



Portals and the New Model for Communication

By Dr. Jerry Gechter
Vice President Product Management

There is a remarkable disconnect today between communication systems and the businesses they are intended to serve. Businesses are now typically organized around web-based applications such as CRM or ERP systems that rationalize their activities and data. In addition, there is increasing deployment of web-based collaboration tools such as Microsoft SharePoint as well as blogs, wikis and the like. These facilitate document sharing and other forms of data cooperation on business tasks. Such applications are the core of business operations, but they have left the communications systems far behind.

This is not just a matter of employees copying phone numbers from the corporate directory to be punched into the phone on the PBX. The problem is that despite the arrival of VoIP, corporate communication systems really haven't changed for years. And the traditional PBX model is no longer appropriate for the way businesses work.

Business applications and collaboration tools create highly-dynamic communities around which business communication takes place. Employees belong to many such communities, and the communities may be spread across time zones and around the world. Just as data collaboration tools make it possible for documents and work plans to be developed without concern for space and time, communication systems must enable real-time interactions to occur easily and according to the priorities and needs of the business and all parties involved.

To see what this can mean, we consider two of the highest-profile new entrants in the communication business, Skype/eBay and Google. There are two reasons for choosing them:

- Since the companies' businesses are well-known, it is easy to see the impact of the new communications model.
- Since these companies are in fact communications service providers, this gives a direct indication of what communication systems will become. We have no secret information on the plans of these companies, but it should nonetheless be clear how fundamentally the communications industry is changing.

We begin with Skype and eBay. (As background the highly-successful, PC-to-PC voice carrier Skype was acquired by eBay for \$2.6B in September of 2005.) From a communications point of view, eBay is a company that creates instant commercial communities of buyers and sellers focused on individual products. This enables anyone

selling anything to suddenly become a full-fledged business enterprise. Today email is the only form of communication for the eBay commercial community, and that gap will presumably be filled by Skype. However, for \$2.6B one expects more in the way of synergy.

The key is communication within each eBay transaction community. For most of the businesses on eBay, there is no pool of people waiting to take calls from potential buyers. To make interactive communication work, there needs to be a way for buyers to indicate a desire to communicate (by whatever media) and for sellers to handle the requests when and how they can. This sounds like an ACD, but the callers can't be kept on hold. With Skype there is a built in IM-style notion of user availability, so that buyers and sellers have the possibility to setup communication when both parties are available. What is more, there is already a fairly well-developed notion of Skype community (www.jyve.com) where users can belong to multiple groups with separate notions of availability in each. This infrastructure gives a new type communications model, where buyers and sellers can manage their availability per sales transaction, and the sellers can queue up and prioritize the communication requests associated with each auction—still without anyone incurring communication charges or listening to music on hold. Going one step farther, eBay can enhance this picture with traditional outsourced call center services. For a seller willing to pay, calls to unavailable sellers could be routed to an eBay contact center where the answering agents would handle callers via seller-provided scripts.

By focusing on the interaction needs of the transaction communities, eBay/Skype can end up creating a full-blown communication system for peer-to-peer internet business. Such a system solidifies eBay's first-mover advantages in its mainline business and has the potential for more—it can be integrated with any hosted application to give eBay a competitive advantage in other businesses it chooses to enter.

Moving on to Google, we find many of the same themes but in a broader communication context. (As background Google announced GoogleTalk, a Skype-like voice communication system, in August of 2005 but has given few details about its long-term plans.) Google's search capability identifies sources of information, and it is natural for the search to deliver not just web pages but also contacts for communication. Virtually anyone can be a target, and there is much to be gained by enhancing one's chance of being reached in this way. However, a person or company who can be reached by Google search has opened himself up, just like a seller on eBay, to anyone who wants his "product", i.e. his skill or expertise. Just as with eBay, the people who want information (the "buyers") need to be able to indicate their desire to communicate, whether or not there is anyone present to answer a call. Providers of information (the "sellers") need to be able to manage and prioritize interactive communications requests, if only to keep from being swamped. Further, individuals will play many different roles and will need the ability to categorize waiting interactions and to indicate what types they are willing to handle at a given time.

State-based queuing again emerges as the basic model for communication, but with an added dimension. Not only is GoogleTalk state-aware, but Google has announced plans for interworking with all public Instant Messaging systems. This means that any IM state information can be used to trigger communication between users on or off the GoogleTalk system, and in fact IM state can even be used to trigger calls between ordinary PSTN phones. Also, it is important to recognize that a Google search effectively characterizes what the caller wants, so that every Google-generated call has already undergone the equivalent of a super-powered IVR triage. This means that the selected party has significant information on which to base the management and routing of the calls that are received.

In summary, with an appropriate communication model, a Google-based system has the potential to redefine the public communication network and the way that users interact with it. Further, as with eBay, the line between communication features and hosted applications may become very hard to see.

Both of these examples speak to what it takes for a communication system to support collaborative activities in an enterprise. In both cases queuing-based models are critical for communication to be convenient, manageable, and adapted to the business. Web applications generate communications requests that are completed based on users' availability in their functional roles.

In addition, the Google example has a lot to say about the basic function of a PBX. Just as many companies already use versions of Google for their internal web searches, the potential exists for Google or similar systems to be the primary driver for communication within an organization, based on names, skills, business functions, and presence state. This is in fact the future of the corporate directory—it, not the phone number, is the gateway to the enterprise. The directory is no longer just a guide, but actually the way to make communication happen.

Finally, with the examples as guide, we can be specific about what a business communication system has now become:

- First of all the fundamental model for communication is changing. The key is no longer the call itself, but the request for communication. The model is fundamentally queuing-based, where a user requests communication with another user or corporate function, and the system establishes the call when and where it is appropriate based on user availability, skills, priorities, permissions, and so forth.
- The traditional dichotomy between ACD's and PBX's is narrowing significantly. All communication needs to be manageable, state-aware, and integrated with business applications. There will continue to be differences of emphasis in different markets, but the overall functionality will be much the same.
- As a basic feature set, users and businesses need to manage requested services based on business objectives and the skills and states of the users. The system needs to be aware

of the many roles that users may play and the states of the users in those roles. In addition, business events can generate communication requests that will need to be prioritized and managed together with the others.

- For both enterprises and services providers, the communication function will be much more closely coupled to business applications than has been possible in the past. As a result the communication function itself needs to be highly configurable in both its capabilities and its interfaces. This means, for example, that state tracking and management must be completely customizable, call processing must be customizable in its handling of both calls and state transitions, and the entire system must be easily embedded in Services-Oriented Architectures.

With this model, communication becomes a natural and integral part of business operations. This is the unfulfilled promise of VoIP.