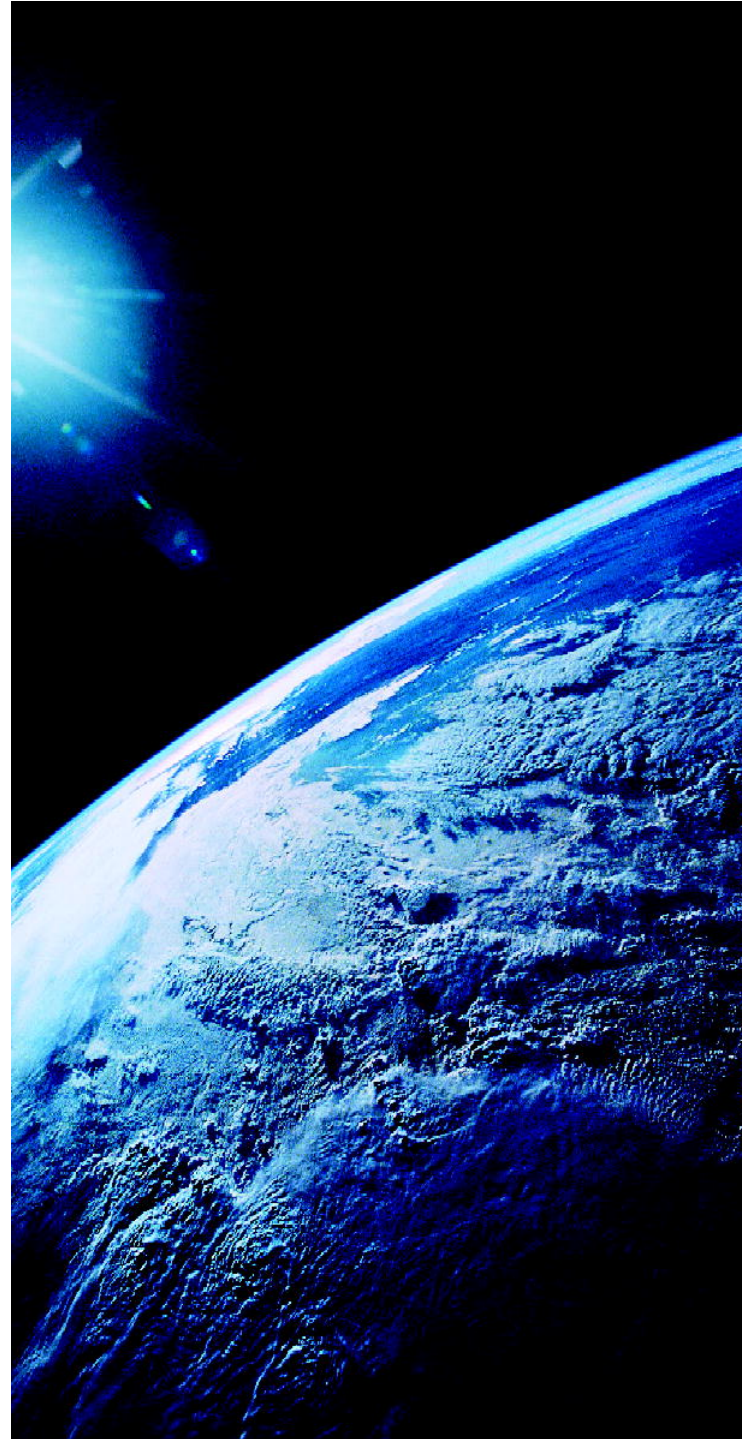
voice+video

Webex API

Scheduled meeting

<http://developer.cisco.com/web/webex-developer/integrate-with-portal>

Demo...



# Jabber SDK Evolution

## SDK

Build on Jabber SDK

Empower customers, ISV's,  
partners, etc



## Standards

Work with standard bodies  
and industry shapers

Openness, interoperability



mozilla



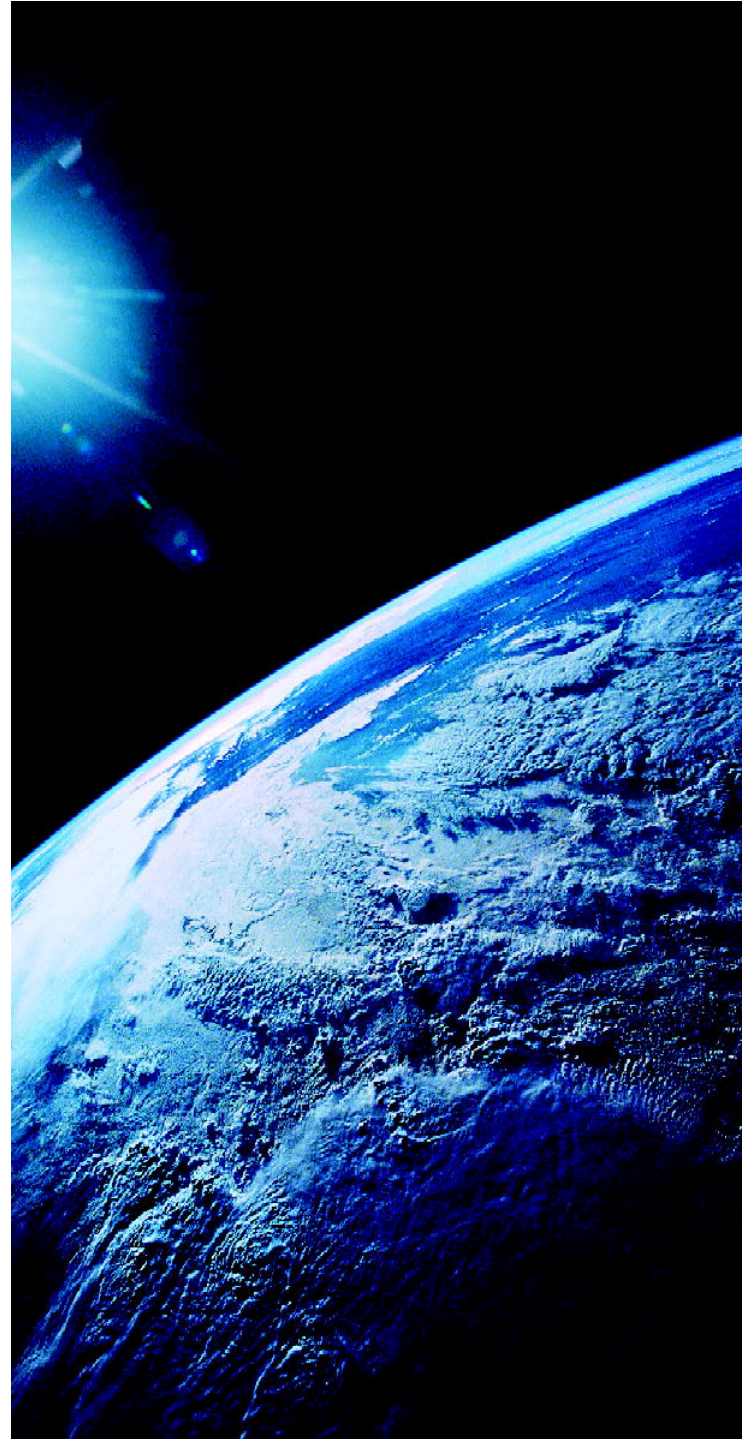
## Products

Progressively introduce HTML5  
& WebRTC

e.g. "Jabber Web"

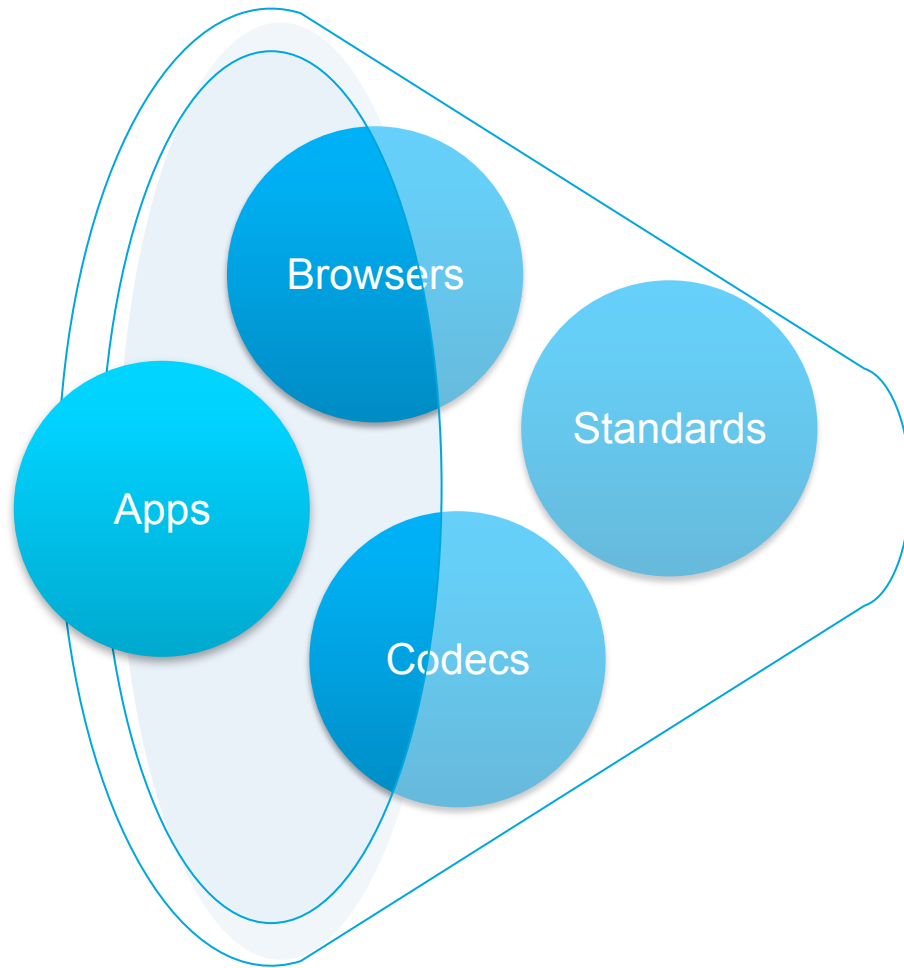


# WebRTC + RTCWeb



# Interactive Voice, Video, Data in Web Browsers

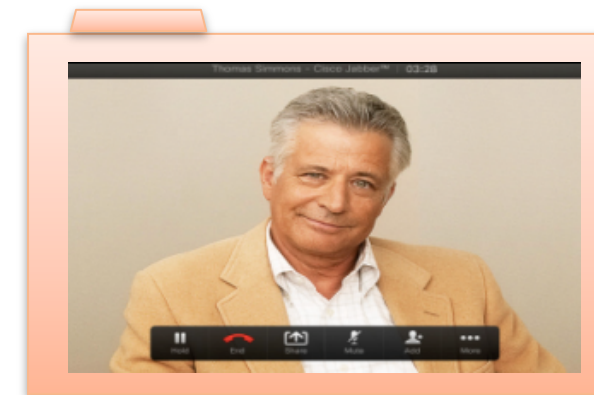
## A Journey



Vendor A Browser with Web App X

Native, Zero Plugin

Vendor B Browser with Web App X



# Standards Efforts

## Cisco Playing Key Role



### RTCWeb Working Group

Defining how browsers communicate with others ... largely re-using existing protocols

#### Notable documents ...

draft-ietf-rtcweb-audio      draft-ietf-rtcweb-data-channel  
draft-ietf-rtcweb-jsep      draft-ietf-rtcweb-overview  
draft-ietf-rtcweb-qos      draft-ietf-rtcweb-rtp-usage  
draft-ietf-rtcweb-security-arch  
draft-ietf-rtcweb-use-cases-and-requirements

### WebRTC Working Group

Defining how Web applications access browser real-time communications, i.e. API's

#### Notable documents ...

[WebRTC 1.0: Real-time Communication Between Browsers](#)  
[Media Capture and Streams](#)  
[Media Capture Scenarios](#)

# Business Applications – Use Cases

Measured Integration and Adoption Over Time ... Simplified Deployment



Virtual Meetings



Employee-to-Employee Calls



Public Interactions



Social Collaboration



Presentation Recording



TBD

# Why HTML5 / WebRTC Are Interesting?

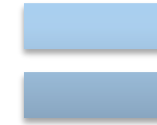
Ease of  
Development



Ease of  
Deployment



Ease of  
Access



Massive  
Adoption



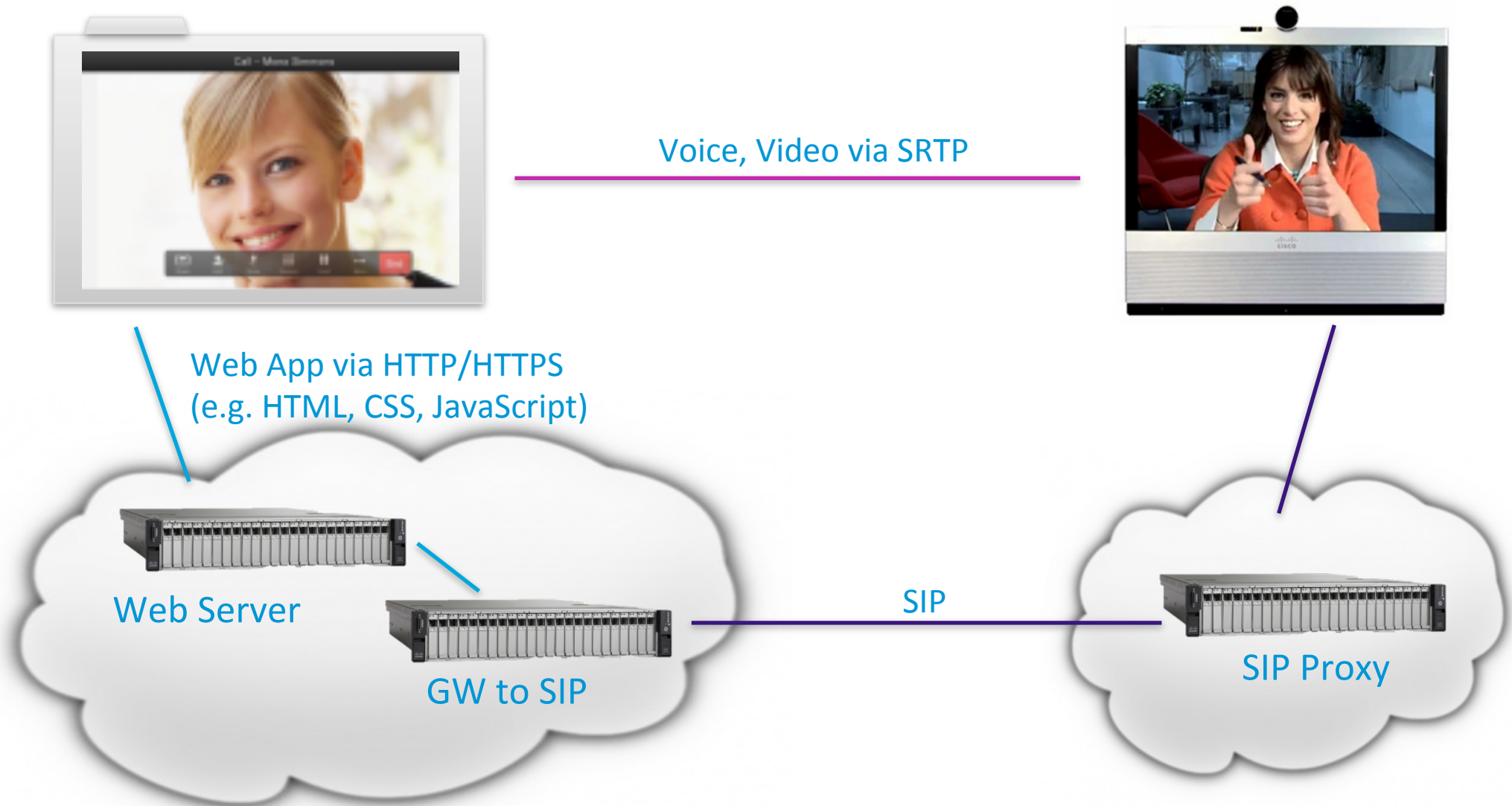
- No VoIP expertise needed
- Enables huge web developer population
- New applications
- Mashable communication components
- Cross platform

- Distribution = URL
- Datacenter, not individual devices
- Low maintenance
- Rapid updates

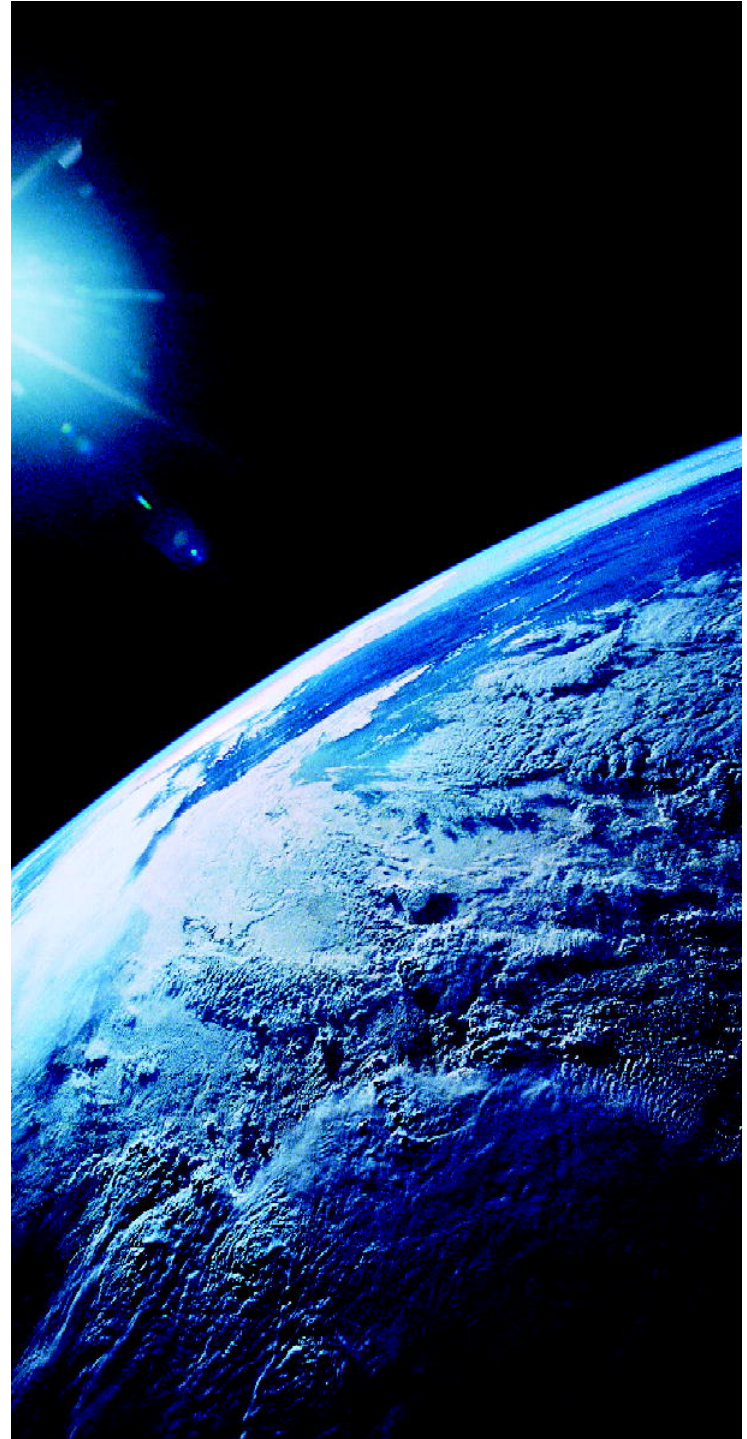
- Click to access
- Any device
- Reduced need for plugins/native apps
- Extends business comm. systems

# Browser to Non-Browser Endpoint

## High-level Real-time Communications Architecture



Demo...



# Browser Implementations of WebRTC

## Initial Versions Coming to Market



### Google Chrome

- Initial implementation in Chrome 23 Stable
- Actively contributing to standards efforts
- Contributing to open source, e.g. WebRTC.org



### Microsoft Internet Explorer

- Actively contributing to standards efforts
- Implementation status not public



### Mozilla Firefox

- Initial implementation in Firefox Aurora channel
- Actively working on open source implementation & contributing to standards efforts
- Cisco contributed open source development, e.g. RFC4566-compliant SDP engine, call control application logic



### Apple Safari

- Maintaining strict secrecy

# Conclusion

## 32B

Instant Messaging – XMPP as a lead & umbrella standard

TelePresence over Internet – VCS Expressway

Collaboration – Webex or Webex Meetings Server

## 32C

Voice + Video – Jabber SDK with a migration path to WebRTC

Collaboration – Webex API

# Otázky a odpovědi

Zodpovíme též v “Ptali jste se” v sále LEO v 17:45 – 18:30

e-mail: [connect-cz@cisco.com](mailto:connect-cz@cisco.com)

Prosíme, ohodnotte  
tuto přednášku.

Děkujeme za pozornost.



For larger statements and quotes, use this slide layout to format the long references in all of your presentations.”

Source Name Placement

# Bullet slide title

This is an example of a bullet slide

This is where all the second level information goes

Here is another bullet point

Hyperlink: [www.cisco.com](http://www.cisco.com)

First level bullets are 22 point and use a bullet point

Second level bullets are 18 pts in size

It's important to keep consistency

Use **highlight color** when emphasizing words, do not italicize

## Two Column Grid Left

You can use two column grid for laying out slides with more than one message

Two columns can also be used when comparing two sets of data or information

Text color can be manually changed to different shades of color to mimic the gradient effect

## Two Column Grid Right

You can use two column grid for laying out slides with more than one message

Two columns can also be used when comparing two sets of data or information

Left and right columns can be different colors

## Column One

Sample text placed here to see how each level of information will be displayed in the final template

If you want to colorize the text, you can select a new color from the palette to fill it with

## Column Two

Sample text placed here to see how each level of information will be displayed in the final template

If you want to colorize the text, you can select a new color from the palette to fill it with

## Column Three

Sample text placed here to see how each level of information will be displayed in the final template

If you want to colorize the text, you can select a new color from the palette to fill it with

# Pull Quote Style

This is an example of a bullet  
slide with a pull quote

This is where all the second level  
information goes

This is another bullet point

First level bullets are 22 point  
and use a bullet point

Second level bullets are 18 pts in size

It's important to keep consistency

# Product Shot or Program

Sample text goes here and can wrap  
to accommodate more lines of  
information

