SIEMENS

Global network of innovation

Briefing Paper

Tomorrow's SIP-Enabled Customer Interactions

Siemens Global eCRM Solutions

For almost two decades, companies have strived to distribute incoming voice calls among call takers in the most efficient manner. In recent years, email and web interactions have been included in the routing mix, using common routing engines across media. However, these communications remained confined within their own 'channel' – voice, email or web chat – and on their originating device.

Now, imagine a world where you can easily reach people anytime, anywhere, via any device or mode of communication regardless of location or number of participants. Even better, imagine a world without voicemail, waiting on hold, and single media interactions – where you can 'see' the availability status of those you wish to communicate with, or they know your availability and the ideal method to reach you.

With converged second generation IP communication networks come new standards such as Session Initiation Protocol (SIP). SIP enabled devices and applications have the potential to transform customer interactions and the way customer contact centers work. SIP brings a new flexible, user centric communication paradigm based on presence, rich content, collaboration and mobility. This new way of interacting will be less fragmented, and offer greater flexibility, efficiency and productivity for both customer and enterprise.

Limitations of Traditional ACD-based Call Center Systems

Despite the advances in ACD (automated call distribution) technologies, the original design point is still a single isolated stream of voice media. Voice calls generate voice conversations while emails typically generate an email response. Each media exists on a separate 'channel'.

To fully comprehend the new customer interaction paradigm enabled by SIP, it's valuable to first explore some of the limitations and dependencies of today's traditional enterprise contact center communications systems. While effective for voice call handling within the closed confines of the enterprise and traditional call center, the enterprise PBX/ACD connected to the PSTN has a number of limitations.

By design, traditional PBX/ACD systems are designed to handle media separately from each other, and distribute single-media at a time (predominately voice) contacts to agents. While a necessity for traditional voice call distribution, this means agent-customer interaction is restricted to a single communications media at any one time, limiting communication richness and effectiveness.

In addition, with Internet-based contact channels such as e-mail and web collaboration more available, the true integration of these channels into the traditional voice-centric contact center environment is even more important. However, frequently these media are separate and entirely disconnected from voice interactions, leading to customer frustration and ultimately more calls. Bottom line: often, customers must place a call and wait in queue if they ultimately want their issue resolved.

When they do call, customers often have to navigate their way through complex IVR menus or are left unproductive on hold waiting for the next available agent. For the customer, the traditional PBX/ACD centric contact center offers little flexibility or choice as to time, place or media with which to make contact. There is no way for callers or agents to gain visibility to the presence and availability of each other, let alone their preferred method of communication at that moment.

By contrast second generation converged IP networks and SIP capable devices and applications enable a whole new communication model. This shift opens the door to exciting possibilities for transforming customer interaction. To understand what SIP brings to IP communications and customer interaction specifically, it's important to first understand some of the characteristics and capabilities of SIP.

What is SIP (Session Initiation Protocol)?

SIP is a signaling protocol that allows for the setup and teardown of voice, data, video, chat and instant messaging communication sessions between SIP capable devices. Put simply, SIP acts as a flexible yet standardized framework for connecting people who wish to communicate with each other through the Internet or any wired or wireless IP network.

SIP was designed and developed as a way to manage any type of communication session over any IP network. From a simple two-way voice call or instant messaging conversation, to a collaborative multimedia video conference, SIP controls how each participant initiates, modifies and terminates their involvement (see Figure 1).

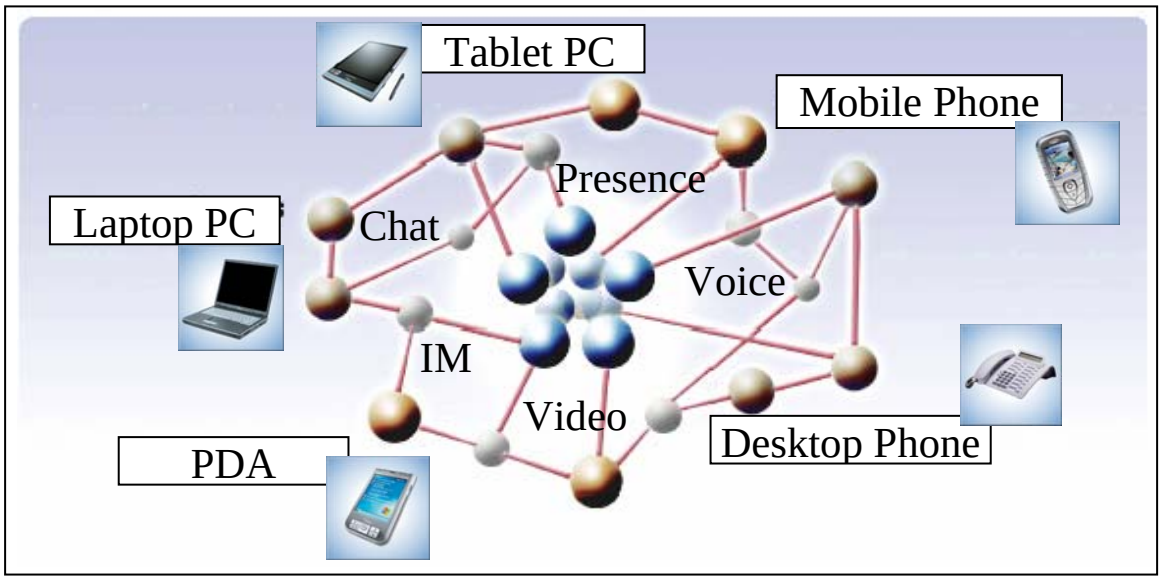

Figure 1: The many-to-many possibilities of a SIP-enabled communications 'ecosystem'.

Inherent to SIP is the concept of presence. Presence let's the network know when a device is turned on and available, what type of device it is, and how to communicate with it. Meaning with SIP, users can locate and contact one another anywhere on the network regardless of location, media type, or even operating system. This frees communication from location and device dependency so that information can automatically be delivered in the right format for the device currently being used.

In addition, SIP also provides user presence, meaning users control their individual presence and availability to others on the network through permissions and rules they define. For example if a person is traveling they may prefer to be contacted by certain individuals on their mobile phone. SIP inherently supports user mobility by automatically redirecting requests to a user's current contact address and device of choice. This is achieved through a public "address of record" and behind it, multiple "contact addresses" for any number of temporary or permanent addresses and devices. This allows user's to be reached via a single number whether they are at home, at the office or even traveling on the other side of the globe.

SIP has been designed to simplify multimedia communication and conferencing, allowing it to be multimodal, making it easier for individuals or groups to collaborate. All SIP capable devices are addressable and made visible to the network. This means by combining multiple, previously disconnected media and devices, interactions are richer and in the case of customer interaction, much more efficient. An example of this is the seamless ability to utilize and combine multiple devices such as mobile phones, PDAs or laptop computers, in one conversation to more effectively communicate.

SIP is standards-based and being advanced by the Internet Engineering Task Force (IETF) – the body responsible for administering and developing the mechanisms that comprise the Internet – and leverages the same control, addressing, protocols, security and other mechanisms already in place on IP networks.

SIP has been adopted by the IETF as the standard protocol for multimedia sessions and has gained significant industry backing from communications and technology leaders such as Siemens, Microsoft, and IBM.

Bringing SIP to Customer Contact Center Interactions

Understanding some of the limitations and constraints of the traditional PBX contact center environment, and the flexibility and capabilities of SIP, let's now take a look at what second generation IP communications and SIP potentially bring to the contact center and customer interaction experience.

Comparing ACD and SIP-based Contact Center Models

Traditional ACD Contact Center	SIP-Enabled Contact Center
Voice centric, with 'add-on' media	Can start on, and move to, any media
Separate voice, e-mail and web contact channels	Mix and choose voice, IM, e-mail, web, video, data collaboration
Multiple 'disconnected' contact addresses -- screen names, phone numbers, email addresses	"One Number" to any device, managed by a personalized communications model
Communications managed by centralized switching platform	Communications managed by intelligent SIP-enabled peer devices
Predominantly wired (wire line) communications	Fluid contact across wired and wireless mobile devices, based on rules
Two-way presence not inherent to the system	Presence inherent to SIP devices across the network, in both directions

To bring these concepts to life, we present three customer interaction scenarios that show how SIP opens new doors for innovation in communications.

Concept Scenario One: Contact Center to a Mobile Consumer on Cellular Phone or PDA

Some customer issues are not easily solved through voice contact alone. For example think about a credit card customer who is 'on the go' is using a cell phone to talk to a customer service agent about a particular service charge that appeared on his statement. Conveying statement details via a voice conversation alone can be cumbersome and time consuming.

However using SIP, the agent could – during the conversation – push a copy of the monthly statement to the customer's PDA or cell phone display. This allows the agent and customer to simultaneously review the details of the specific transaction visually and quickly resolve any issue. With SIP all of this can be done within a single seamless conversation and all on the same device.

Concept Scenario Two: Presence-based Personal Communications Model

During peak calling times, in order to get an issue resolved customers have traditionally had little option but to wait on hold for the next available agent, or risk loosing their calling priority.

With SIP enabled presence, customers can see via the Web if an agent is available or the length of the queue of customers waiting in line, and then decide to wait or be automatically be alerted when the particular agent handling their situation becomes available (see Figure 2).

Figure 2: Contact Center Follow up - SIP enables a Personalized Communications Model, via “one number” access to reach any media according to configured rules

Better yet, a customer can indicate through *their* presence status and availability rules when it’s convenient for them to be contacted by an account representative or customer service agent and how they would like that contact to be made. For example, a customer’s presence information may indicate they’re away from their desk and wish to be contacted on their mobile phone. Or perhaps they’re in a meeting or a theatre and indicate the preference for text based communication only. With SIP-enabled devices and applications users decide when and how they wish to be contacted.

Meanwhile, both parties have the potential to ‘see' each other’s presence and availability in real-time, transparently across the IP network.

Concept Scenario Three: Rich Multimedia Conferencing

Some situations require multiple parties to be able to communicate quickly and accurately in real-time. For example, consider an auto insurance claim. A person who has been in an accident might take pictures or video of their vehicles damage and the immediate circumstances, and transmit the images in real time to an agent that could be located anywhere in the world.

During the conversation the agent could invite a mobile claims adjuster somewhere in the field, into the conference to simultaneously view the pictures and get immediate, first hand details of the incident. Witness statements could even be collected recorded and transmitted in real-time while recollections are most clear (see Figure 3).

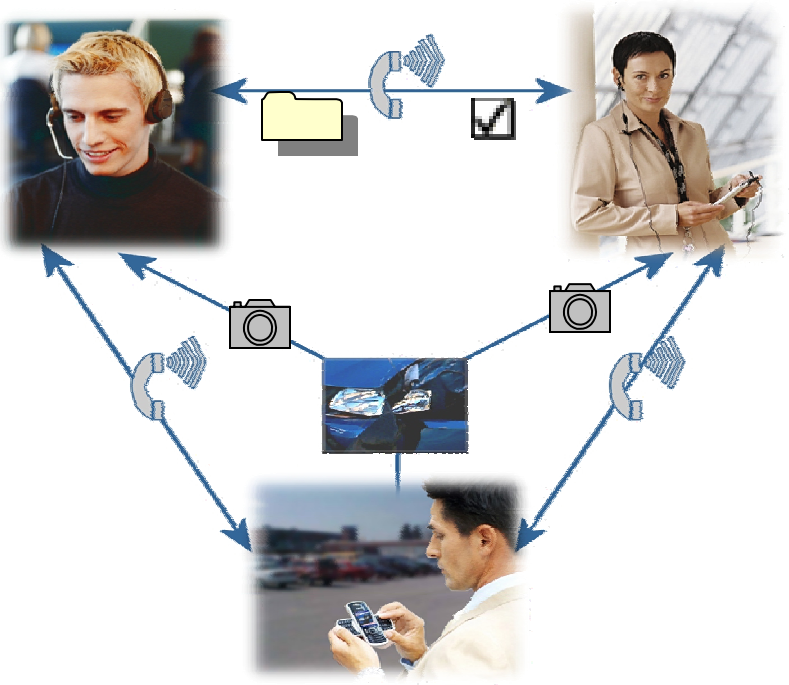

Figure 3: Contact Center Agent Leverages Voice, Data and Video on one SIP-enabled collaborative session with the client and a field claims supervisor.

By combining multiple parties in disparate locations, while leveraging multiple media simultaneously, this example highlights the many-to-many rich communication possibilities that SIP-enabled customer interactions can bring.

Summary – A Vision for Future Customer Interaction Models

The new communication paradigm enabled by SIP has the potential to change customer interaction forever. As more users adopt SIP-compatible smart clients, a tipping point will be reached where SIP-enabled interactions will be demanded (and perpetuated) by customers.

Forward looking companies can gain a leg up on the competition, differentiating on richer customer interaction experiences and more productive communication. Flexible, convenient new ways of interacting mean less wasted time for companies and customers trying to deal with each other.

These new ways to embrace and interact with customers will obviously impact processes and new, innovative 'best practices' will be established, replacing the old one dimensional model of interaction.

We believe companies that start evaluating how SIP-enabled capabilities can be integrated into contact center and CRM strategies now will be better positioned to build customer equity through a richer, innovative way of engaging and retaining their customers.