

## IP Telephony for the Clinic and Physician Office

The clinic or physician office and its communication needs mirror, in many ways, that of larger healthcare providers. Physicians, administrators, and nursing staff routinely use multiple ways of staying in touch — whether by voice, voicemail, instant messaging, e-mail, text messaging or fax. Most also have a corresponding assortment of “communication identities,” including an e-mail ID, instant messaging handle, and a variety of numbers for office and home phones, mobile phones, PDAs, and fax lines.

Add it all together, and there have never been so many ways of communicating. If left unresolved, this complexity makes it more difficult and time-consuming to conduct business and to concentrate on patient care. That can be a decided disadvantage when speed of information-sharing and decision-making can mean the difference in both patient outcomes and marketplace success.

Advances in IP Telephony and Unified Communications now offer a practical solution to this dilemma. Using communication services based on these technologies, physicians, nurses, and staff have the means to simplify, integrate and control all aspects of their communications, leading to more productive and effective ways of working and to improved levels of care. Of particular importance is the fact that with the advent of low cost IP enabled, voice systems, physician office staff now can experience the same level of real-time accessibility and responsiveness to their patients and each other as larger, hospitals and healthcare providers. The result for the physician’s office and clinic is a positive impact to the quality of care and patient satisfaction, while reducing costs and improving ambulatory revenue stream opportunities.

### Building Business Value: Simplification

It is important to recognize that IP Telephony and its Unified Communication services are not a single capability or application, but a set of capabilities that provides a simpler, more integrated, communication experience. For example, a single, easy-to-use Web portal can provide access to a full spectrum of communication tools, including messaging, conferencing and telephony. Healthcare workers can access a consistent set of capabilities regardless of the device or network at hand.

In the past, individuals using multiple communication modes would need to manually switch between applications and devices. In the greatly simplified world of IP telephony, the process within the clinic and office becomes seamless. Doctors, nurses, and administrators are able to receive and launch all forms of communication — person-to-person calls, e-mails, multimedia Web sessions and video conference calls, voicemails, instant messages and faxes — through the single device of their choice.

Unified Communications applications built for the IP telephony environment are constructed on industry standards like Session Initiation Protocol (SIP) to allow “on the fly” transition from one form of communication to another. This greatly simplifies connectivity between the physician’s office and the other healthcare providers (e.g., other physician offices, hospitals, insurance companies) that he/she must work with. For example, a physician can send important patient details to a colleague as an encrypted instant message from a laptop PC, while launching a conference call with a specialist and a nurse by clicking on names in a buddy list or directory. A few more clicks can turn the call into a desktop video conference.

### Building Business Value: Integration

IP telephony and the Unified Communication applications that are integrated into it also gives

healthcare workers the flexibility to convert information into different forms so they can access and share information more efficiently and effectively. Using speech access applications, for instance, they can listen to incoming e-mails via mobile phone, view incoming faxes on a PC, manage schedules and appointments or respond to an e-mail with a .wav file. Patients are able to use self-service tools to schedule an appointment or access test results, whether they prefer to communicate via Web, phone or mobile device.

Visual voicemail can significantly increase the productivity of mobile healthcare users. That means a physicians commuting between offices or clinics can view a list of incoming voicemail messages and then listen to them over the device of choice. The list shows the sender, time and length of each message, and allows them to be listened to in any order. Messages are automatically downloaded “in the background” so users don’t need to spend time dialing in and logging onto the facility’s voicemail system. Voice messages can be accessed in multiple ways — whether through an e-mail client, mobile device or Unified Communications portal.

Unified Communications also makes mobile communications more intelligent. For example, as a physician or nurse moves within their office, they can transform a mobile device into an extension of an office phone and “empower” the device with core IP telephony functionality. That means members of clinical or administrative team can be easily reached through a single number, regardless of where they are. They can access directories and route calls through your organization’s network and can use advanced features such as multiparty conference calling, call transferring and abbreviated dialing, just as if they were at their desk. That means they have ready access to the tools they need to reach the appropriate personnel and better serve patients and their families.

### **Building Business Value: Control**

Another fundamental attribute of IP telephony and Unified Communications for the physician’s office is the ability to control the “when,” “how” and “who” of communications. For example, under certain circumstances, a doctor might choose to receive a message in any format and at any hour, but only if it comes from the a member of his/her practice. While meeting with a patient or outside of his/her office (e.g., conducting rounds) the same doctor might choose to be unavailable or to allow only e-mails or instant messages to be delivered.

Productivity-boosting “presence management” and SIP technologies are behind these enhanced controls. They allow up-to-date information on the availability of members of your healthcare community to be shared internally (and potentially externally with healthcare partners, patients and their families). With presence, the choices users make about their current availability and how they prefer to be reached are displayed in rules-based, online directories that can be accessed by colleagues or other authorized individuals. The result is the ability to connect quickly and successfully with others, on their own terms.

### **Building Business Value: Intelligent Communications**

In addition to improving productivity, IP telephony and its Unified Communication applications can have a major impact on the effectiveness of key healthcare processes by making them more intelligent. For example, consider the difference it can make when clinic if the business office is able to use Unified Communications to connect quickly and consistently with the right subject matter expert. They can determine whether the expert is available, and if so, how they can best be reached — bringing patient questions or transactions to a speedy and effective conclusion. Key administrative and clinical processes can be automated, including appointment scheduling and confirmations, information hotlines, payment reminders and medication reminders.

The intelligence delivered by IP telephony plays a role in the emerging development of Dynamic Communication Processes, which are designed to eliminate human delay. By inserting automated, rules-based communication capabilities into core healthcare processes, the right individuals are automatically engaged via the right medium at the right time. For example, the office administrator might receive an automatic notification when a nurse or staff member calls in sick or is going to be late for a patient meeting.

### **Building Business Value: Competitive Advantage**

The impact of Unified Communications can be significant and wide-ranging on the physician's office and elsewhere in the healthcare industry. In fact, according to Zeus Kerravala, an industry analyst with Boston-based Yankee Group, organizations adopting Unified Communications have typically seen double-digit improvements in productivity.

When communication becomes more efficient and effective, collaboration and responsiveness improve. Organizations become more agile and accelerate innovation, problem-solving and decision-making. Patient care improves, productivity soars and healthcare costs are reduced. Ultimately, communication is transformed from a source of complexity into a powerful new advantage for today's healthcare providers.

### **Making the Move to IP Telephony and Unified Communications**

Most healthcare practices, large and small, making the move to IP telephony and Unified Communications adopt a phased approach and add new capabilities gradually. In fact, nearly every area of functionality involved in Unified Communications can be implemented separately and provides genuine business value on its own, such as unified portals, multimedia conferencing, corporate directories and instant messaging.

The only technological prerequisite is an Internet protocol (IP) telephony infrastructure. If your business is like most, however, you operate in a mixed environment with multiple protocols and with systems and software from multiple vendors. That's not a problem. You can begin realizing the benefits of Unified communications now, despite a mixed infrastructure.

Simply choose open, industry standards-based applications that can be scaled for growth and can support a variety of worker types – from office staffers, to traveling administrators, to clinical teams on the move within a healthcare campus. Standards such as Session Initiation Protocol (SIP) are also the key to integrating your Unified Communications solution with other business and healthcare applications. This common set of communication protocols can connect all applications and services within the enterprise, regardless of their underlying hardware, operating system, or programming language.

### **The Planning Essentials**

Here are several, critical “must do’s” when evolving to Unified Communications:

- *Conduct a Thorough Needs Assessment*

A needs assessment provides an essential foundation for a solution optimized for your individual healthcare enterprise. It determines what your firm wants to accomplish with and how those needs map to your overall organizational strategy.

A needs assessment also determines the functional capabilities required by individual departments and worker types – exploring the degree to which personnel are on the move, how intensively they collaborate and how often they interact with patients.

- *Assess Your Current Communications Infrastructure*

An objective, site-by-site communications inventory will document:

- Current communication practices of in-office, mobile and remote healthcare workers
- Communications-dependent applications and processes
- Network architectures and connectivity
- Infrastructure components and applications – listed by vendor, vintage and configuration
- Available equipment space, power and cooling

- *Determine the Optimum Approach*

Once your requirements and strategy are compared against your inventory findings, Unified Communications specialists will have what they need to develop a blueprint for the design of your solution. Critical activities at this stage include:

- Assessing the capacity and quality of service of your IP network
- Involving key stakeholders in a review of timelines and budgets
- Segmenting user communities by requirements and preferences for optimum productivity gains
- Identifying how existing devices and applications will be integrated
- Specifying new components that will be required
- Addressing reliability, security, scalability, business continuity and regulatory compliance requirements, such as HIPPA
- Specifying an approach for lifecycle maintenance and management

- *Design the Solution and Deployment Plan*

The final steps are designing a solution and outlining the deployment plan. To make certain your design is optimized for maximum performance and impact, make certain it addresses the needs captured in your initial research.

Deployment plans should be sequenced by site and by capability and should detail the transition from existing communication capabilities and configurations to the new design.

One caution: Avoid the trap of over promising and setting timelines that are far too aggressive. Instead, make certain the deployment plan is realistic and attainable with detailed contingency plans.



About the author....

**Mark Wechsler – Cross Healthcare Vertical Industry Director**

Mark Wechsler leads Cross Telecom's Healthcare Industry in the development of Intelligent Communication solutions designed to improve the quality of care, reduce costs, and increase patient satisfaction. With more than 30 years of experience, Mr. Wechsler has developed deep knowledge of the healthcare industry. Working for major healthcare technology vendors and consulting organizations such as Hewlett Packard's Medical Products Group and Ernst & Young, he has acquired a clear understanding of the practical contribution technology makes in successful healthcare solutions. His experience includes development of critical care patient telemetry systems, serving as an interim CIO/CTO with Blue Cross/Blue Shield, implementation of various healthcare information systems, and deployment of ambulatory and acute patient record systems. Leading Cross Telecom's commitment to serve healthcare providers and payers, Mr. Wechsler provides guidance in the adoption and deployment of communication systems designed to accelerate information access and collaboration for payers, providers, and the communities they serve.