

# Internet Communications Software Group—Driving the Market for Converged Applications and Services

## Introduction

Through its Internet Communications Software Group, Cisco is uniquely positioned to accelerate the delivery of converged voice and data applications such as new-generation Customer Contact and Unified Communications solutions while placing customers on an aggressive new value curve—a curve based on a horizontally-integrated open business model.

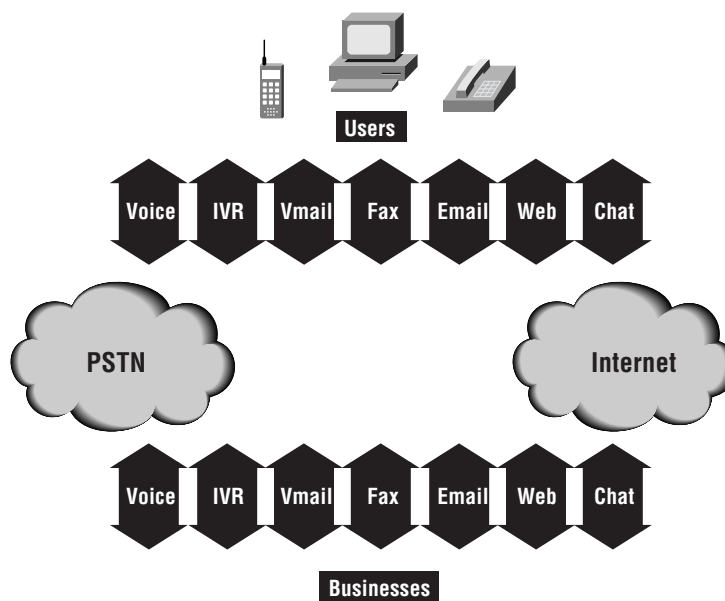
You can practically feel the ground shifting. In the course of just a few years, we have experienced:

- An explosion in the number of channels available for customer interaction and personal communication
- Unprecedented access to a world of competing suppliers, and hence unprecedented choice

As a consequence, never have so many individuals been so empowered to manage so many different kinds of business relationships. Nor have so many businesses had so rich an opportunity to leverage communications, and their communications infrastructures, for competitive gain.

With competitors just a click, call or email away, it is critical that businesses improve the efficiency of all their communications and maximize the value of each customer contact—whether it's by Web, phone, email, or fax—in order to strengthen their brand, build loyalty, increase revenues, and boost profits. Like gravity, these crucial needs are driving the convergence of voice and data communications as well as the convergence of e-Commerce and customer service.

Figure 1 New Communications Landscape



As these dual convergences pick up speed, traditional telecommunications platforms based on vertically-integrated closed models will be severely challenged to keep pace. Conversely, a horizontally-integrated open business model presents a much better chance for success because, by accommodating multiple competing vendors at each level, it avoids vendor and technology lock-in, supports an extremely rapid pace of innovation, and enables a very steep value curve.

Cisco formed the Internet Communications Software Group (ISCG) to accelerate the delivery of this type of open model, and thus accelerate the industry's ability to deliver converged applications. Most businesses communicate internally and interact with customers over an *ad hoc* skein of best-effort, point-to-point solutions. They need an integrated communications landscape across all media and over both the public telephone network and the Internet.

In addressing this opportunity, Cisco raises the bar and brings unique value to a much larger market space. Focused exclusively on software, the Internet Communications Software Group joins with other Cisco initiatives to help provide the company with the opportunity and means to expand its leadership in the data networking space to the overall telecommunications market—pegged at US\$252 billion.

This paper discusses the opportunities in the Customer Contact and Unified Communications markets, the platform and technology requirements of these markets, value-adds and engagement strategies for accelerating the growth of these markets, and Cisco's ability to drive the success of its customers and partners.

## **New Value Propositions for Converged Markets**

As voice applications move from circuit-switched to IP networks and as phone-based and Web-based customer support merge and blend, the convergence of media types is enabling richer interactions and greater personalization of applications and services. The Internet Communications Software Group is targeting two key market segments whose application vendors, service providers, and users stand to benefit greatly from this convergence:

- **Customer Contact**—where e-Commerce melds with advanced multimedia call center capabilities and intelligent contact routing to enhance customer relationships and reduce the friction inherent to business processes
- **Unified Communications**—where the existing paradigm of unified messaging is enriched by Voice over IP (VoIP)-enabled real-time call management, and device and media independent enhanced services

In each of these areas, an open platform architecture will allow: 1) applications providers to write new converged applications, and 2) service provider and enterprise customers to provide innovative new services to sustain revenue and competitive advantage.

### **Customer Contact—Competing on Customer Satisfaction and Customer Loyalty**

Converged applications enable companies to compete on customer service in an increasingly commoditized and competitive business environment. As the lines continue to blur between selling to customers and supporting them, today's click-and-mortar merchants are looking at e-Commerce in new ways and are starting to aggressively leverage their physical world presence, trusted brands, and customer service assets (including thousands of trained personnel) via the Web. At the same time, dot.coms have to play harder at customer service as the competition, always a click away, continues to multiply. Melding personalized service with e-Commerce is essential to brand reinforcement and to creating "sticky" high-touch services that:

- Create higher barriers to customer defection, or churn
- Enable higher cross-selling and up-selling rates
- Result in increased sales

According to Jupiter Communications, customer satisfaction with online shopping has steadily eroded, from a high of 88% in July 1998 to just 62% one year later. Today's online consumers have little time for site problems, order errors, and poor customer service. By intelligently combining live sales and support capabilities with online commerce, companies can increase customer loyalty and make more sales (and, in the long run, *more profitable sales*).

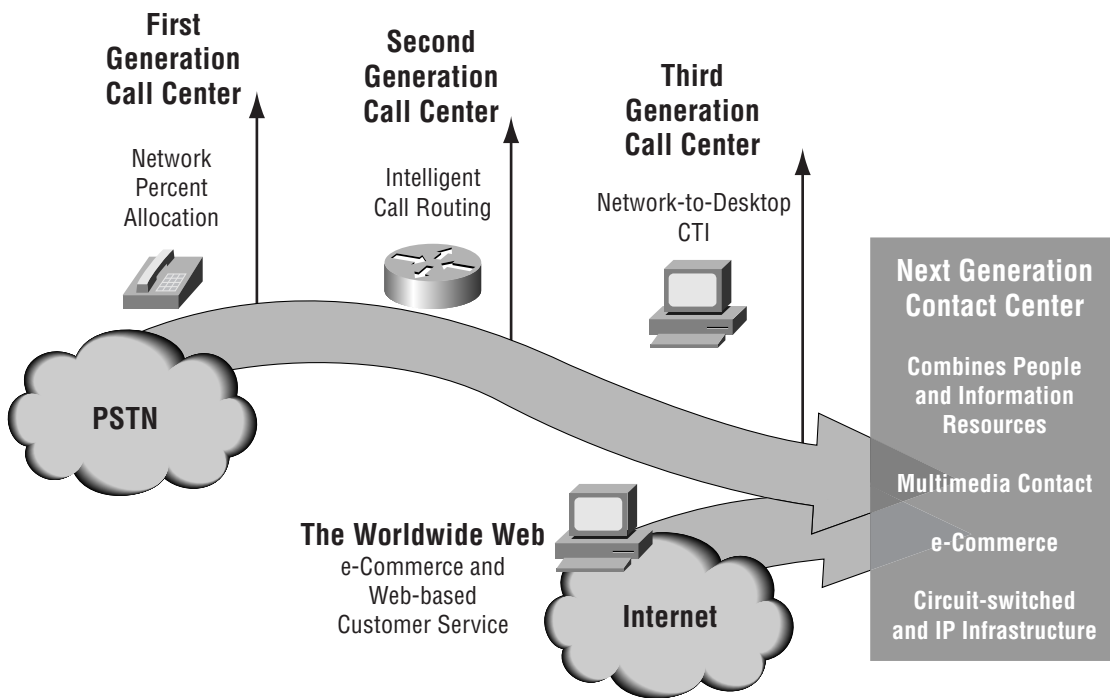
The next-generation customer contact center will be characterized by multimedia contacts (customer choice), integrate seamlessly with Web presence, and migrate from switched to IP infrastructures. It will combine the value of *personal* interaction solutions with the information value of the latest *automated* interaction systems as both experienced personnel and up-to-the-second, integrated information resources are brought intelligently to bear on individual customers to maximize the value of each contact.

On an implementation level, this requires:

Adding customer service functionality to a Web presence—Some customers show that cross-sell and up-sell rates, typically in the 4-6 percent range, jump up to 40-60 percent when live collaboration is added to a company's Web presence.

- **Adding Internet presence to call centers**—The Web-enabled call center market is projected by Frost & Sullivan to reach US\$1.3 billion by 2006. This will be the result of forward-looking companies integrating their e-Commerce activities, on all levels, with traditional customer service activities in order to maximize staff efficiency, minimize wasted customer time, eliminate inconsistent information, and so on.
- **Applying the optimal resource to every customer interaction**—Flexible business intelligence is required to continually match the optimal resources to every customer contact and request, be it a highly trained specialist to close a major sale or an IVR capability to handle simple requests such as account balances.
- **Putting in place the infrastructure necessary to project a holistic brand image across all channels of customer interaction**—As contact channels proliferate, and as consumers' competitive choices continue to multiple, it is essential that there be a unified customer experience underlying all customer interactions across all channels. This requires exchanges (personal, informational, and application) to flow easily through the network in order to reduce friction, compress time, present a unified brand with unified values to increase loyalty, and ultimately anticipate individual consumer needs.

Figure 2 Evolution of Customer Contact



### **Unified Communications—Competing Through Differentiated, Value-Added Applications Delivery**

According to the PELORUS Group, the unified messaging market is projected to reach US\$6 billion by 2004. Unified Communications, which extends the value of traditional store and forward unified messaging, by integrating it with real-time call management and notification services as well as delivering a broad range of enhanced services that result from the convergence of voice and Internet applications, represents an even larger market opportunity. Examples include personal agent services, message filtering, calendar integration, and myriad wireless applications.

Today, most communications content is stove piped, non-real time, and one-way. Phone calls go into voice mail while Internet communications go into email in-boxes, and the two rarely if ever meet. Unifying these in-boxes allows the creation of a single mailbox for voice or data that is universally accessible from any fixed or mobile device—phone, browser, personal digital assistant (PDA), and so on.

All this is essentially store- and forward-based unified messaging. The appeal is strong and encompasses easy manageability, flexible deployment options, and more; but the real value that is driving the emerging market for Unified Communications is unified, real-time, 2-way enhanced services. According to Piper Jaffrey, enhanced services for Unified Communications (including such desirable and incrementally profitable services as real time call back-to-sender response from voice, fax, or email messages, and single number find-me/follow-me services) is one of the fastest growing segments of the telecommunications market. This is because enhanced services can be combined in integrated bundles that enable communications carriers and service providers to create a compelling up-sell/cross-sell, churn-reducing environment while cost-effectively leveraging existing and future IP investments.

Enhanced services equal new profits for Application Service Providers (ASPs), VoIP network service providers, Internet Service Providers (ISPs), wireless carriers, CLECS, cable operators, and more—serving mobile, Enterprise, Small Office Home Office (SOHO), and residential users. Facing the problems of customer churn, commoditized prices, and an intensively competitive playing field, incumbents and upstart players alike need to focus on agility, costs, and providing differentiating new services. For the first time, service providers can:

- Create unique and differentiate brands
- Package targeted and attractive services
- Sell “inexpensive sticky minutes”
- Cut costs and thus alleviate the margin erosion endemic to this highly competitive marketplace

Enterprise customers, meanwhile, gain new communications efficiencies, the opportunity to leverage IP investments, rapid-deployment and reduced cost advantages, and higher employee productivity.

### **What is Required to Execute—Convergence, Plus**

Accelerating and then proliferating convergence in Customer Contact and Unified Communications is far from a slam-dunk. Today's Customer Contact infrastructures, for example, are a series of point solutions supporting each contact channel. It is a market in need of software platforms that can converge and blend all media types, coupled with comprehensive legacy system integration capabilities. Similarly, Unified Communications requires a software platform that can leverage industry-standard messaging technologies and standards-based telephony gateways, combined with the ability to scale quickly and cost-effectively.

The Cisco approach is to build on the strength of its data and voice networking products to break down the barriers that separate the traditional voice network from the growing Internet data networks:

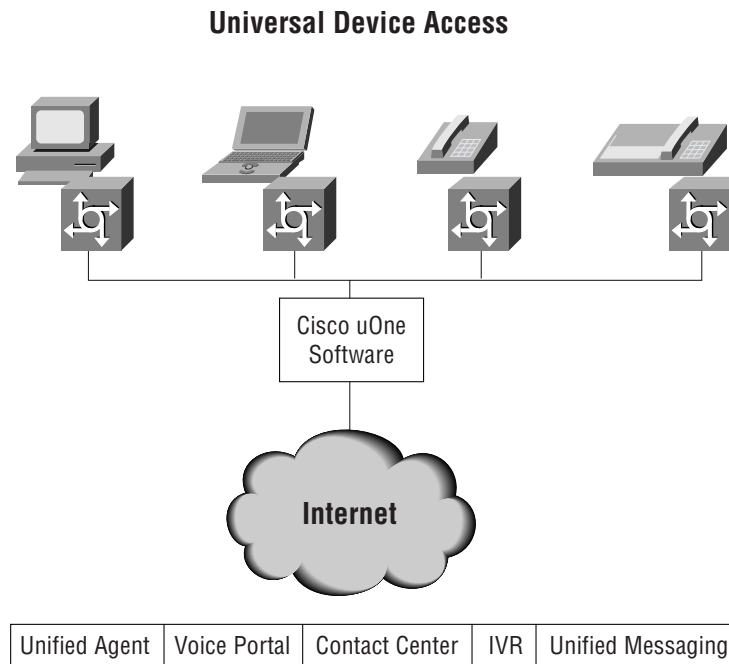
- **In the Customer Contact arena**, this means providing an open software platform on which customers can add new outward-facing media channels and use applications such as Customer Relationship Management (CRM). Multiple contact channels—from Web, phone, and chat—to VoIP, IVR, fax, and email—can thus be able to be managed in an integrated fashion in support of a unified customer experience across all channels. Tactically, built-in intelligence matches company information and contact resources with individual customer needs in real time, and this intelligence can be changed virtually on-the-fly through user-defined routing scripts.

- **In the Unified Communications space**, this same open platform model enables Cisco to combine the best features of the voice network (through Cisco Gateways to TDM and mobile networks) with the flexibility and rich data, content, and functionality of the Internet and multimedia/unified messaging. As a result, end users are able to access any type of message from any type of device, add a voice message on top of an email or fax, send an email on top of a voice message, and more. Customers can then add differentiating Unified Communications capabilities (in the form of service bundles) that move beyond unified messaging and into call control, notification, and call management for unified real-time voice and data communications services.

An example: enhanced services bundle might include *single number reach* with integrated call screening and priority notification, coupled with call back sender capabilities plus the ability to send unanswered calls to a unified in-box. Other converged voice and Internet application examples include:

- **Enterprise Process**—A workflow or e-Commerce (B2B) application triggers an exception notification to a mobile device, thus alerting a shop floor manager to a potentially disruptive shortage and enabling a real-time connection to a purchasing agent or alternative supplier
- **Residential/Landlord**—Notification of heating/air conditioner or sump pump failure can trigger an immediate alert via office or mobile phone or email (you can define your preference based on calendar/time of day/type of alert) with the option for a real-time call to a repair service
- **Small Office Home Office (SOHO)/Small Medium Business (SMB)**—A delivery service application combines customer service with efficient route management by triggering an outbound call to a customer notifying them that there are no packages for delivery today and prompting the customer to identify if they have a package for pick-up, thus enhancing customer satisfaction while saving valuable minutes on the delivery schedule

Figure 3 Unified Communications Vision



## **Platform Evolution**

The open platform approach also provides Cisco with unsurpassed agility when addressing market needs. New modules representing enhanced feature sets can be quickly added to the two existing platforms outlined above to stay ahead of the customer demand curve. At the same time, Cisco customers are able to enjoy reduced deployment and support costs by leveraging an existing IP infrastructure. Going forward, the Cisco platforms (and by extension, its customers) will be able to address new markets, such as Business-to-Business (B2B) communications, using existing modules. Cisco will also be able to replicate this model and provide entirely new platforms to meet emerging market needs.

## **Product Technology Solutions—Ecosystem of Partners**

Horizontally-integrated open platforms succeed through partnerships. By virtue of platform openness, Cisco is uniquely suited to focus on partnering.

The Cisco platforms provide application and technology vendors with far-reaching opportunities. Because of their openness, they will not disrupt markets, but rather extend them. This means that Cisco customers are able to leverage technologies and solutions from Cisco ecosystem partners in order to differentiate their Customer Contact and Unified Communications offering to end users.

In Customer Contact, a broad range of leading application providers have already embraced the Cisco approach and platform. These include Oracle and PeopleSoft/Vantive in the all-important CRM arena, as well as Octane Software/Epiphany and Kana/Silknet in the emerging e-CRM space. Technology partners include the leading vendors in the recording, monitoring and playback, and critical speech-to-text conversion arenas, including Dictaphone, Edify, Eyretel, Racal, APEX, Syntellect, and many more. Cisco also has proven core strengths in integrating with legacy systems such as PBXs, IVRs and ACDs from leading vendors in order for customers to leverage existing resources and extend their current investments into the new converged world.

In Unified Communications, ecosystem partners ensure reliability and interoperability with Cisco solutions and help provide customers with key differentiating applications in their respective marketplaces. Customers are able to enjoy a best-of-breed solutions and gain the advantages of faster go-to-market deployment. Cisco partners in the Unified Communications arena include Hewlett Packard, Sun Microsystems/iPlanet, and Software.com. ISVs in this space include Nuance for speech recognition, and Lernout & Hauspie (L&H) for text/speech conversion technologies.

## **Market Impact—Strategies for Delivery**


To bring the value of its platforms and of converged applications to as wide a market as possible, the Cisco Internet Communications Software Group extends its ecosystem partnership approach with a constellation of go-to-market alliances, starting with consultant integrators and extending to resellers to ASPs/outsourcers. Many of these partners also participate in joint market and channel activities with other Cisco business groups.

### **From Business to Technical Consulting**

The Internet Communications Software Group's consultant integrators include such major business consultancies as KPMG Consulting, Pricewaterhouse Coopers, Deloitte Consulting, and Ernst & Young, and span a range of more focused consultancies with deep knowledge of specific market and application areas such as Spanlink. The Cisco direct sales force and support staff collaborates with leading consultant integrators in sales engagement programs and professional services activities, including pre-sale business and technical consulting, large-scale integration, and post-sale support. Cisco is also collaborating with consultant integrators to build, pre-integrate and pre-test business solutions and services replicable across multiple clients and to transfer critical knowledge that enable consultant integrators to deliver Cisco-enabled solutions.

### **System Integrators/Reseller Partners—for Both Point and Platform Solutions**

Subsequent go-to-market phases will involve identifying and recruiting system integrators/reseller partners with competencies and market share in various aspects of the Internet Communications Software Group's open platform solutions, including PBXs, IVRs, network infrastructure, servers, and gateways and middleware/database components. These resellers will run the gamut from traditional point product resellers to an emerging new breed of platform resellers in Customer Contact and Unified Communications such as NEC and Hewlett Packard, respectively.



#### Outsourcers, ASPs and Wholesale Providers—Widening the Circle of Value

While consultant integrator programs extend the Cisco reach into major accounts, and resellers offer value-adds and channel strengths, the Internet Communications Software Group has also developed go-to-market programs for outsourcers and ASPs that offer managed solutions. In collaborating with outsourcers, Cisco is leveraging a highly scalable sales engagement model to bring its value propositions to a huge number of businesses of all sizes. These include new technology start-ups with rapid time-to-market requirements and limited resources to organizations not wishing to invest in personnel and competencies outside of their core businesses.

In Customer Contact, the Internet Communications Software Group is initially focusing on:

- CRM ASPs that host CRM software and deliver it to customers for use by in-house personnel
- Outsourcing organizations that host the software and provide the customer care personnel in a complete service solution

In Unified Communications, the focus is on:

- Service providers such as ASPs and CLECs that purchase the Cisco Unified Communications platform, including software and supporting hardware, and create/deliver network-based service bundles for end customers. (*Service providers such as ASPs to customers*)
- A new class of wholesale service providers that purchase Cisco's platform and market it downstream to other service providers including ISPs and ASPs that in turn brand, package and deliver the service bundle to end customers (*wholesale service providers to service providers/ASPs to customers*)

In all outsourcing cases, the Cisco proven programmatic approach helps ASPs and other outsourcers to:

- Crystallize their capabilities
- Target their service offerings
- Build their brands
- Differentiate their services

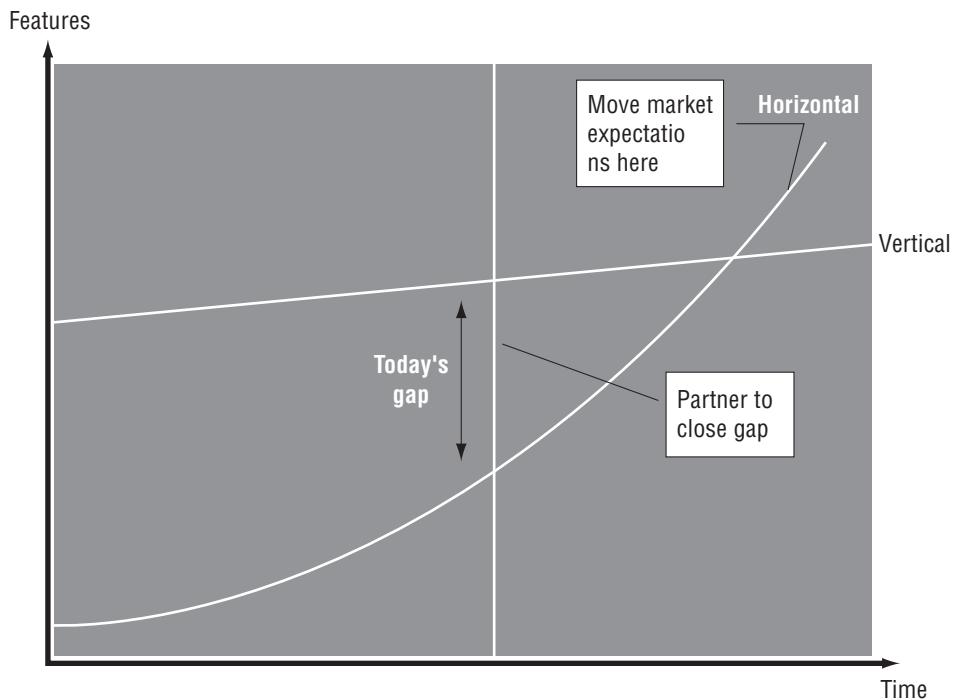
In addition, the new breed of wholesale Unified Communications service providers are able to leverage their often significant VoIP investments in gateways and more.

#### **End Game—New Values Drive New Successes**

Networks have gone far beyond just supporting business processes. In a very important sense, they *are* the business processes. In fact, in many cases, they are the business *itself* as they are the sole point of customer interaction. In today's competitive environment, this is far too important a task to be assigned to platforms that show any signs of being closed or brittle and unable to adapt to changing market forces.

Cisco's Internet Communications Software Group has pioneered open software platform models required to take advantage of, and accelerate, the convergence of voice and data in the key areas of Customer Contact and Unified Communications, and is supporting these platforms with an ecosystem of solution, technology and market partners. Just as gravity seems to be behind the convergence of voice and data, the laws of gravity provide an explanation for why the market will embrace such a model.

Figure 4 Horizontal Integration vs. Vertical Integration



Converging voice with data onto IP infrastructures provides a compelling economic value picture. Companies have invested aggressively in data infrastructures. It makes good economic sense to leverage these investments across converged applications in order to take advantage of IP's steep innovation curve and resulting price/performance advantages. For example, Fast Ethernet boards declined in price by as much as 50 percent in the past year, compared to an estimated 7 percent decline in the price of legacy PBXs. Where should the value-dollars go?

A horizontally-integrated open model such as Cisco's draws in technology vendors and thus accelerates the pace of innovation. Customers derive value from this innovation curve, avoid vendor lock-in, and gain flexible implementation options and scalability in support of business agility as Cisco helps them move gracefully from "Old World" networks to fully-enabled "New World" communications.



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