

# ***Cisco IP Contact Center***

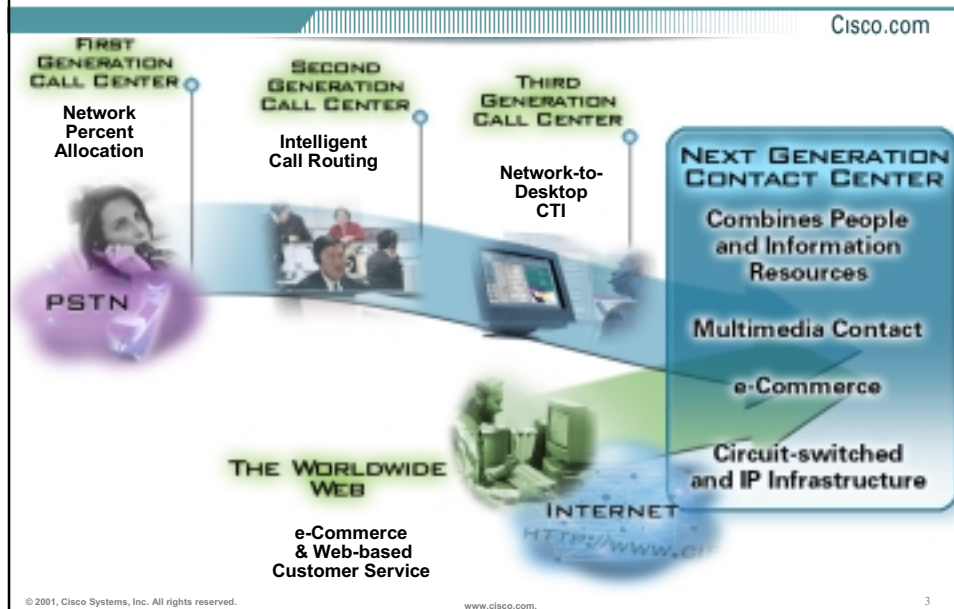


**Kyeongho Yang**  
System Engineer, Enterprise  
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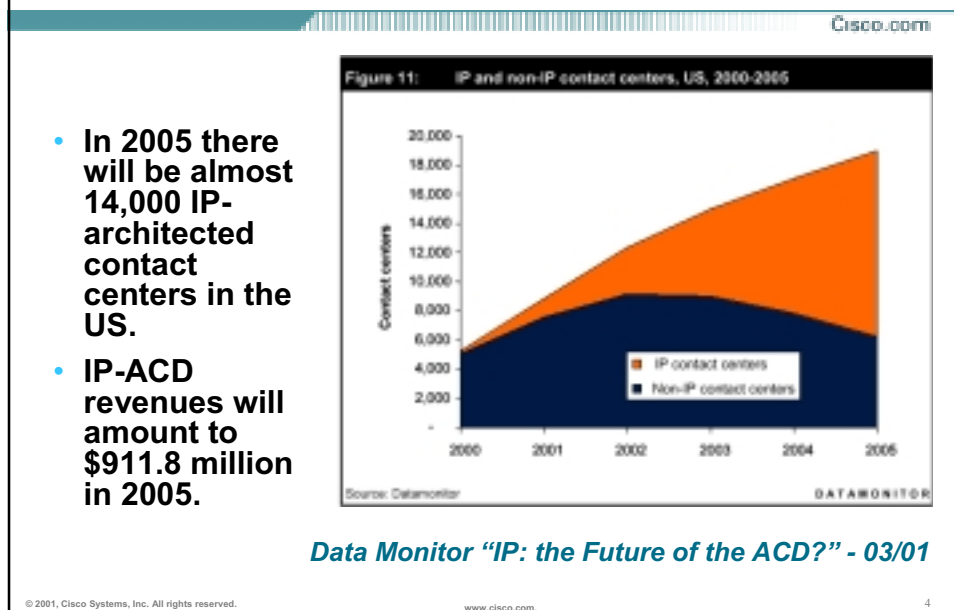
## **Agenda**

- **IPCC Overview**
- **IPCC Components**
- **IPCC Deployment Model**
- **IPCC Business Benefits**
- **Summary**

# Evolution of Customer Contact



# Market Projections



## Advantages of IP

Cisco.com

- **Location independence**
  - Locate agents and workers anywhere
- **Support multiple channels**
  - Voice, Email, Web, Fax, Video
- **Rapid deployment of new applications**
- **Deploy and maintain one network**



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5

## Cisco's Product Strategy

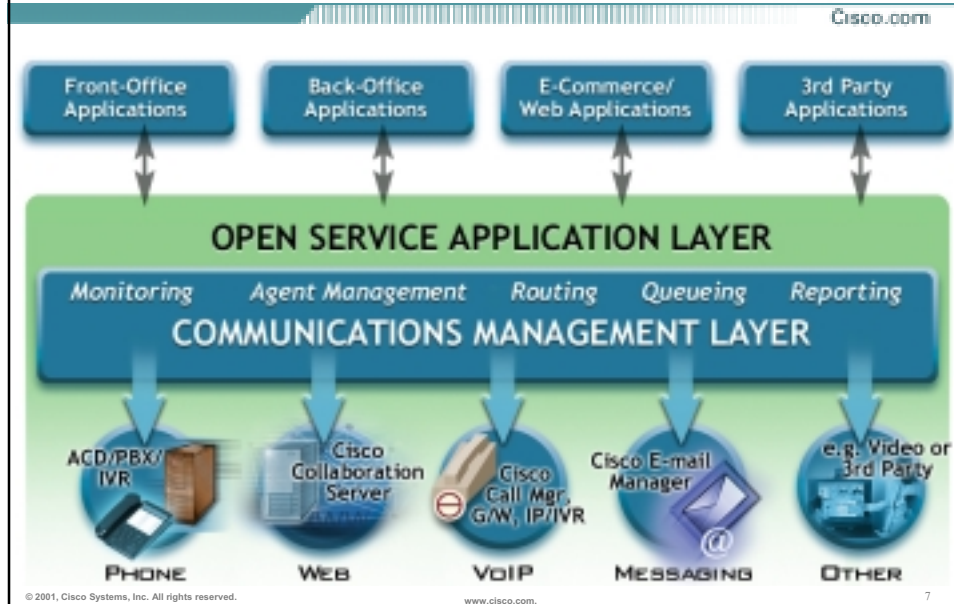
Cisco.com

**Provide an open software platform that enables multi-channel customer communication over IP and legacy networks**

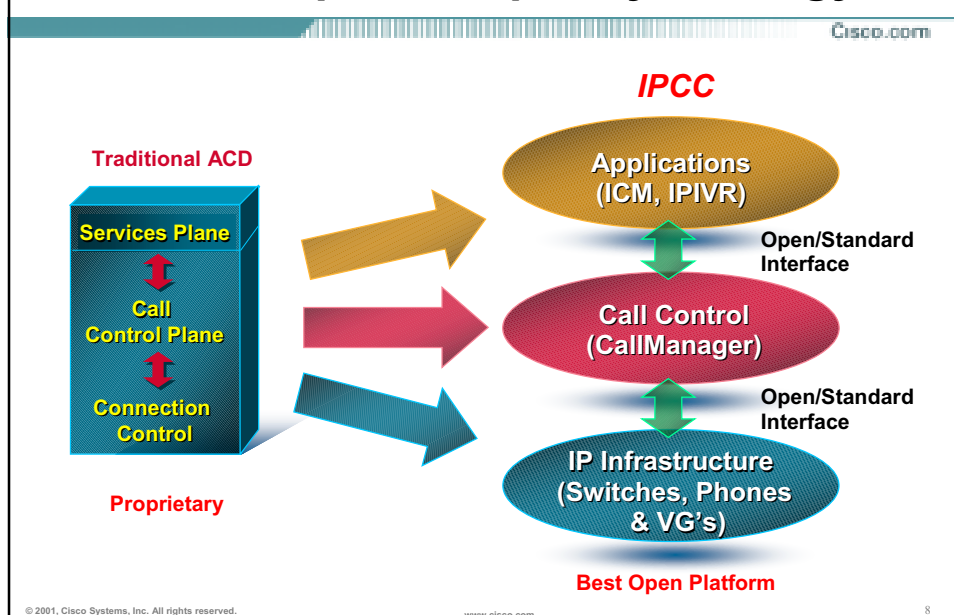


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# Cisco's Vision for Integrated Customer Communications

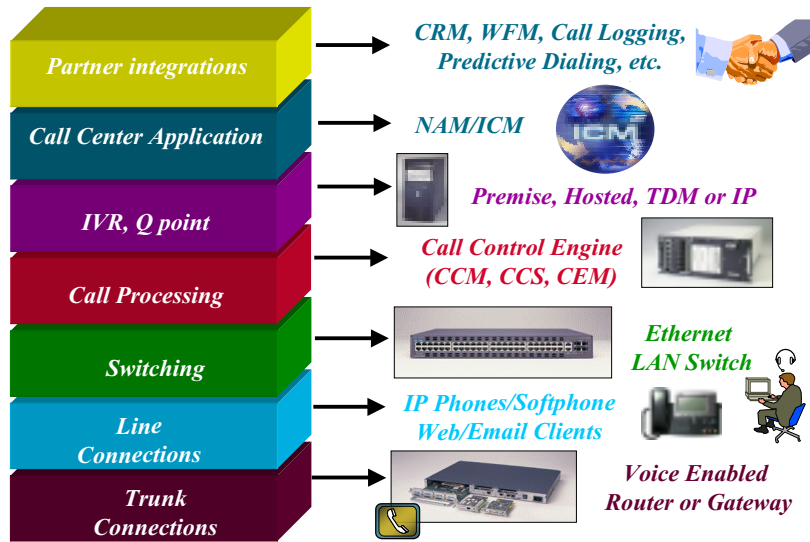


# Cisco's Open Telephony Strategy



# Cisco IP Contact Center Solution

## How to replace traditional call center??



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# IPCC Components

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# IP Contact Center Components



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## ICM as Virtual ACD



- Call (contact) routing and queuing
- Track agent status
- Real-time management information
- Historical reporting
- Computer Telephony Integration

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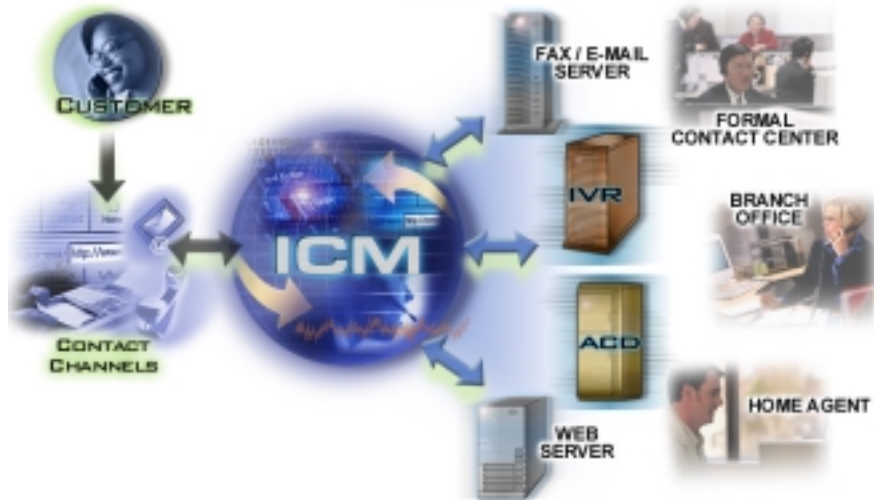
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# ICM as Single Control Point

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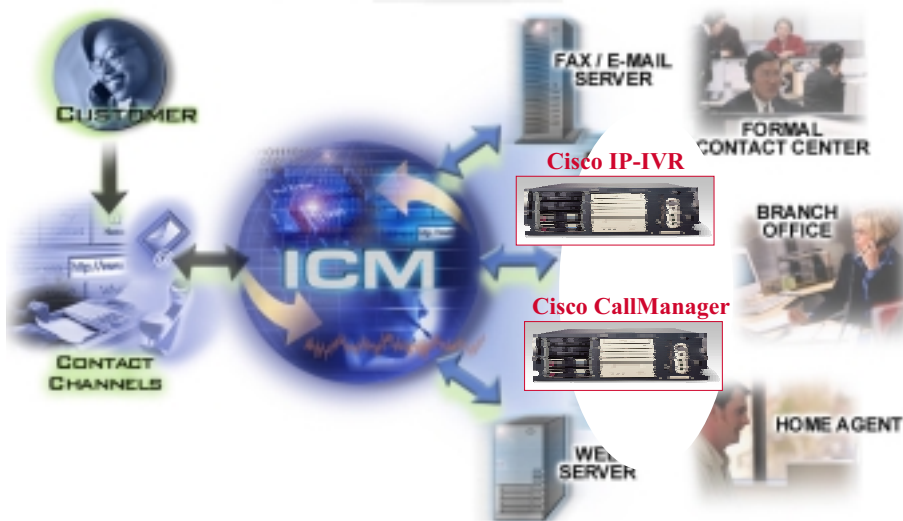
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# IP Contact Center

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# Centralized Management & Control

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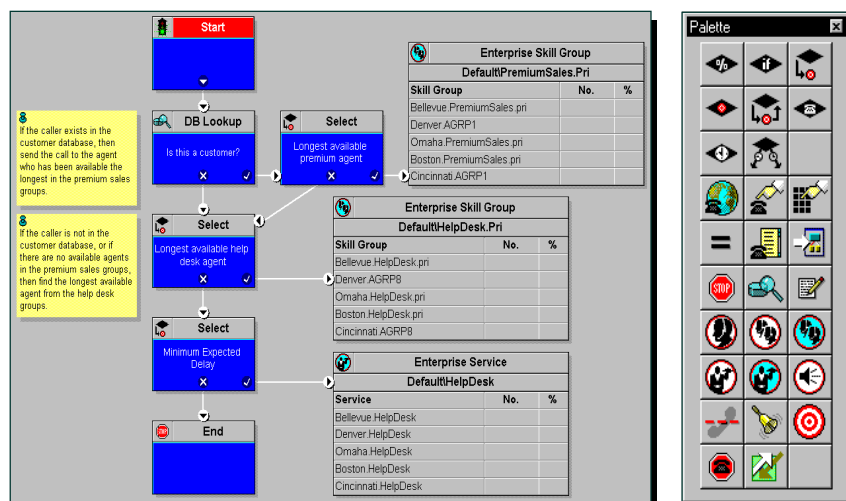


- Implement business rules
- Maintain consistent service levels
- Generate normalized, consolidated reports

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## ICM Script Editor

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# Real-time & Historical Reporting

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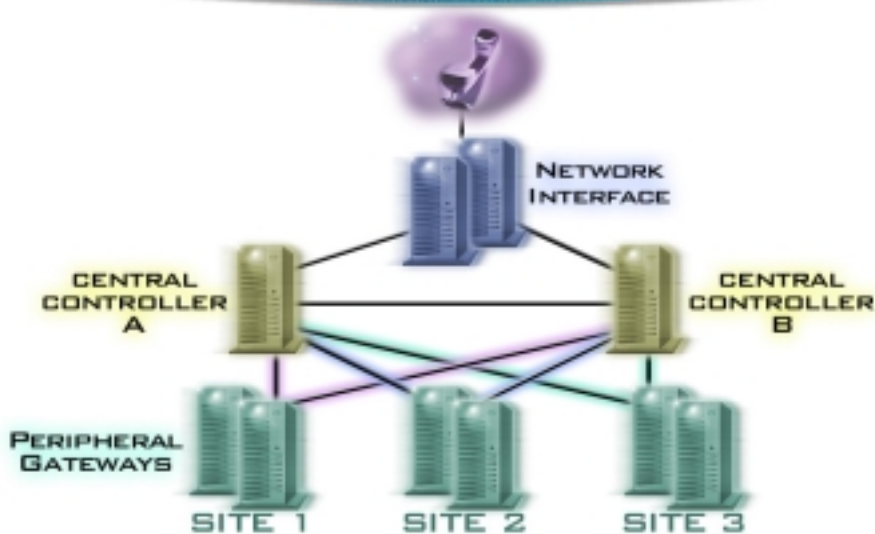
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# Carrier-class Reliability

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18

# Open Ecosystem

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## CRM/eCRM

Chordiant  
Kana/Silknet  
Octane  
Oracle  
Pegasystems  
Siebel

## Recording

Dictaphone  
E-Talk  
Eyretel, PLC  
NICE Systems  
Racal Recorders  
Witness Systems

## IVR

Apex  
Aspect-Voicetek  
Aumtech  
Edify  
InterVoice-Brite  
Periphonics  
Spanlink  
Syntellect  
Telera

## ACD

Alcatel  
Aspect  
Ericsson  
Lucent  
NEC  
Nortel  
Rockwell  
Siemens  
Open CSTA

## WFM

Blue Pumpkin  
IEX

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# Call Manager

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**Provides call processing, call control, and feature control to phones, gateways, devices**

- The MCS-7835/7325 is a turnkey hardware platform for Cisco CallManager IP Telephony software
- Designed to be a highly available and scalable IP Telephony call processing server



**MCS-7835/7325 Server**

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20

# Cisco IP Phone 7960

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- Professional, Manager
- High or Busy Telephone Traffic
- Six Lines - Mix Directory Numbers or Features
- Display Area: Calling Information, Feature Access Via "Soft Keys," Additional Display Area for Value-added Services and Applications
- Info Key for "on-line" help with features
- Services key for XML based information
- Full Duplex Handsfree
- Built-in Headset Connection
- 10/100 BaseT, 3 Port Switch
- Inline Power compatible
- Adjustable foot stand (flat to 60 degrees)

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# Cisco IP Phones

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IP Phone 7940



IP Phone 7910



IP Conference Station 7935

**And other 3<sup>rd</sup> Party IP Phones  
Are under development**

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# Cisco IP SoftPhone 1.2

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- **Standalone or with IP phone**
  - Control IP phone
  - Is phone on PC
- **Easy feature access**
  - One-click conference and transfer
  - Keyboard shortcuts
- **Directory integration**
  - Personal and public (LDAP)
  - Dial by name/e-mail address

- **Windows based IP Phone for CallManager 3.0 and 3.1**
- **Available in English, French , German, Japanese, Korean(?)**

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# Cisco VoIP Gateways

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## Switch-based



Catalyst 4000



Catalyst 6000



7200-VXR



AS5300



AS5800

## Router-based



1750



2600



3600



MC3810



VG200



DT-24+



DE-30+


## Stand-alone

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24

# CTI Desktop Solutions

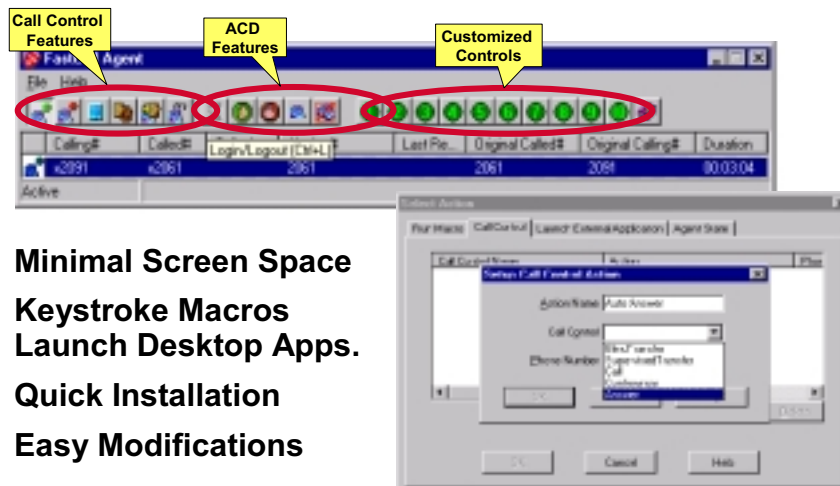


- ACD Features
- Real Time Information
- Call Control
- Screen Pop Customer Data
- Choice of Integrations
  - Turnkey CTI
  - CTI Toolkit
  - CRM Integrations

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## Turnkey CTI Agent

*A quick-to-deploy CTI desktop application*



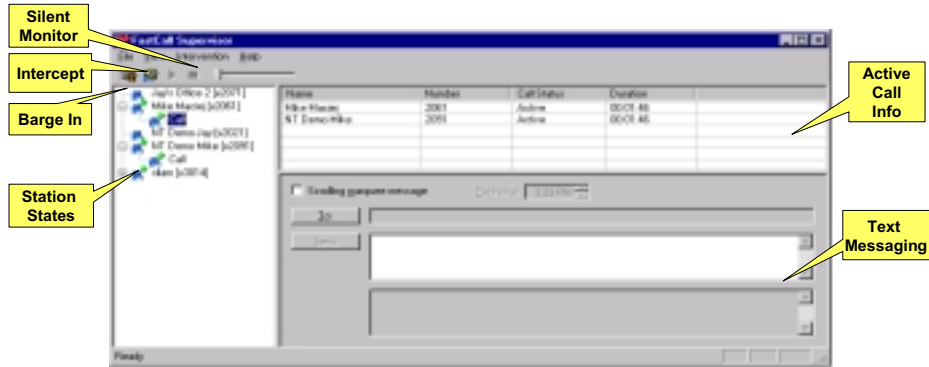
- Minimal Screen Space
- Keystroke Macros Launch Desktop Apps.
- Quick Installation
- Easy Modifications

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# Turnkey CTI Supervisor

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## Supervisor application for Turnkey CTI Agents



- Supervisor selects agent to be monitored
- Audio sent to Supervisor's PC speakers

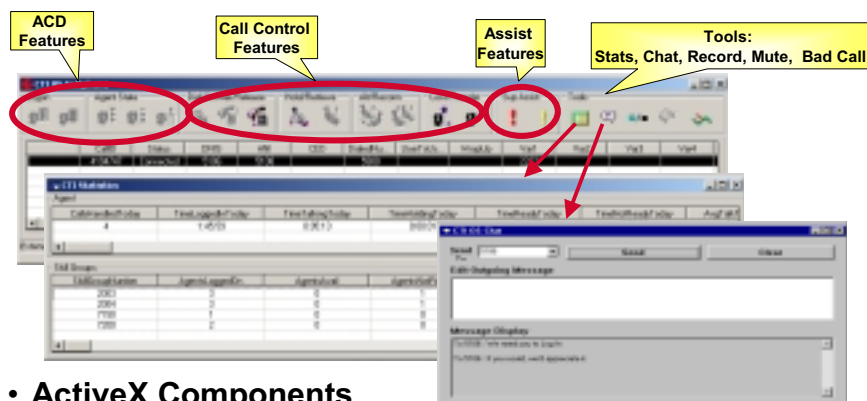
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# CTI Toolkit Agent

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- ActiveX Components
- ACD and Call Control features
- Emergency Call, Agent Statistics, Chat,
- Sample Application with Source Code

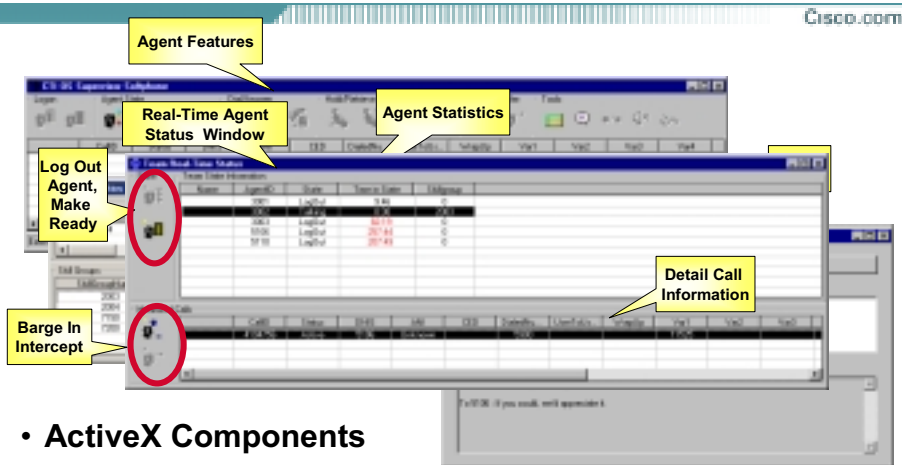
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28



# CTI Toolkit Supervisor



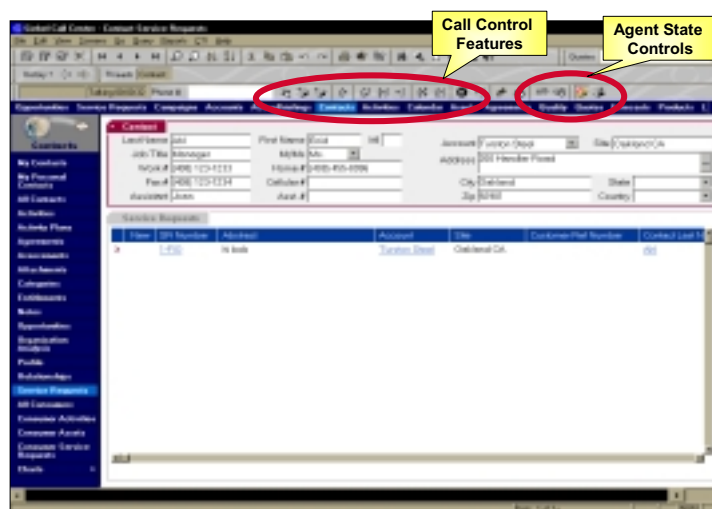
- ActiveX Components
- ACD and Call Control features
- Barge-In, Intercept, Change Agent State, Statistics, Chat
- Sample Application with Source Code

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29

# CRM Integrated Desktop



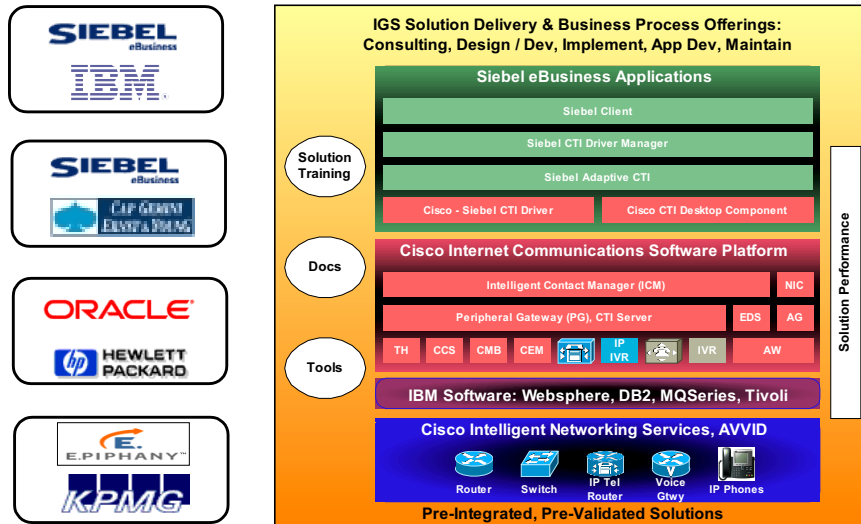
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# Strategic CRM Solutions Available

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# Interactive Voice Response

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*Provides call treatment to queued calls*



- **Static Announcements:** "All of our agents are busy . . ."
- **Dynamic Announcements:** "There are 12 calls in queue. Your expected wait time is 15 minutes"
- **Prompts for caller data:** "Please enter your 6 digit account code."
- **Prompts for route options:** "To leave a message press 1, to select from a list of frequently asked questions . . ."

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# Cisco IP-IVR

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- IP-IVR is an **IP-based IVR solution** which offers a foundation for the delivery of interactive voice response (IVR) transaction processing



- **Application engine**  
Executes IP IVR/IP AA flows  
Executes on an MCS server  
Windows 2000 server

MCS Servers

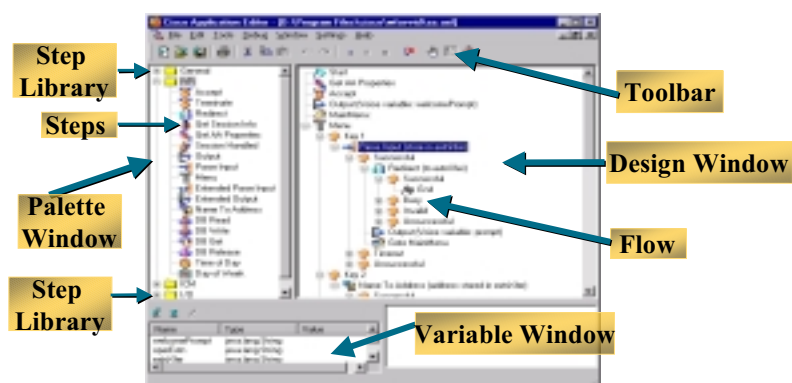
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## IP-IVR Application Editor

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- **Application Editor**  
Windows application  
Edit flows anywhere in the network  
Download flows to any IP-IVR/IP AA  
Any editor can edit flows on any engine

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# Cisco Web Collaboration

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- Enables “live help” button on Web site
- Integrates text chat, Web collaboration, Internet telephony with IPCC
- Increases revenues
- Drives customer loyalty and satisfaction

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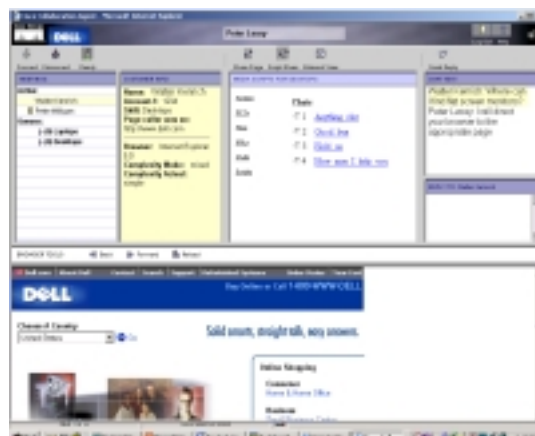
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# Web Collaboration

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- Runs in the browser - no install required
- Scripted environment insures user interface is easy to learn and easy use
- Sharing content is as easy as clicking a link



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# Simple Collaboration

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Available in both single and multi-session agent desktops

- **Page Share:** Agent *and* customer can share web pages to each other.
- **Frame Share:** When sharing frames no need to share the entire frameset.



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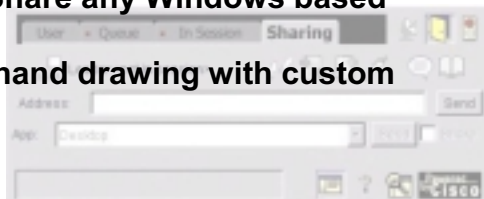
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# Complex Collaboration

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- **Follow-me browsing:** allows one participant to follow wherever the other participant leads.
- **Form Share:** Agent and caller can fill out web based forms together.
- **Remote Control:** No need to “train the caller”, agent can work the caller UI remotely.
- **Application Sharing:** Share any Windows based application.
- **White-boarding:** Free hand drawing with custom drawing elements.



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# Call Center Integration

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- **Biggest differentiator**
  - Automatic callback to customer
- **With the Cisco Media Blender**
  - Can use ACD for routing and queuing engine
- **With Cisco WebOption**
  - can use ICM as the routing engine and ACD as queuing engine

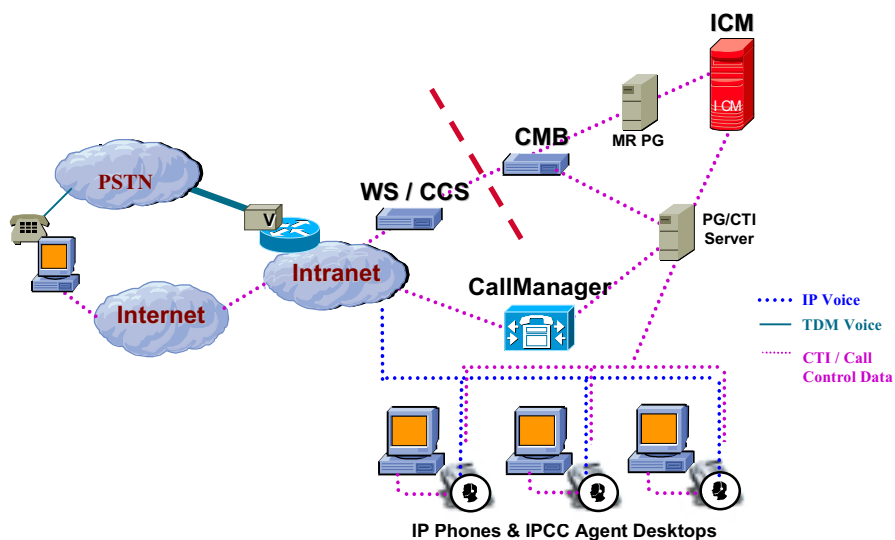
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# Web Contact Integration to IPCC

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## Benefits of Web Collaboration

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- **Increase customer satisfaction** by getting to the customer's root questions/issues more quickly
- Makes the Web a customer service vehicle, not just a customer "self-service" vehicle
- **Improve agent's abilities** to sell through visual comparison of products and services
- Simulate face-to-face sales process

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## Cisco eMail Manager

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***Flexible, extensible, and highly scalable email response management (ERM) system***

- Receives inbound messages
- Performs message analysis
- Sends automated replies
- Routes to responders
- Provides message-handling tools
- Provides queue-management tools
- Tracks/archives messages
- Multi-platform support
  - NT
  - Solaris
- Part of Multimedia Contact Center Solution



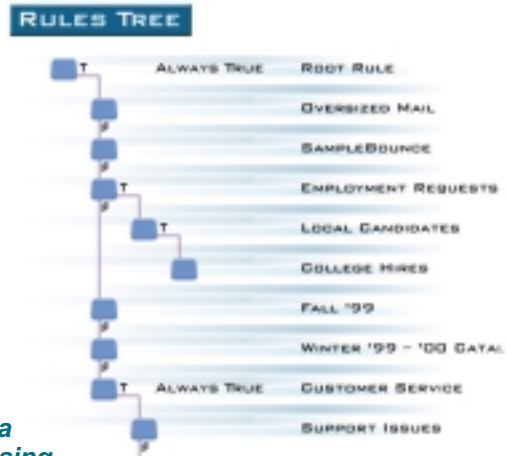
# Cisco eMail Manager Key Differentiators

CISCO.COM

## **Powerful processing engine features:**

- Hierarchical, branching rule logic
- Graphical rule-building environment
- Sophisticated message tracking
- Inter-instance routing

*Simplifies the process of  
creating, testing, and managing a  
sophisticated network of processing  
rules.*



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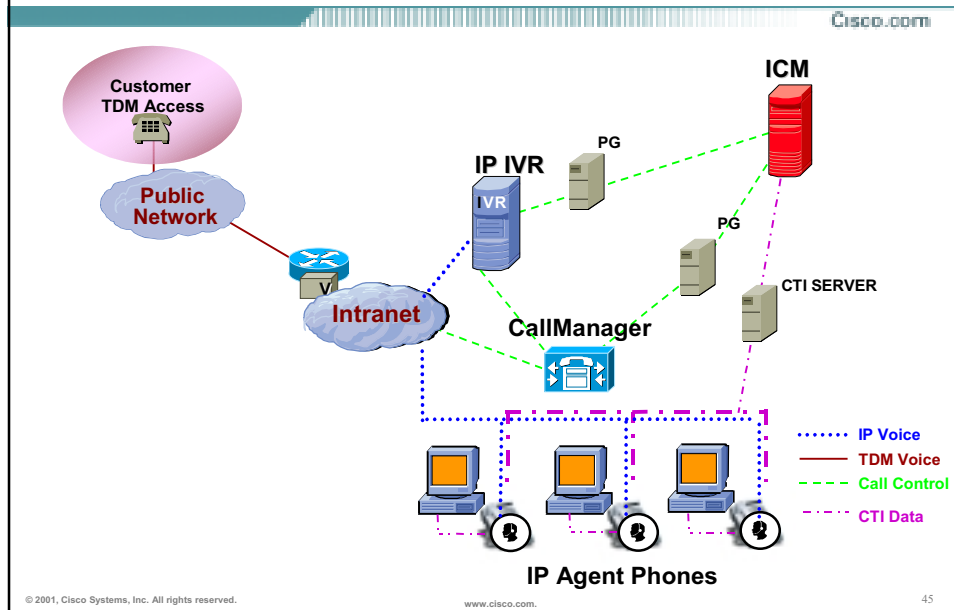
# IPCC Deployment Configurations

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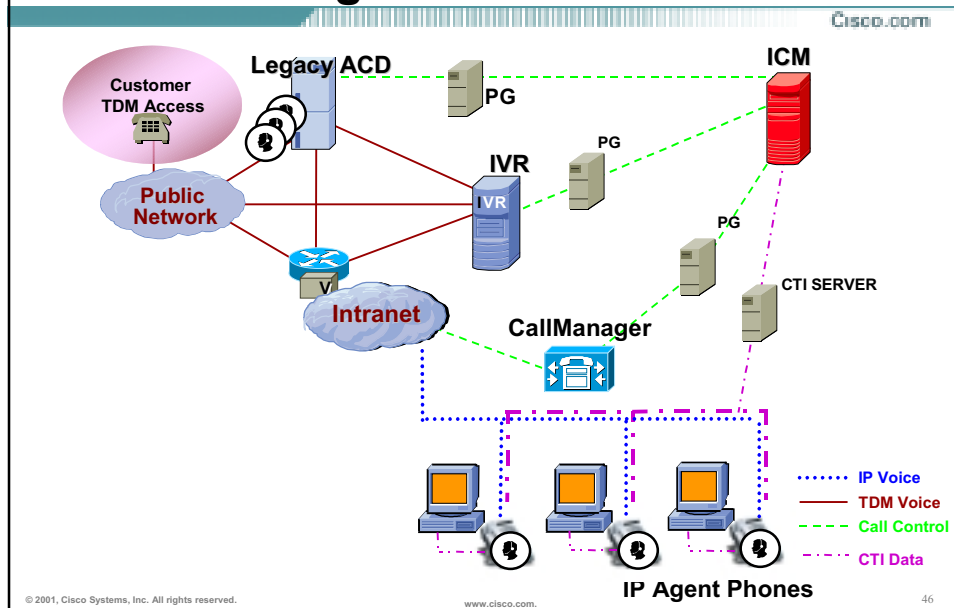
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44

## Single Site IPCC using IP IVR



## Single Site IPCC with TDM IVR and agents on TDM ACD



# Single Site IPCC with IP IVR And TDM ACD and TDM IVR

The diagram illustrates a network architecture for a Single Site IPCC (Intelligent Personal Call Center) with IP IVR and TDM ACD and TDM IVR. The network is divided into a Public Network and an Intranet.

**Public Network:**

- Customer TDM Access (represented by a telephone icon)
- Public Network (represented by a cloud icon)
- Legacy ACD (represented by a server icon)
- PG (Proxy Gateway, represented by a server icon)
- ICM (Intelligent Call Manager, represented by a server icon)

**Intranet:**

- IP IVR (represented by a server icon)
- CallManager (represented by a server icon)
- CTI SERVER (represented by a server icon)
- IP Agent Phones (represented by computer icons with telephone handsets)

**Connections:**

- Red solid lines represent TDM Voice connections.
- Green dashed lines represent Call Control connections.
- Blue dotted lines represent IP Voice connections.
- Purple dashed lines represent CTI Data connections.

**Legend:**

- ..... IP Voice
- TDM Voice
- - - Call Control
- . - CTI Data

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# Multi site IPCC over WAN

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The diagram illustrates a multi-site IP Call Processing Center (IPCC) over a Wide Area Network (WAN). It features two main sites: the **Head Office** and the **Branch Office**.

**Head Office Components:**

- PG (Phone Gateway):** Represented by a red cylinder.
- IP-IVR (IP Interactive Voice Response):** Represented by a blue cylinder.
- ICM (Intelligent Call Manager):** Represented by a red cylinder.
- Call Processing:** A group of blue server icons enclosed in a red dashed box.
- Network:** A blue switch and a blue router (marked with a 'V') are connected to the call processing group.

**Branch Office Components:**

- PG (Phone Gateway):** Represented by a red cylinder.
- IP-IVR (IP Interactive Voice Response):** Represented by a blue cylinder.
- Call Processing:** A group of blue server icons enclosed in a red dashed box.
- Network:** A blue switch and a blue router (marked with a 'V') are connected to the call processing group.

**Network Connections:**

- IP WAN:** A central cloud labeled "IP WAN" connects the two sites. Below it is an **IOS Gateway** (blue router with a 'V').
- PSTN (Public Switched Telephone Network):** A cloud labeled "PSTN" is connected to the routers at both the Head Office and Branch Office.
- Inter-office Connections:** Dashed lines show connections between the PG and IP-IVR components of both offices, and between the ICM at the Head Office and the PG at the Branch Office.

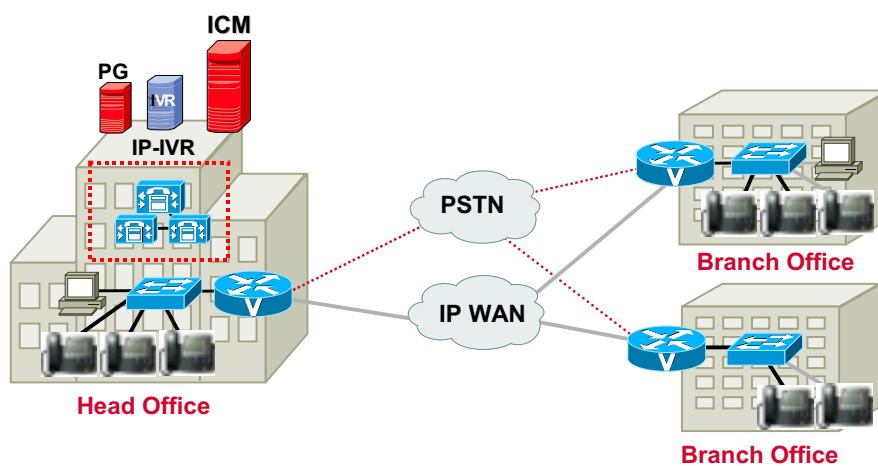
## IP WAN with Distributed Call Processing

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## Multi site IPCC over WAN

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### IP WAN with Centralized Call Processing

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## IPCC Business Benefits

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## Benefits of IPCC vs PBX-based Call Centers

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- Enables a web-like infrastructure for the Contact Center
- **New channels in Contact Centers** like Email and Web Collaboration are IP-based channels
- IPCC inherently supports **Virtual Contact Center capabilities** – Virtual Contact Centers increase Contact Center efficiencies.
- **IP Architecture benefits**
  - Location independence, Rapid deployment of new applications, Deploy and maintain a single network.



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## Benefits of IPCC vs PBX-based Call Centers

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- The “ACD” within IPCC is **independent** of the underlying Telephony system
- IPCC enables the use of XML-based **Productivity-enhancing applications** on the Phones
- It is much economical to implement **Redundancy in IPCC** than in traditional PBX-based Call Centers
- IPCC has **superior scalability**
- Preserves the value of existing TDM-based technology investments



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## Benefits of IPCC vs PBX-based Call Centers

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- **No “PBX-type” hidden costs** – digital/analog cards for the Agent phones, software RTU for CTI, etc
- Cisco's IP-IVR removes the needs of analog/digital cards on the IVR and PBX; we use IP sessions
- Cisco IPCC provides Real-time and Historical Reporting via web browsers
- Cisco's IPCC enables the deployment and use of third party products like Voice Logger much more easier.



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53

## IPCC Customer Wins

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- **20+ IPCC Installs since January, 2001**
- **30+ in process or pending Bid Assurance approval**
- **The last three months in AsiaPac**
  - Jiangsu Power
  - Shanghai Computer Antivirus Service Centre
  - Beijing Cable
  - **China Life**
  - TT&T Taiwan
  - Rail Com
  - Inland Revenue - NZ

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54

# Cisco Customers & Industries

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Telecommunications	Finance	Retail	Travel & Leisure	HealthCare/Insurance
AT&T	GE Capital	Victoria Secrets	American Airlines	United Healthcare
Sprint	Capital One	Sears	British Airways	Traveler
Cable & Wireless	Commonwealth Bank	Montgomery Ward	Continental Airlines	Access Health
France Telecom	MBNA	Lands End	Delta Airlines	Allstate
British Telecom	GMAC	Cheap Tickets	Marriott International	Sun Life
Telecom New Zealand	Wells Fargo	1-800-FLOWERS	Air Tours	Aetna
WorldSpan	Bank of China	Staples	Northwest Airlines	Privilege Insurance
Energis	CIBC	Dell Computers	Carlson Wagonlit Travel	Prudential Insurance
Excel Communications	Rosenbluth International	Whitbread	Starwood/ITTs	Trailblazer Health
Worldnet	Household Credit Service	JCPenney	US Airways	
Con Ed	CIBC	US Postal		
PG&E	RAMS Home Loans	Federal Express		
UUNet	Barclay	United Parcel Service		
British Gas	Hua Xia Bank of China	Spiegel		
Airtel	Citicorp			
GTE	Chase			
JazzTel	First Direct Bank			
Bell Canada	USA Group			
West Teleservices	Oriental Trading			
KDD	First USA			
Japan Telecom				

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## Summary

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- Enhances customer service
- Single set of business rules; single point of administration for Contact Center
- Advantages of IP Architecture
- Preserves the value of existing technology investments - compatible with Legacy Call Center technology allowing a smooth migration to IP

**The world is moving to IP Contact Centers.**

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56

# New World Contact Center

The diagram illustrates a contact center architecture. On the left, a **TDM Customer** (represented by a person on a phone) connects to a **PSTN** cloud. Below it, a **VoIP Customer** (represented by a person at a computer) connects to an **INTERNET** cloud. The PSTN cloud connects to an **ACD** (Automatic Call Distribution) server and an **IP-IVR** (Interactive Voice Response) server. The Internet cloud connects to an **INTRANET** cloud. The ACD server connects to an **ICM PG** (Interactive Call Manager) server. The IP-IVR server connects to an **ICM PG** server. The INTRANET cloud connects to a **Cisco CallManager** server. The ICM PG servers connect to an **ICM CTI Server**. The ICM CTI Server connects to **Agent Phones** (represented by three computer monitors with phones). A legend in the bottom right corner identifies the connection types: **IP Voice** (blue line), **TDM Voice** (brown line), **Call Control** (green line), and **CTI Data** (purple line).

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57

