# Cisco Unified Communications System & Retail
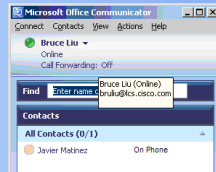
**Aleksandar Vulović**

**Sistem inženjer**

**24. februar 2009.**

# Cisco Unified Communications System

## 3RD Party Applications

**Microsoft outlook**

**Vertical apps.**

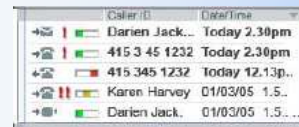**IBM Lotus Notes**

## Applications

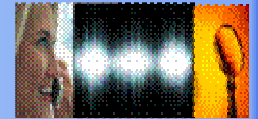**Mobility Manager**

**Unity Unified Messaging**

**Unified Meeting Place conferencing**

**Unified Presence Server**

**Unified Personal Communicator**

**Unified Contact Centre**

## Endpoints

**Unified IP phones**

**Unified IP Communicator**

**Nokia Dual-Mode**

## Media Control

**Cisco Unified Communications Manager Express**

**Cisco Unified Communications Manager**

**Cisco Unified Application Environment**

**Cisco IPICS**

## Infrastructure

**Routing**  **Switching**  **Availability**  **Management**  **QoS**  **Security**  **Administration**
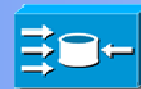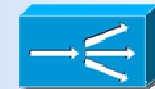
# Cisco IP Telepony – Basic Components



PSTN

IP Phone

Desktop

SCCP,
SIP,
H.323

Call Manager Server

H.323,MGCP or SIP

Ethernet Switch

Router / Voice Gateway

# Cisco IP Telepony – Basic Components

**IP Phone**

**Desktop**

**SCCP,
SIP,
H.323**

**PSTN**

**Router / Voice Gateway /
CallManager Express**

**Ethernet Switch**
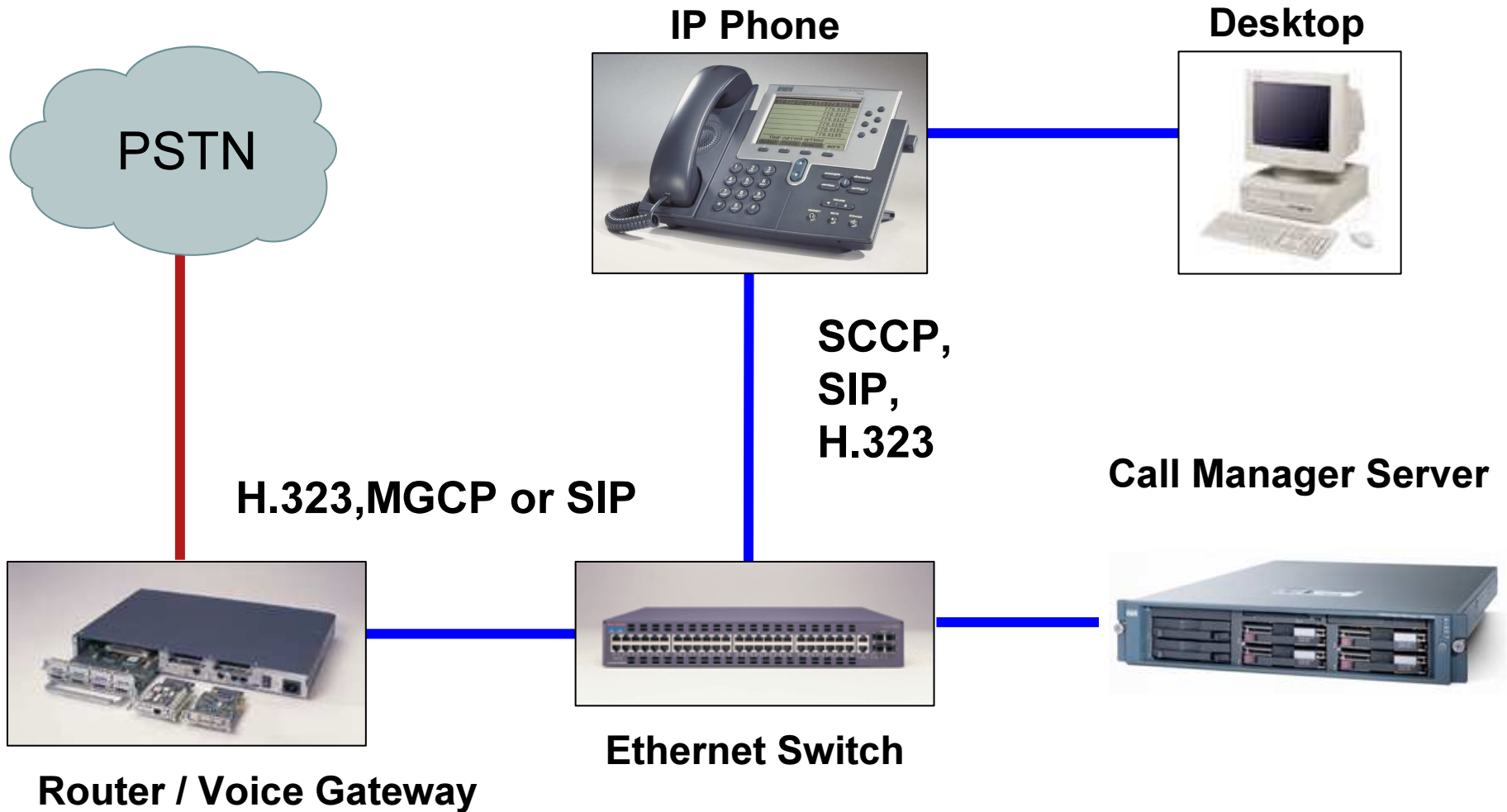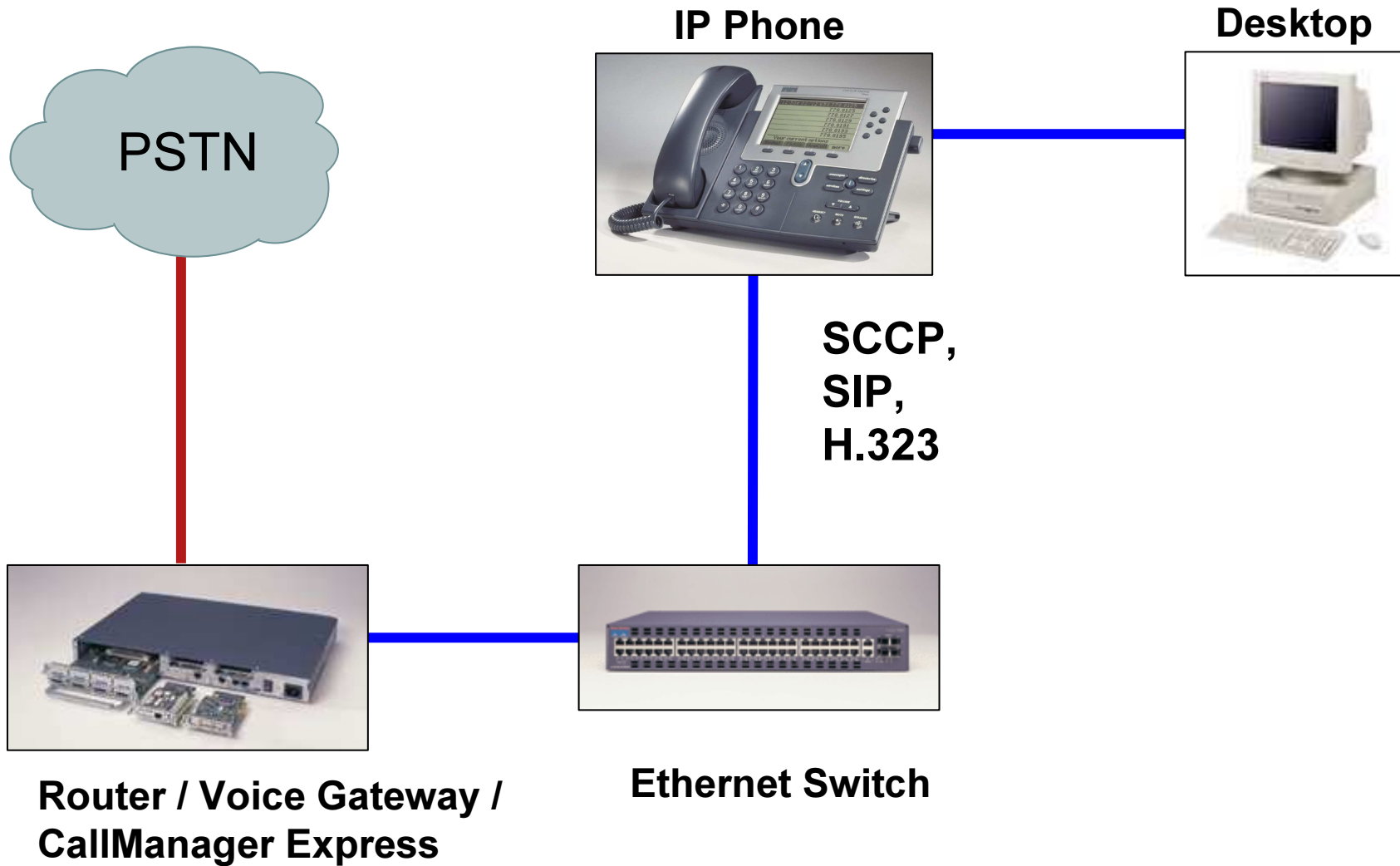
# QSIG Protocol

- **Inter-PBX network features in stub or tandem environments**

  - ID services, diversion, forwarding, transfer, conference, call back/camp-on, …

- **Ability to share common voicemail between PBXs**

# Cisco IP Telepony End-to-end

Central location

CallManager

Router

World

Router

CallManager

PSTN

Regional center

Internet

WAN

VPN access

DSL access

Router
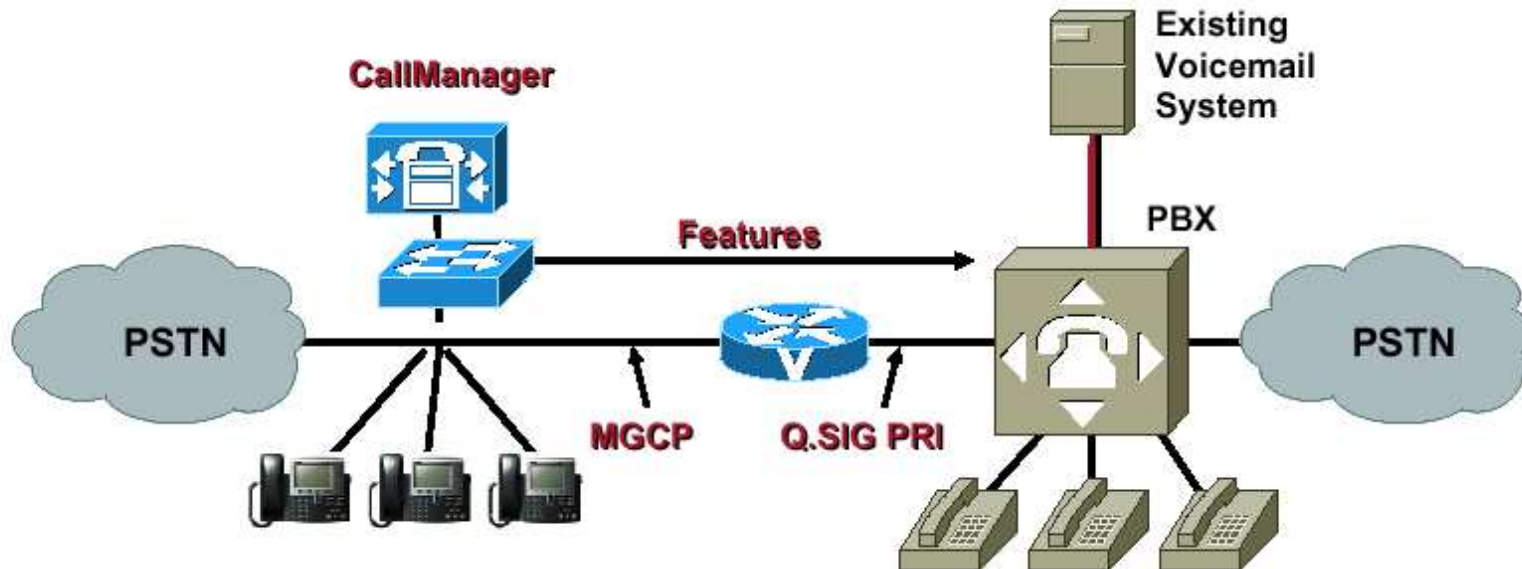
Branch Office

# Survivable Remote Site Telephony

- SRST provides redundancy in the case of WAN failure

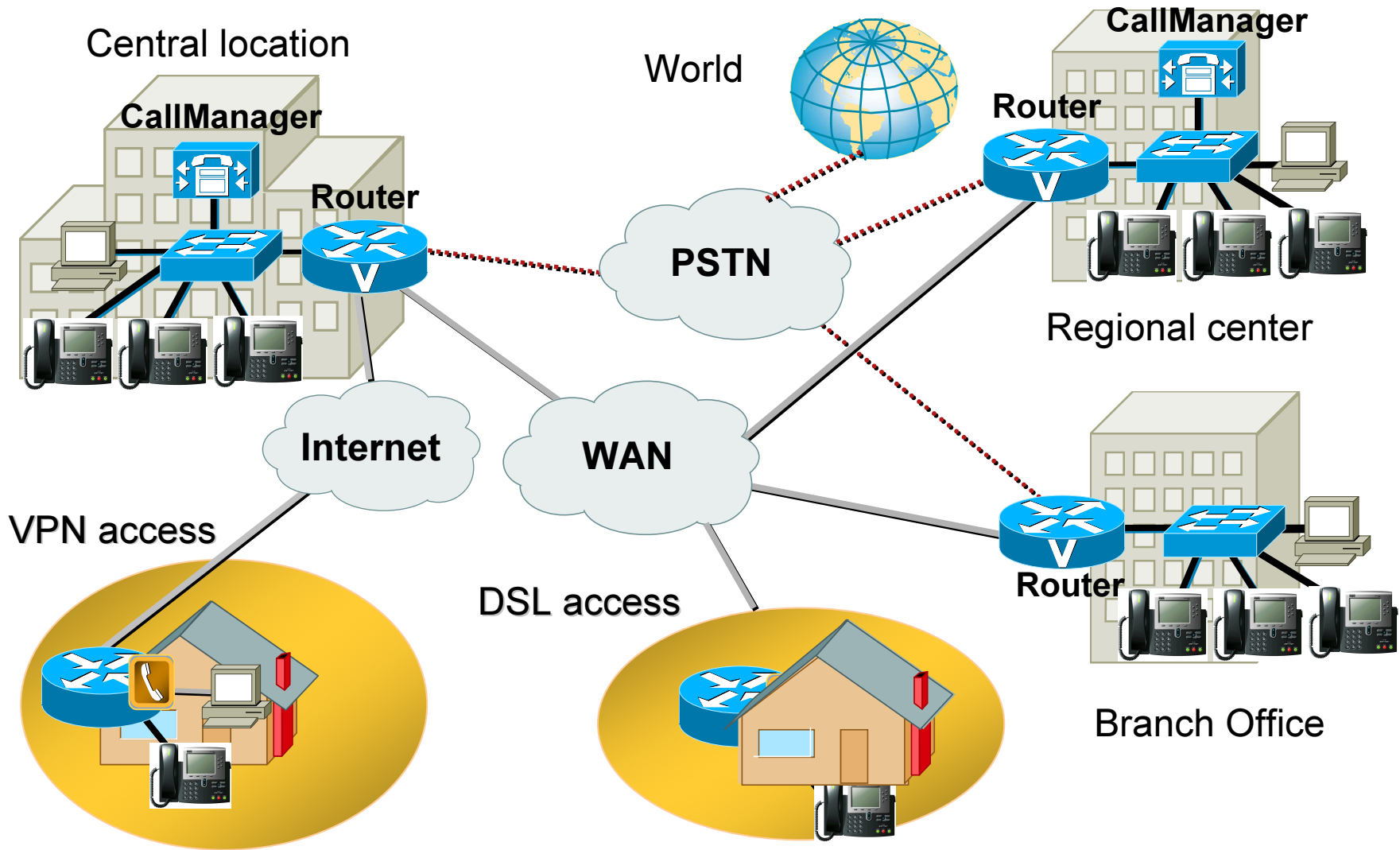- Ideal for enterprise customers utilizing Centralized Cisco CallManager Deployment for IP telephony at their branch offices

- Provides near feature parity with Cisco Call Manager

- Configure it and forget it! SRST inherits its configuration from Cisco Call Manager and requires no configuration or intervention in the event of a WAN failure

- Supported across all Voice platforms, up to 720 Phones per Router



Applications Server

CallManager Cluster

Router

Central  Site

WAN

PSTN

Router with SRS Telephony

Branch Office

# Cisco Integrated Services Router Portfolio



Performance and Services Density

New Cisco 880/860

3800 Series

2800 Series

1861

1800 Series

800 Series

High Density and Performance for Concurrent Services

Embedded, Advanced Voice, Video, Data and Security Services

Embedded Wireless, Security and Data

**The Integrated Services Router Portfolio**

| Small Office and Teleworker | Small Branch | Medium Branch | Medium to Large Branch |

Presentation

# Cisco 880 SRST Integrated Services Router

**New**

**For Small Branch, Enterprise Teleworker or Remote Call Center Agent**

- Desktop form factor
- WAN Interfaces: FE, VDSL2*, G.SHDSL
- PSTN Fallback: BRI, FXO
- Voice Ports: Four FXS
- Four-port FE Managed Switch with PoE
- Voice Protocols: H.323, SIP, MGCP, SCCP
- Software: Advanced IP Services

*Future

- Adds Voice with Survivability Features
  - Best-in-class integration of data and toll-quality analog/digital voice services for Enterprise Teleworker
- WAN/LAN Technologies
  - Fast Ethernet, G.SHDSL, VDSL2*
  - 802.11n WLAN and Unified Management
- Comprehensive security
  - IPsec VPN acceleration: DMVPN, GET VPN, Easy VPN
  - Firewall, IPS, Content Filtering, SSL-VPN,
- Comprehensive Routing and QoS
- Ease of Management
  - Cisco Configuration Professional
  - CiscoWorks
  - Unified Wireless Management

# IP Phones & Services

# Cisco Endpoints

**Executive**

**Cisco Unified IP Phone**
**7975G / 7971G-GE**

**Manager**

**Cisco Unified IP Phone**
**7960G / 7961G / 7961G-GE**

**Business**

**Cisco Unified IP Phone**
**7940G / 7941G / 7941G-GE**

**Multibutton**

**Cisco Unified IP Phone**
**7931G**

**Basic**

**Cisco Unified IP Phone 7906G /**
**7911G**

**Video**

**Cisco Unified IP Phone**
**7985G**

**Cisco Unified Video**
**Advantage**

**Cisco Unified**
**Personal Communicator**

**Mobility**

**Cisco IP Communicator**

**Cisco Unified Wireless**
**IP Phone 7921/7925**

**Cisco Unified**
**Personal Communicator**

**Analog**

**Cisco ATA 186**

**Cisco VG202/204/VG224/VG248**
**Analog Phone Gateway**

# Nokia Dual Mode phone

**Enterprise infrastructure**

Cisco
WLAN AP

Cisco
CallManager

Cisco
IP phone

**Operator infrastructure**

*SCCP/SIP*

fixed network

**Dual Mode devices**

**Nokia Enterprise Voice Client**

Call Manager

1  Mike
10/01/2003 21:37:24

Opzioni          Indietro

165

166

mobile network

**NOKIA**

CISCO SYSTEMS

- **Nokia E Series Device**
- **Nokia SCCP Voice Client**
- Nokia Mobile Email *
- Nokia Mobile VPN*
- Nokia Device Management*

**\* Optional add-on**

- **Cisco Call Manager**
- **CCM user license**
- **Cisco WLAN**

NOKIA

*DTMF/data path signalling*

**Mobile Operator**

- GSM Account
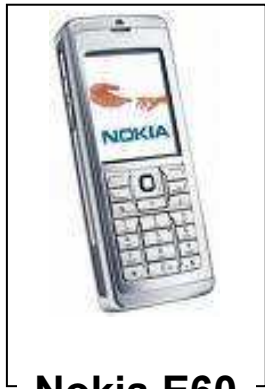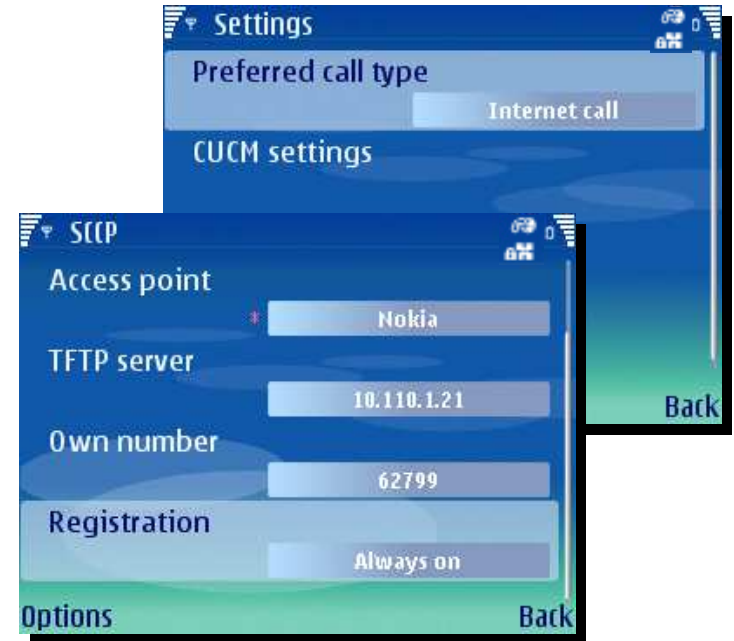
*'Blending Wi-Fi and cellular connections with Enterprise PBX calling features in a VoIP handset is approaching telephony nirvana*
*NETWORK WORLD*

# Nokia Dual-Mode Phone

- Nokia Intellisync Call Connect
- Phone handsets: Nokia E60, E61, E61i,E65, E51, E66 and E71
- SCCP-only Client
- Switch to cellural: supported on E51, E66 and E71
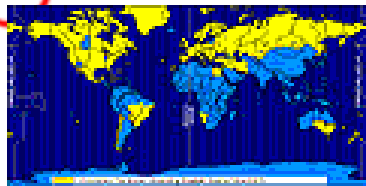- Nokia Mobile VPN



**Nokia E60**  **Nokia E61**  **Nokia E61i**  **Nokia E65**  **Nokia E66**  **Nokia E71**

# Cisco IP Phone Services Examples

**World Clock**

**Yellow Pages Lookup**

**Meeting Room Scheduler**

**Weather**

19:18 07/20/00        9728111026
Tue. Wed. Thu. Fri.
83 F   84 F   90 F   92 F
28 C   28 C   32 C   33 C
Update               Exit

**Stock Tracker**

Dow  9687.53 ↑182.75 ↑1.89%
9700.0
9600.0
9500.0
9:30      1:00      4:30

**Flight Status**

**Transit Schedules**

# Joining the Live Broadcast

- After the demo has been started, users can join the Subscription by selecting the **Live Broadcast** from the menu. Thus becoming participants and starting to receive audio and images

- Users can leave the Broadcast at any time by pressing the **Exit** button.

CISCO IP PHONE
7941 SERIES

15 52 27/01/09                                    2335

Vreme u Novom Sadu

Dobiano: 27. 01. 2009. u 14:00

Temperatura: 6 °C

Pritisak: 994 mb

Rel. vlaznost: 90%

Brzina vetra: 4 m/s

Gore/Dole - zelena tipka

Osvezi    Povratak
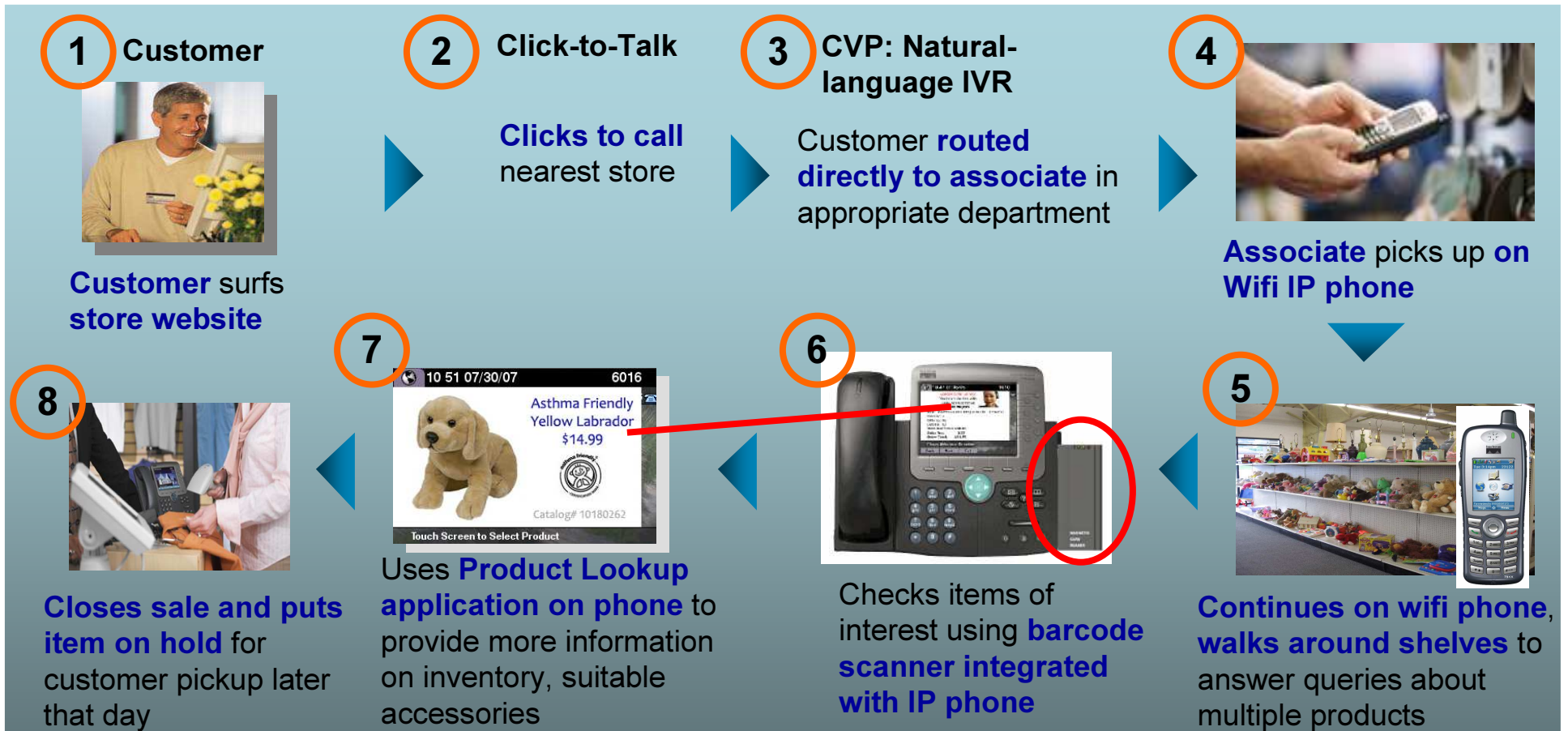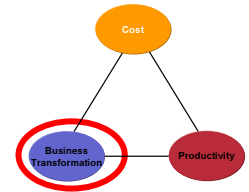
# UC-enabled Store Associate Solution enhances associate productivity and customer experience

**1 Customer**

Customer surfs store website

**2 Click-to-Talk**

Clicks to call nearest store

**3 CVP: Natural-language IVR**

Customer routed directly to associate in appropriate department

**4**

Associate picks up on Wifi IP phone

**5**

Continues on wifi phone, walks around shelves to answer queries about multiple products

**6**

10 51 07/30/07          6016

Checks items of interest using barcode scanner integrated with IP phone

**7**

Asthma Friendly Yellow Labrador $14.99

Catalog# 10180262

Touch Screen to Select Product

Uses Product Lookup application on phone to provide more information on inventory, suitable accessories

**8**

Closes sale and puts item on hold for customer pickup later that day

---

## Business Value

- Enhanced associate productivity (potential >50% improvement in efficiency of interaction with customers)
  - ➢ Call routed directly to associate with wifi phone
  - ➢ Seamless 2-way phone to radio, phone to PDA communications in store
- Increased cross-sell/upsell due to richer customer experience
  - ➢ Phones integrated with product lookup and inventory applications

# Wifi Phones Integrated With Key Store Applications Can Enhance Productivity Of Store Employees

## Operational menu

- Item location and QOH
- Replenishment, transfers
- Cycle counts
- Receiving
- Planogram

## Revenue menu

- Item description
- Price, location, QOH
- Open POs, available date
- Partner store availability
- Hot-key access to product/category expert (on the speakerphone)
- Promotion alerts for cross-sell

## Manager menu

- Sales metrics (e.g., revenue per hour, per department, per customer)
- Special order status and metrics
- Associate stats
- Broadcast messaging (e.g., voice-mail)

# UC Employee Dashboard Solution decreases on-boarding time by streamlining delivery of information to associates
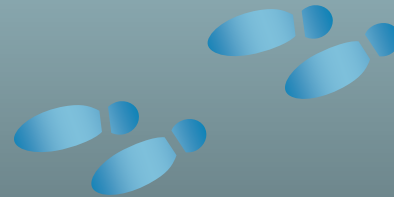
**1** **Store Associate arrives** at start of shift

**3** **Walks to department, begins work**

**2** Associate **on-boards at single station** using applications integrated on IP phone

1. Clock In/Out of Shift
2. Receives Shift and Meal Breaks
3. Reads Reports and New Information
4. Receives goals/tasks

**Business Value**

- **Improved associate productivity (~>50% decrease in on-boarding time)**
- **Improved customer service by reinvesting gains to customer facing time**
- **More consistent delivery of management communications**
- **(FUTURE): VoDs delivered to IP phones can save training costs**

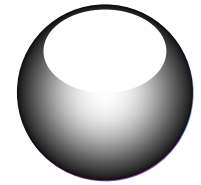# Available IP Applications
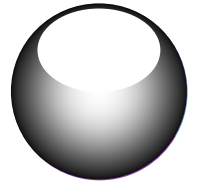
## Store Customer Assistance Applications

- Inventory Availability

- Service Connection

- IP Phone Media Display

- Fitting Room Assistance

- Price Inquiry

# Retail Customer Care

**Customer access** to product information and sales assistance through IP enabled device from sale floor

Bring It to You

Store Employee

Ask for It

Size Needed

# Available IP Applications

## Retail Employee IP Dashboard Solution

- Time capture system

- Store reminder notification

- Broadcast audio messaging system

- Employee communication and recognition

# UC Media Display:
## Features

Push Here for Service Assistance

# UC Media Display:
## Features

Check Out the New Releases!

Image

# UC Media Display:
## Features



**Image and Audio**

# UC Media Display:
## Features



**Text**

# UC Media Display:
## Features

**Surveys**

# UC Media Display:
## Features
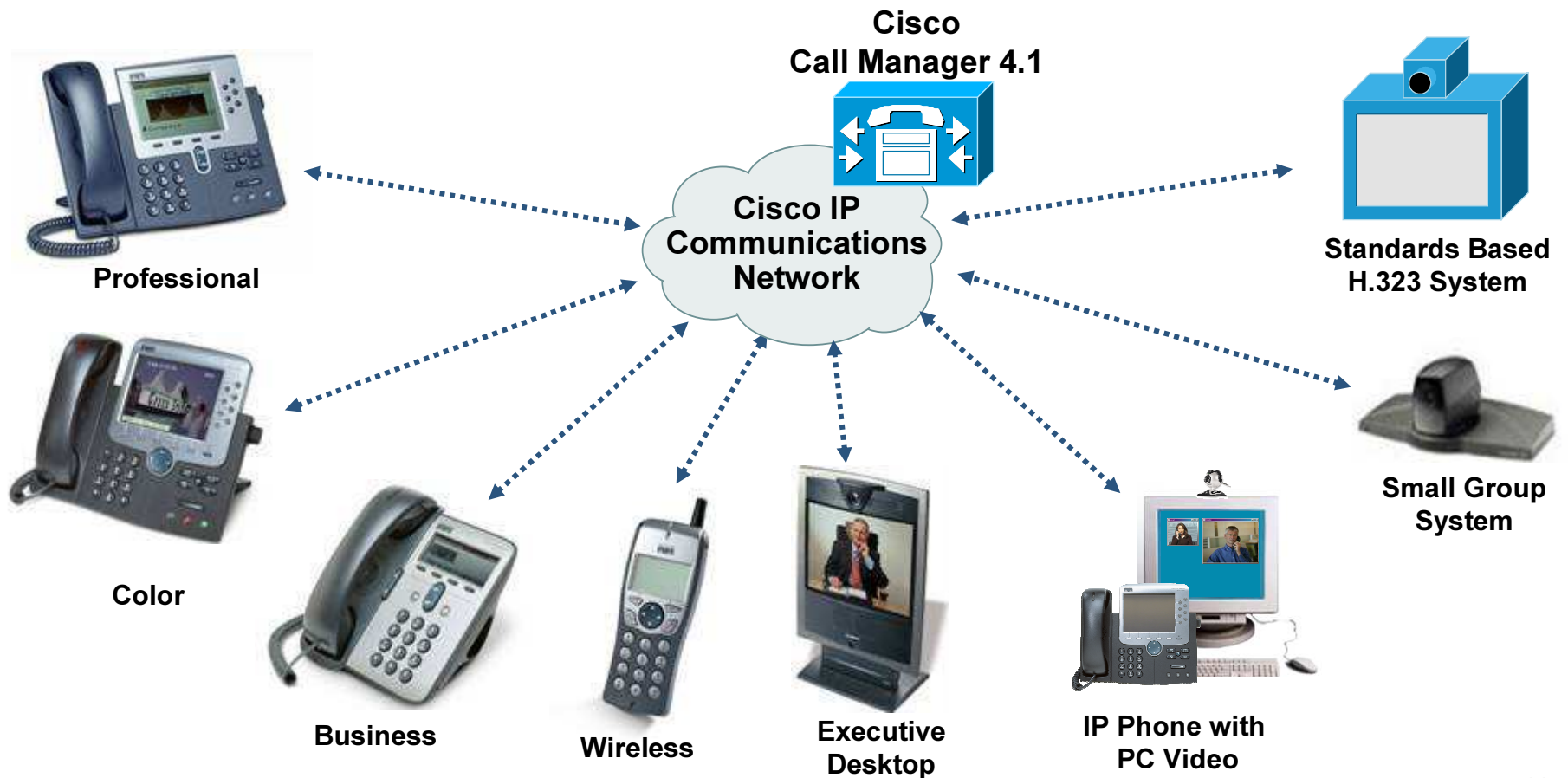


Push Here for Service Assistance

# Rich Media Communications

# Introducing IP Video Telephony

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



**Professional**

**Color**

**Business**

**Wireless**

**Executive Desktop**

**Cisco Call Manager 4.1**

**Cisco IP Communications Network**

**IP Phone with PC Video**

**Standards Based H.323 System**

**Small Group System**

# JJ Foods: Leveraging UC platform to drive greater collaboration



"New features in Cisco Unified Communications-such as presence technology, easy-to-use video phones, and SIP support-make our company more cohesive."- *Rif Kiamil, IT Manager, JJ Food Service Limited*

**1** Employee at HQ **reads customer voicemail** in email in-box, wants to **discuss issue with a colleague**

**2** **Uses Presence** in CUPC to **find a colleague in another location** available for a call

**3** Colleague answers on IP phone, decides to **conference in a manager**

**4** **Manager on IP video phone helps resolve issue** (call with 1st employee on CUPC is video, 2nd employee is on only for audio )

## Business Value

- Rapid integration: Added 60 employees from acquired company in 1 day
- Ease of management: 2 new locations managed with same 3-man staff
- Ability to reach right employee the first time presents better image to customers
- Four-digit dialing, directory lookup, unplanned conference calling, unified messaging all save time and increase productivity

# UC Can Enable Rapid Delivery Of Training And Executive Communications To Employees
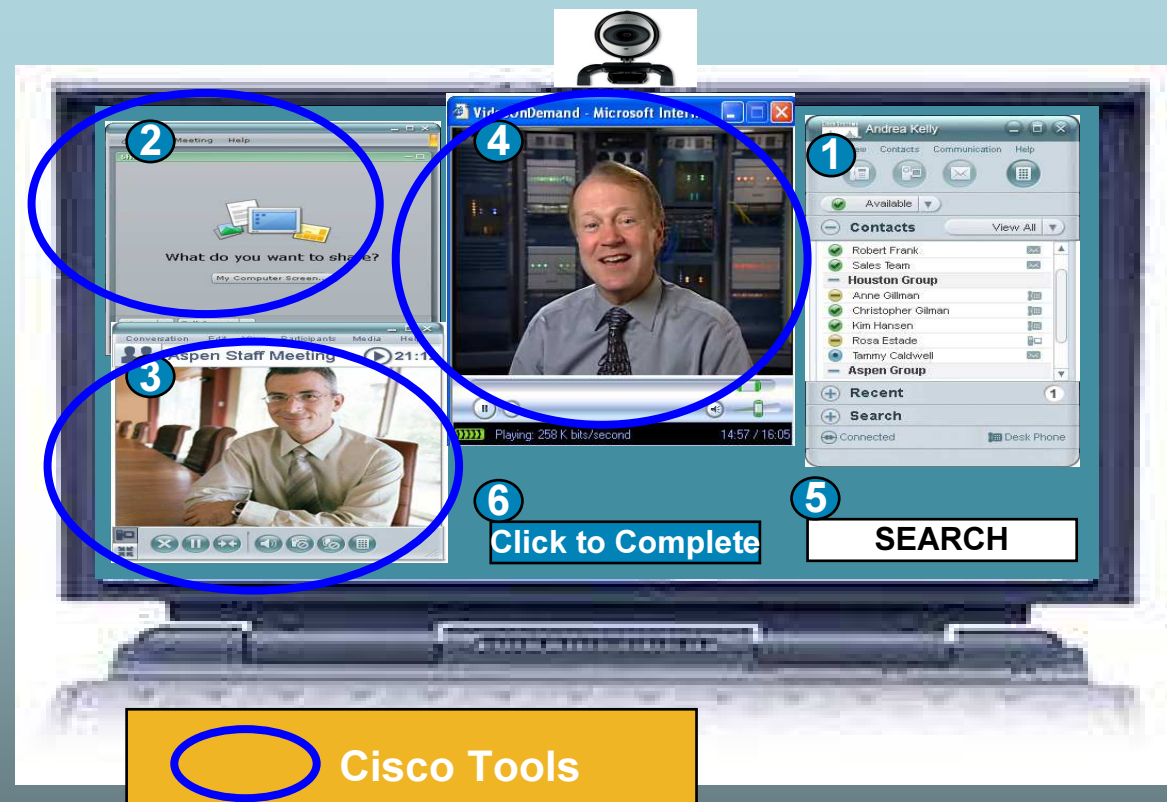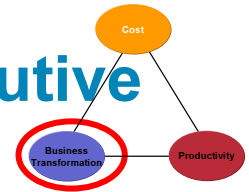


1. **Checklist of training topics**

2. **Documents to share with trainees**

3. **On-demand category expert**

4. **VOD explanations**

5. **Knowledge database keyword search**

6. **Automated click to complete**

## Potential Benefits to Retailer

- Rapid ramp-up of new team members - immediate delivery of expert content at the time of need w/ no associated labor
- Immediate availability of experts for key products through voice / video/ web conferencing
- Training related travel and facilities cost avoidance and associated productivity enhancements

# UC Can Increase Customer Conversion and Retention

## Digital Signage, IP Phone Lookup, Click to Call Product Expert

**Digital Signage**
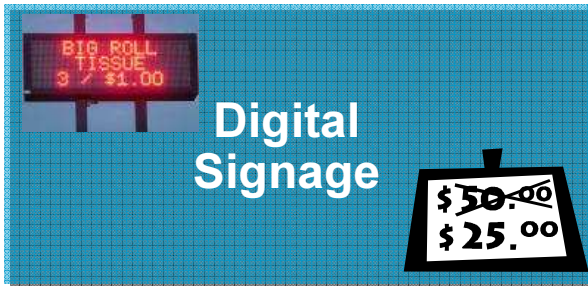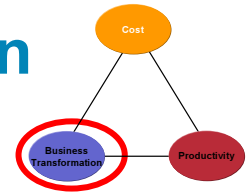
**A customer walks in and knows the price of an item is correct as it changes in real-time … price history can be got on the spot to show if an item is currently on sale**

**The customer is interested in the item but cannot find the exact color / size they want … check at the nearest kiosk about this for nearby store inventories**

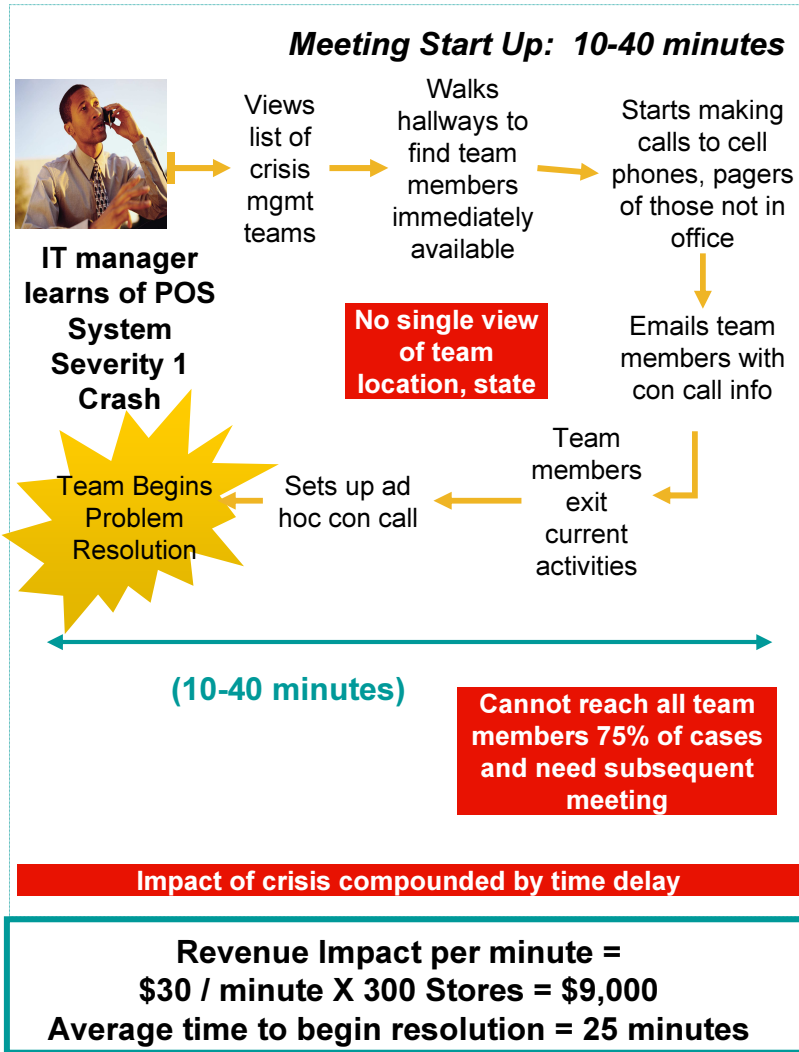**Store Look-up**

**Agent Connectivity**

**To clarify a question the customer "clicks to talk" and speaks with a virtual call center agent who completes the sale of the item on line with shipment to home … sale closed**
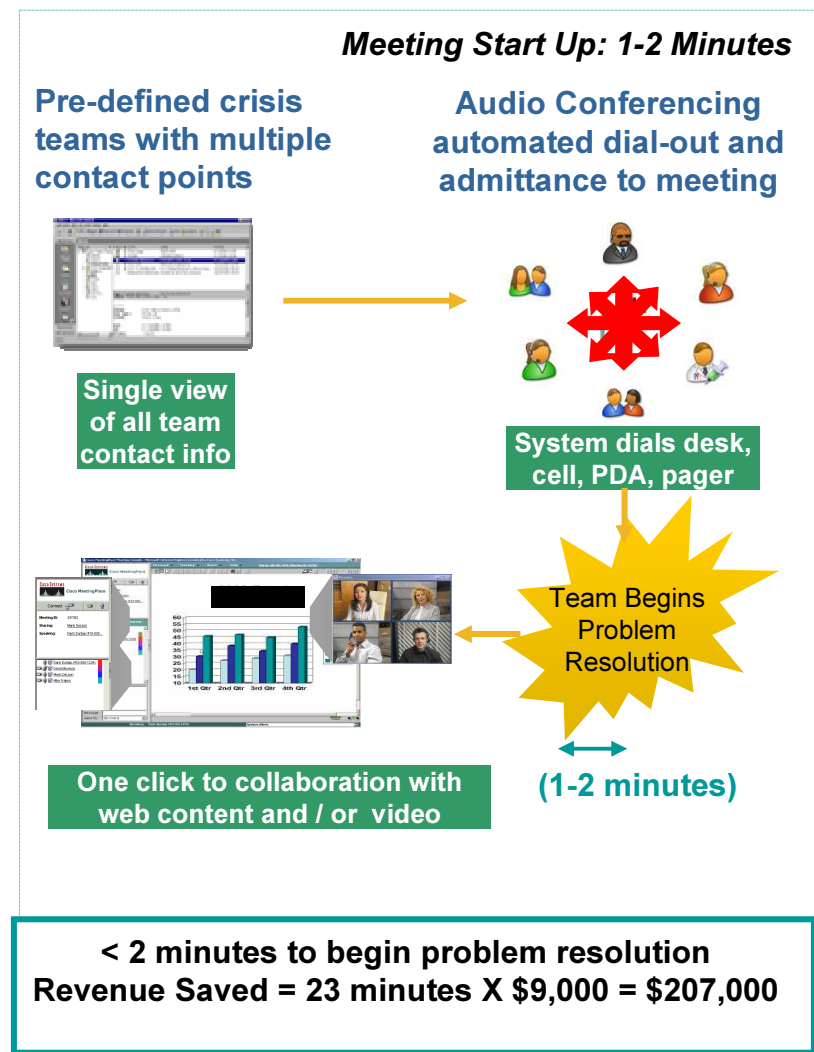
# Retail -- Crisis Management
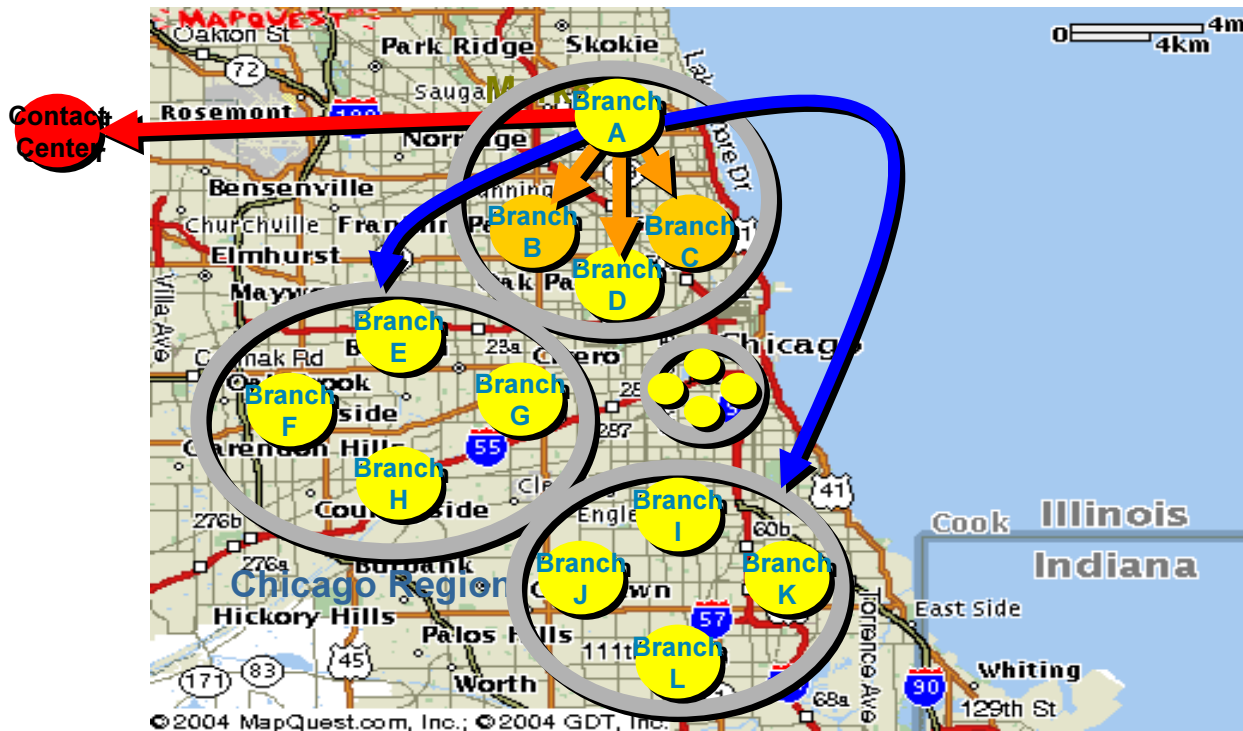## POS System Down at Lunchtime in 300 Locations

### As is…

**Meeting Start Up: 10-40 minutes**



**IT manager learns of POS System Severity 1 Crash**

Views list of crisis mgmt teams → Walks hallways to find team members immediately available → Starts making calls to cell phones, pagers of those not in office

**No single view of team location, state**

Emails team members with con call info

Team members exit current activities

Sets up ad hoc con call

**Team Begins Problem Resolution**

**(10-40 minutes)**

**Cannot reach all team members 75% of cases and need subsequent meeting**

**Impact of crisis compounded by time delay**

**Revenue Impact per minute =
$30 / minute X 300 Stores = $9,000
Average time to begin resolution = 25 minutes**

### …With Unified Communications

**Meeting Start Up: 1-2 Minutes**

**Pre-defined crisis teams with multiple contact points**

**Audio Conferencing automated dial-out and admittance to meeting**

**Single view of all team contact info**

**System dials desk, cell, PDA, pager**

**Team Begins Problem Resolution**

**(1-2 minutes)**

**One click to collaboration with web content and / or video**

**< 2 minutes to begin problem resolution
Revenue Saved = 23 minutes X $9,000 = $207,000**

# Grainger Uses UC To Increase Customer Responsiveness Through CC Virtualization
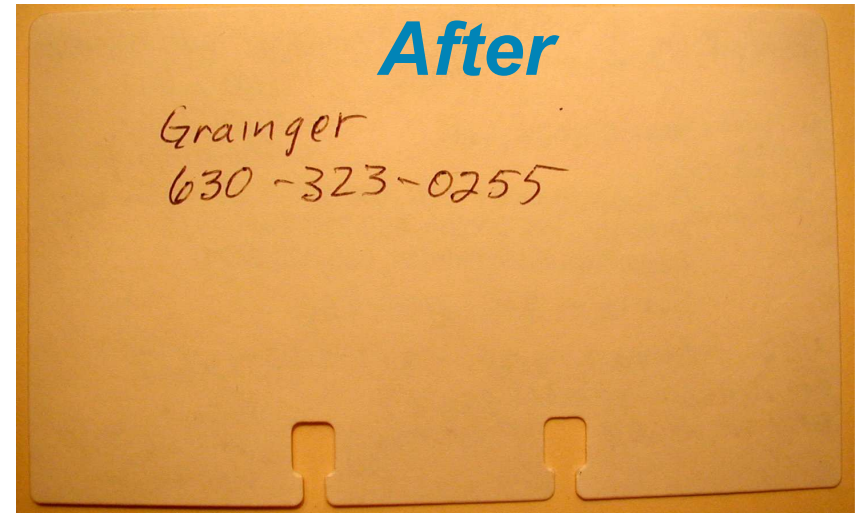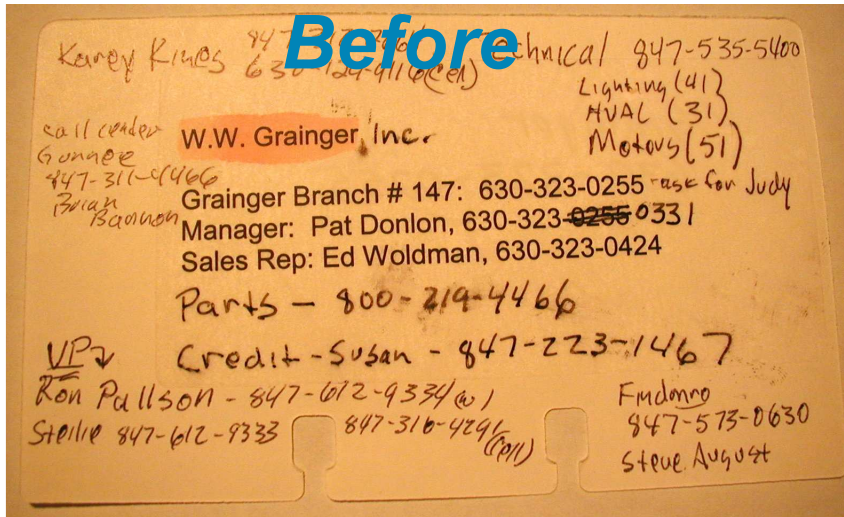
**GRAINGER**
FOR THE ONES WHO GET IT DONE



- **Grainger:** multi-channel, B2B distributor of industrial supplies & equipment

- **Company profile:** over $5Bn in sales, 15,000 customers, 1,500 sales reps at ~400 branches

- **Key business challenge:** how to leverage local presence with central enterprise resources to drive sales, improve customer experience

- **Solution:** Integrating branch and enterprise resources through a converged network

- **Result:** Shorter hold time for customers, local touch, increased annual sales by $60M

*"Each branch is now part of a virtual contact center with an incredible array of resources. The local (branch) customer service agent can now act as the quarterback for the customer contact."*
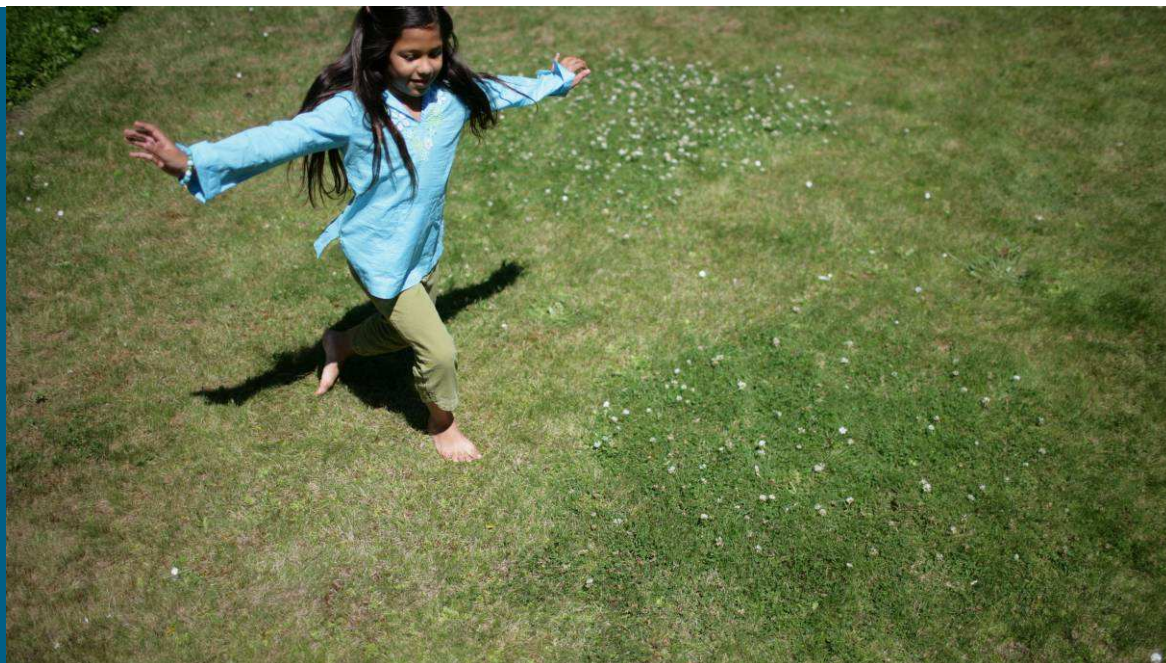**- Pat Davidson, Grainger SVP of Customer Service**

# Value To Customers Is That UC Is "Making It Simple" … Resulting In Increased Sales
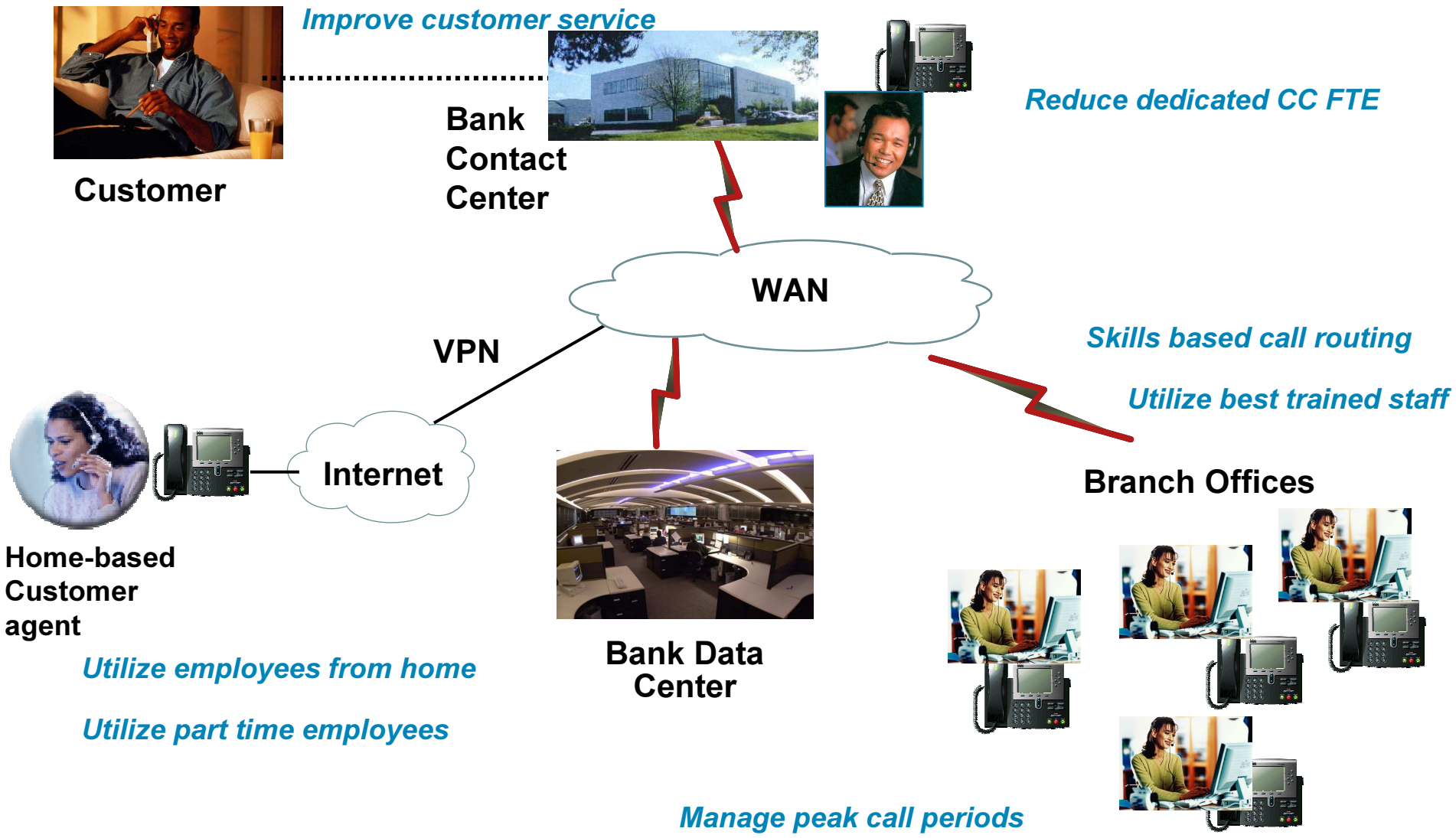
***Before***

***After***

***Grainger 2004 Annual Report:***

**"We updated our U.S. branch telephony and IT infrastructure using the latest Voice over IP technology.  Customers now have seamless connectivity to all the products and services Grainger offers. We are already seeing improvements in our costs while capturing more sales."**
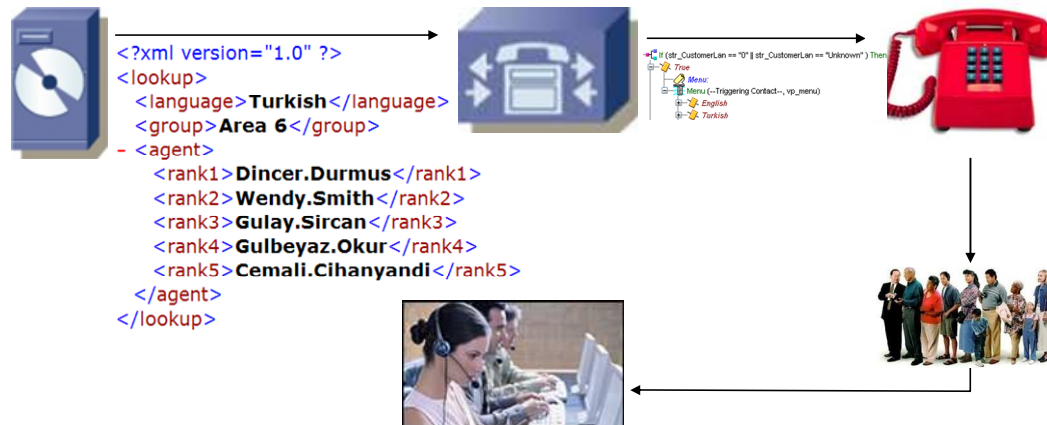
# Contact Center

# Virtual Call Center



**Customer**

*Improve customer service*

**Bank Contact Center**

*Reduce dedicated CC FTE*

**WAN**

**VPN**

**Internet**

**Home-based Customer agent**

*Utilize employees from home*

*Utilize part time employees*

**Bank Data Center**

*Skills based call routing*

*Utilize best trained staff*

**Branch Offices**

*Manage peak call periods*

# JJ Foods: Integrating the call center with the ERP/CRM systems for increased capacity

Portal sends back information about the customer and how the call should be treated → IPCC Express routes call to the correct person



```
<?xml version="1.0" ?>
<lookup>
  <language>Turkish</language>
  <group>Area 6</group>
- <agent>
    <rank1>Dincer.Durmus</rank1>
    <rank2>Wendy.Smith</rank2>
    <rank3>Gulay.Sircan</rank3>
    <rank4>Gulbeyaz.Okur</rank4>
    <rank5>Cemali.Cihanyandi</rank5>
  </agent>
</lookup>
```

"This allowed us to cut down 162,500 customer calls a year being transferred and/or being called back."

162,500 x 105sec = **$6.5m productivity gain**

"To build this application has taken a total **10 days** - the web developer has never worked on Cisco Unified Contact Center Express or on a call centre application before."

# Extending the Contact Center with E-Mail Customer Interaction – Agent E-Mail!

- Email interaction management service

- Agent E-Mail provides a core feature set for managing e-mails
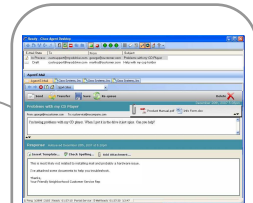
  Distributes e-mails to agents

  Sends responses from the contact center to the customer

  Provides real-time and historical reports on e-mail activity

- Zero footprint, browser based and fully integrated with Agent and Supervisor Desktops

**Contact Center Agent**



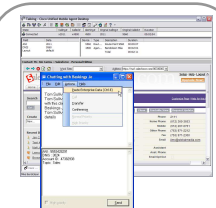**Cisco Agent Desktop and Agent E-Mail**

**Click to play the demo!**

# Extending the Contact Center with Enterprise Collaboration: Unified Contact Center Express with Presence!

- Agent and supervisor desktops are presence enabled via integration with Cisco Unified Presence Server

- Available at no additional charge in Standard, Enhanced and Premium

- Unified Contact Center Express with Presence:

    Enhances collaboration throughout the enterprise

    Provides agents with visibility to key operational experts

    Increases agent productivity and First Contact Resolution

**Contact Center Agent**



**Cisco Agent Desktop and Presence**

**Click to play the demo!**

# Integracija sa mrežom
## Aplikacija – "Pronađi eksperta"

**Primer za aerodrom:**

- Pristup aplikaciji kroz XML telefonski servis na telefonu

- Izaberemo željenu lokaciju, npr. "gate 3"

- Prikaz mape eksperata koji nose wireless 802.11 IP telefon

- Korisnik može da izabere određenog eksperta sa mape ili da klikne na "Najbliži"

- Upućujemo poziv na ekspertov wireless IP telefon 7921

*Isti princip može da se primeni i u zdravstvu, maloprodaji, proizvodnji ...*

# Cisco Telepresence

# Cisco TelePresence Meeting rešenje
## Krajnji uređaji



## Cisco TelePresence System 3000

- 12 mesta za virtuelnim stolom
- Specijalno napravljena soba
- 15 Mbps za 1080p, ultra-high definition
- Prostorni wideband audio
- Kašnjenje se ne može uočiti



## Cisco TelePresence System 1000

- 4 mesta za virtuelnim stolom
- Soba za opšte namene
- 5 Mbps at 1080p, ultra-high definition
- Wideband audio
- Kašnjenje se ne može uočiti

# TelePresence virtuelni stručnjak

- Cisco TelePresence  i Cisco Unified contact center

- Virtuelni poslovni terminali

  Maloprodaja

  Filijale banaka

  Virtuelna zdravstvena nega

  Virtuelna recepcija

  Hoteli

- Prodajna mesta

- Call centri

- Mesta gde je bliskost sa korisnicima komperativna prednost

# Example Deliverable: Productivity and Business Transformation Opportunities for Key Roles in Retail

## Retail Store Employee

**Role:** Maximize customer face time, answering questions and selling.

**Issue:** Administrative and inventory search activities reduce face time

**Impact:** Reduce time away from customers by 15-45 mins / day / emp.

| From | To | Solution |
|------|----|----|
| | | **IP phone time management, inventory lookup apps.** |

## Contact Center Agent

**Role:** Product expertise and peak time resource for stores

**Issue:** Lost sales due to lack of point of sale product expertise

**Impact:** Reduce customer walk aways and increase customer loyalty

| From | To | Solution |
|------|----|----|
| | | **Click-to-talk to expert, integrated routing** |

## Retail Store Manager

**Role:** Increase sales and customer loyalty, while minimizing opex

**Issue:** High turnover and employee retraining burden

**Impact:** Improve employee knowledge, reduce turnover, increase sales 4-6%

| From | To | Solution |
|------|----|----|
| $ | $ | **Web enabled distance learning, IP phone policy adherence apps** |

## IT Application Manager / Engineer

**Role:** Maximize uptime of enterprise and store applications

**Issue:** Slow response time on critical system down situations.

**Impact:** Reduce lost store revenue by up to $200K per incident

| From | To | Solution | |
|------|----|----|----|
| | | **Rich media conferencing outdial functionality** | ? ! |

# Retail: Fashion Retailer Enhancing Employee Productivity and Business Agility Through UC

## Business Challenges

- Need to facilitate better communication and collaboration between executives discussing strategy, design decisions, new product lines etc.
- Improve productivity for mobile workers and teleworkers
- Reduce telephony costs while facilitating expansion and acquisitions
- Improve contact center service

## Solution

- Cisco IP telephony solution including Call Manager, IP phones and broadband routers;  IP Communicator softphones for traveling executives and associates
- Cisco IPCC Express to obtain integrated reports and performance metrics
- Planned deployment of video telephony solution to increase productivity of design discussions, reduce frequent travel between offices etc.

## Business Value

- Improved productivity for executives visiting other locations since they can log on to any phone as their own
- Significant cost reduction due to savings in connectivity, toll bypass, MACs, cell phone and home phone expenses for mobile and teleworkers
- Faster integration of new offices into the corporate telephony network
- Optimized staffing and improved customer service through detailed contact center reporting and enhanced routing capabilities

*"Extension Mobility is a boon for productivity"*

*"Integrating telephony systems of acquisitions is 3X faster than the industry standard"*
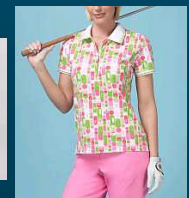
# Hannaford Brothers Enables Growth Via UC-driven Employee Productivity

## Company Profile

- Fifth largest grocery operator in U.S. - 147 supermarket / food / drug stores in Northeast – business segment of Belgian based global retailer Delhaize. 24,000 employees

## Business Challenges

- Improve store employee productivity – increase customer face time and improve task allocation across employees
- Improve ability to open / close stores more effectively
- Enhance user experience and reduce costs of international meetings and presentations

## Solution

- Unified Communications: Call Manager, IP Phones, Unified Messaging, Video Conferencing, phone-based applications

## Business Value

- Opened 14 new stores in 2006 – highest single year in history
- $75M annual savings from unified communications, IP videoconferencing and converged network.
- Better communication / collaboration between stores, Hannaford HQ and Delhaize parent company.
- Improved customer experience and video "how to" content

"We're lowering the cost of doing business, and we're running a better store.

Our customers see it both in the cost of our products and how well the store is organized – very few products are ever out of stock, for example.

It's subtle, but its very powerful."

- Bill Homa, CIO
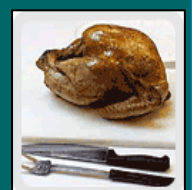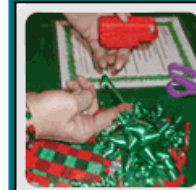
# Example: Global Quick Service Chain
## UC Platform Saved 23% on TCO in First Year

## Business Challenges

- Improve communications across 5 brand silos, multiple geographies, consistent management, quality and policy
- Move away from EOL PBX solution, with escalating support costs
- Reduce voice TCO and consolidate 4 VM platforms to enable corporate wide communications

## Solution

- End-to-end IPT / messaging in HQ, regional sites
- Click to talk integration with corporate directories, web conferencing application, crisis management
- Next phase: Leverage platform to expand— Contact center, rich media, UM

## Business Value

- 23% reduction in voice TCO realized in first year
- Consistency of communications and adherence, faster crisis resolution, productivity gains on repetitive communications tasks



**"Crisis situations drive need to bring disparate team together. Before, it was difficult…and involved making multiple phone calls, searching offices, paging people, setting up impromptu meetings… just to start resolution"**