

eBay and Skype: Why would an online auction company buy an Internet telephone Company?

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ABSTRACT

eBay's announcement to acquire Skype Technologies SA, a global Internet communications company, for \$2.6 billion raised the question of why would an online auction company be interested in buying an Internet telephone company. eBay is confident that the acquisition of Skype will "strengthen eBay's global marketplace and payments platform, while opening several new lines of business and creating significant new monetization opportunities for the company" (eBay, September 12, 2005).

This article analyzes the impact of the Skype service on online auction processes in order to gain a better understanding which exchange processes will benefit from the integration of Skype into eBay's online auction platform. The analysis is based on a framework developed by Kambil and van Heck (1998, 2002), and it builds on earlier findings in the research of the role of multi-access technologies in online auctions (Vesa and van Heck 2003, 2005a, 2005b).

The article demonstrates how the convergence of voice and data over fixed and wireless networks, in this case the integration the Skype service in to eBay's online auction platform, has the potential to enhance primarily the trade context processes (i.e., product representation, risk management, influence, and dispute resolution) but also the basic trade processes (i.e., logistics, payment and settlement, and authentication).

The analysis shows that Voice over IP (VoIP) technology may well add value to all stakeholders, i.e. the sellers, the buyers and the market maker eBay. As our earlier analyses of online auction markets have shown, voice services have not been very well integrated into the exchange processes although earlier research such as the media richness theory (Daft and Lengel, 1986) has argued that voice is rich in content, real-time and offers feedback symmetry. Telephone is often considered expensive, inefficient and old-fashioned. However, with the fast-increasing penetration of broadband access and the use of VoIP technology, telephone conversation is making a comeback as a rich and natural way of making the exchange processes of online auction markets more efficient.

1 INTRODUCTION

EBay, “The World's Online Marketplace”, is undoubtedly one of the biggest success stories of the Internet era. Skype, on the other hand, has been highly successful with its free voice-over-Internet service – making it one of the hottest companies of the decade: by mid-September 2005, Skype had 54 million registered users (Fortune, October 3, 2005), and the strong growth seems to continue.

Against this background it is easy to understand the level of amazement amongst the industry analysts when eBay announced its plans to acquire Skype Technologies SA for \$2.6 billion in September 2005 (eBay, September 12, 2005). The announcement raised the question of why would an online auction company be interested in buying an Internet telephone company. The eBay-Skype deal appeared to confuse the industry analysts: According to IDG News Service, analysts had “mixed opinions on whether a hookup between these two Internet companies is a good or bad thing” (“Are eBay and Skype a good fit?”, Sept. 8, 2005). An intriguing question seems to be whether the motivation of the deal was primarily eBay’s desire to get their share of the fast-growing Internet-telephony business in order to respond to the similar plans of Microsoft, Yahoo and Google, or was eBay perhaps also looking for other types of synergies between the company’s online auction business and Skype’s voice-over-Internet service? eBay believes that the acquisition of Skype will “strengthen eBay’s global marketplace and payments platform, while opening several new lines of business and creating significant new monetization opportunities for the company” (eBay, September 12, 2005). However, as a recent article by Fortune magazine pointed out, “eBay needed a 78-page PowerPoint presentation to explain the purchase, which could cost up to \$4.1 billion” (Fortune, October 3, 2005, p. 11). Fortune noted sarcastically that eBay “offered up a hodgepodge of ideas on how it might build Skype into its auction business – by allowing users to talk to one another about sales, for example, and by creating a marketplace for services around Skype” (p. 11).

By building on the online market process model developed by Kambil and van Heck (1998, 2003), this article provides a process-based analysis of the “hodgepodge of ideas” presented by eBay in order to demonstrate the impact of Skype service, or more broadly Internet-based communications enabled by the existing and emerging broadband telecommunications technologies, on various online auction processes.

The objective is to provide better understanding of which auction processes will benefit most from the integration of Skype into eBay's online auction platform. The analysis is based on earlier findings in the research of the role of multi-access technologies in online auctions (Vesa and van Heck 2003, 2005a, 2005b).

This article demonstrates how the convergence of voice and data over fixed and wireless networks, in this case the integration the Skype service in to eBay's online auction platform, has the potential to enhance primarily the trade context processes, such as product representation, regulation, risk management, influence, and dispute resolution, but also the basic trade processes, such as logistics, payment and settlement, and authentication, as identified by Kambil and van Heck (1998, 2002).

Based on the analysis presented in this article it can be argued that albeit one can always question whether the price paid by eBay is justified, the analysis of the impact of Internet telephone service on various exchange processes in the context of online auction markets shows that Voice over IP (VoIP) technology may well add value to all stakeholders, i.e. the sellers, the buyers and the market maker, in this case eBay. As our earlier analyses of online auction markets have shown, voice services have not been very well integrated into the exchange processes although earlier research such as the media richness theory (Daft and Lengel, 1986) has argued that voice, i.e. being able to talk with another person, is rich in content, real-time and offers feedback symmetry. Telephone is often considered expensive, inefficient and old-fashioned. However, with the fast-increasing penetration of broadband access and the use of VoIP technology, telephone conversation is making a comeback as a rich and natural way of making the exchange processes of online auction markets more efficient.

Furthermore, in the world of converging voice and data communication, instead of talking about Voice-over-IP or IP-telephony solutions, it would be better to focus on IP-communications solutions which utilize the best parts of the both worlds.

As a result of the process-based analysis of eBay online market platform this article identified some missing elements in the Exchange Process Model developed by Kambil and van Heck (1998): It is argued here that the community effect between the frequent users, or rather members, of online auctions is such an essential part of the exciting world of online auctions, that the process model should perhaps be extended with at least one new process – the communitizing process.

The structure of the article is the following: In Chapter 2 we will briefly review earlier research and theories this article is building on. Chapter 3 introduces the conceptual model used in the analysis of the Skype-eBay integration. The following chapter presents a brief introduction to eBay and Skype, and Chapter 5 an in-depth analysis of the eBay online market platform along with a before-after comparison of exchange processes. Chapter 6 discusses the findings and concludes the paper.

2 THEORETICAL BACKGROUND

This article builds on earlier research in online markets by Kambil & van Heck (1998, 2002) and on the role of various access technologies in online auction markets (Vesa and van Heck 2003, 2005a, 2005b).

Kambil (1992) introduced the concept of ten distinct processes that can operate in exchange relation. Kambil & van Heck (1998) divided the ten exchange processes into two categories, namely to five trade processes (search, valuation, logistics, payments and settlement, authentication) and to five trade context processes (communication and computing, product representation, legitimation, influence, dispute resolution). The role of trade context processes is to facilitate and enable, or reduce the costs of or frictions, in the basic processes. The exchange process model has been developed further to its current version (Kambil and van Heck 2002) where trade context processes include product representation, regulation, risk management, influence, and dispute resolution. The eleventh process called "Communications and computing" enables integration of all other trading processes.

The Exchange Process Model introduced by Kambil and van Heck in 1998 was used by Paarlberg (2001) for evaluating the maturity of exchange processes of 196 European web auctions in eight countries. Paarlberg created a scoring system for evaluating the process maturity by using quantitative research methods. Vesa and van Heck (2003) introduced a toolset that combined the Exchange process model by Kambil and van Heck and the scoring system by Paarlberg with the concept of multi-access technologies. The toolset was then used as the basis of a comparative analysis of five Finnish online auction markets.

Although building on earlier e-Auction, or online market, research described above, this article is taking a different approach: Instead of comparing multiple online

auctions the focus will be in the analysis of the impact of a new kind of access technology, i.e. the Skype voice-over-the-Internet service, on the maturity of exchange processes of a leading online auction market eBay.

3 CONCEPTUAL MODEL

Next we will review briefly the conceptual model of exchange processes.

3.1 Typology of multi-access technologies

In today's business environment, the variety of devices used to access online services, is increasing dramatically. New technologies such as digital television and wireless multimedia are gaining a stronger foothold amongst consumers and business users (see Figure 1).



Figure 1. Multi-access technologies in online auctions (Vesa & van Heck, 2005a)

At same time as the number of devices and services increases, traditionally separated technologies are coming closer to each other in the process of convergence, which is fueled by the emergence of so-called “all-IP” architecture of ICT services, where traditionally separated circuit-switched telephone networks and packet-based computer networks are becoming one. This development can be seen, for instance, in

the current trend towards bundling of voice, data and video into a total offering under the umbrella of “triple-play” (sometimes called also “quadruple-play” as fixed and mobile voice are regarded as two different “plays”).

We are currently witnessing another phenomenon that could be described as simultaneous convergence and divergence: At the same time as the number of devices and services available increases, they become also more and more different from each other. In other words, the current trend is towards an increased divergence both in devices and services – despite the fact that networks, or access methods, are converging as a result of the trend towards an “all-IP” architecture. This development is illustrated in Figure 2.

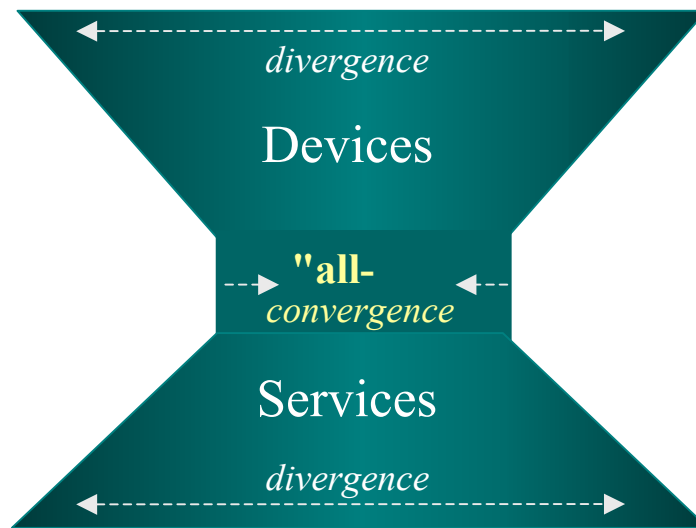


Figure 2. Simultaneous process of convergence and divergence

As a result of the converged technological evolution that has taken place during the past few years, it has become increasingly difficult to categorize various communications or access technologies. While still two-three years ago one could justly propose a simple four-category classification of multi-access technologies, namely “fixed Internet”, “mobile data services”, “digiTV”, and “voice”, today we have to deal with less clear-cut distinctions between various access technologies. Let’s take a few examples: As a result of the current Wi-Fi boom, laptop PCs use almost transparently both fixed and wireless Internet access; the latest feature-rich mobile phones, or smartphones, offer multiple access technologies in addition to the traditional cellular standards. These include for instance wireless LANs such as

WLAN/Wi-Fi (IEEE 802.11), WiMAX (IEEE 802.16), Bluetooth and other short-range radio technologies. Furthermore, even the distinction between various applications and services is blurring: For instance, television broadcast can today be “consumed” in mobile handsets (e.g., mobile TV, DVB-H) or in PCs (e.g., IPTV), and Voice-over-IP technology (VoIP) brings voice applications to PDAs.

Against this background it is easy to understand that hardly any typology of multi-access technologies would be perfect. However, in order to proceed with our analysis of the implications of integrating the free Internet-based voice service Skype in to the online auction platform of eBay, this article proposes the following way of categorizing multi-access technologies used in the context on online auctions (see Table 1).

Device category	Access network	Application / content
PC (desktop, laptop)	Fixed broadband (ADSL, fibre, cable etc.) Wireless broadband (WLAN / Wi-Fi, WiMAX, short-range radio etc.)	World-wide Web, E-mail, Instant Messaging (IM), Voice-over-IP (e.g. Skype), IPTV etc.
PDA / Smartphone	Mobile telephone networks (GSM, CDMA, 3G etc.) Wireless broadband (WLAN / Wi-Fi, WiMAX, short-range radio etc.)	World-wide Web, E-mail, Instant Messaging (IM), Voice-over-IP (e.g. Skype), IPTV, voice etc.
Mobile phones / cellular	Mobile telephone networks (GSM, CDMA, 3G etc.) Wireless broadband (WLAN / Wi-Fi, WiMAX, short-range radio etc.)	World-wide Web, E-mail, Instant Messaging (IM), Voice-over-IP (e.g. Skype), IPTV, digital mobile TV (DVB-H), voice etc.
Fixed telephone	PSTN Mobile telephone networks in a “fixed mobile solution” (“GSM deskphone”) Wireline broadband (ADSL, Fibre, cable etc.)	Voice, Voice-over-IP (VoIP), wireline SMS etc.
TV / Set-top-box	Broadcast network (analog, digital) Cable	“TV”, Super-text-TV, interactive services etc.

Table 1. Typology of various multi-access technologies (“device-centric view”)

3.2 The Exchange Process Model

The analysis presented in this article is based on the *Exchange Process Model* developed by Kambil and van Heck (1998). The current version of the model was introduced by the authors in 2002 (see Figure 3). The three main elements of the model are the *basic trade processes* (i.e., search, pricing, logistics, payment and settlement, and authentication); the *trade context processes* (i.e., product representation, regulation, risk management, influence, and dispute resolution); and the *communications and computing* element facilitating and supporting the two sets of exchange processes.

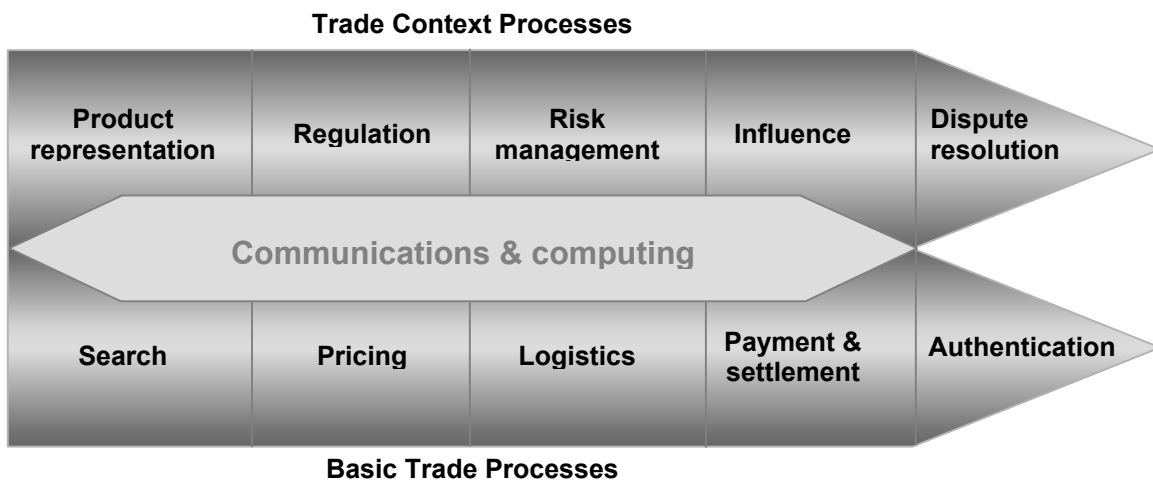


Figure 3. Exchange Process Model (Kambil and van Heck 2002)

The five *basic trade processes* related directly to executing any kind of trade have been defined as follows (Kambil and van Heck 2002, p. 26):

- (1) *Search* processes that allow buyers and sellers to discover and compare trading opportunities
- (2) *Pricing* processes to help buyers and sellers discover prices
- (3) *Logistics* processes that coordinate the transfer of physical and digital goods between buyers and sellers
- (4) *Payment and settlement* processes to transfer funds from buyer to seller
- (5) *Authentication* processes to verify the quality of the goods sold and the credibility of the buyers and sellers.

Kambil and van Heck (2002, p. 27) have identified five additional *trade context processes* that enhance trust among trading parties and legitimize the trade:

- (6) *Product representation* processes that specify the presentation of products and services to buyers and sellers
- (7) *Regulation processes* that record and recognize the transaction within a framework of laws and rules to signal it as legitimate and conforming to a set of market rules and social principles
- (8) *Risk management processes* to reduce buyer and seller risks in a transaction
- (9) *Influence processes* to ensure that commitments among trading partners are met
- (10) *Dispute resolution processes* that resolve conflicts among buyers, sellers, and market makers.

The eleventh process in the framework is called “*communications and computing*”, and it “enables integration of all other trading processes” (Kambil and van Heck 2002, p. 27).

3.3 Maturity of exchange processes

According to Kambil and van Heck, information and communications technology has an impact on the maturity of various exchange processes of online markets. The maturity of processes, on the other hand, determines the value of an online market platform to various stakeholders, i.e. the sellers, the buyers and the market-maker running the online market platform. The focus of this article is to analyze whether the integration of the Skype service offering free Internet-telephony will improve or deteriorate various exchange processes of the eBay online marketplace.

Although we are now dealing with the leading virtual online market in the world, the eBay service, the integration of voice-over-IP telephony into the exchange processes will create a kind of bridge between the virtual world of the Internet and the physical world. Speaking on the phone with a person about problems related to an auction transaction brings the whole interaction to a more personal level when compared with

sending emails or chatting. Although “ebayers” have had the opportunity to request their trading partner’s contact information from the supervisors of the eBay service in case of late payment or missing goods, our goal is to analyze how a closer integration of telephony through Skype would change the picture.

3.4 Communication and computing process

Perhaps the most interesting process category the Exchange Process Model for the purposes of this article is the "Communication and computing" process category. According to Kambil and van Heck (2002), “the communications and computing process enables integration of all other trading processes into specific markets for buyers and sellers” (p. 27). Communications and computing are defined as attributes of the market platform, i.e. how much and what kinds of benefits the platform provides for various stakeholders.

3.5 Design of the research

Data collection in this case research was performed so that the functionality of the eBay web site was analyzed by using the Exchange Process Model (Kambil and van Heck, 2002) as a conceptual framework. In this study the framework has been extended by combining (1) the business processes, (2) various stakeholders, and (3) a specific access technology, i.e. voice-over-the-Internet service Skype, in the same analysis.

The primary source of evidence was the eBay web site. Online auction markets are ideal research objects as they can be observed directly in real-time in order to find out how various technologies are used during the auction process. A researcher has also the opportunity to use participant observation technique by taking part in various auctions.

4 INTRODUCTION TO SKYPE AND EBAY

eBay – The World’s Online Marketplace®

eBay is undoubtedly one of the biggest success stories of the Internet era. Founded in September 1995, the company acts as a market maker “for the sales of goods and services by a diverse community of individuals and small business.” The eBay community includes over hundred million registered members around the world. eBay

argues that “people spend more time on eBay than any other online site, making it the most popular shopping destination on the Internet” (www.ebay.com). Although eBay is often described as a consumer-to-consumer (C2C) online auction, the company’s mission is “to provide a global trading platform where practically anyone can trade practically anything” – within the rules and regulations of the eBay marketplace. Millions of items in thousands of categories from trading cards to used cards are listed on eBay every day. It is important to remember that eBay is not only about auctions as “buyers have the option to purchase items in an auction-style format or items can be purchased at a fixed price through a feature called Buy It Now”. The company has local operations in several 24 countries in North America, Europe and Asia. EBay has enhanced the its platform through acquisitions of specialized service providers such as the online payments company PayPal – and of course most recently internet telephony company Skype Technologies S.A.

Skype – the Global Telephony Company™

Skype is a piece of software that allows its users to make free calls over the Internet to anyone else using the same software. The Skype software application was created by a company called Skype Technologies S.A., which was recently acquired by eBay. The company calls itself “the Global P2P Telephony Company™” that will be “changing the telecommunications world by offering consumers free, superior-quality calling worldwide” (www.skype.com, November 5, 2005). Skype was founded by Niklas Zennström and Janus Friis, the creators of KaZaA. The company’s headquarters are located in Luxemburg with offices also in London and Tallinn.

The first public beta version of the Skype software was introduced in August 2003, and the first Windows version was introduced in July 2004. Since then, the network of Skype users has grown at a tremendous speed: By November 2005, the software had been downloaded close to 198 million times (www.skype.com, November 5, 2005), and in September 2005 Skype had about 53 million users (Ward, 2005). According to the company, “the rapid proliferation of broadband, plus Skype, gives anyone around the world real choice in communications” (www.skype.com, November 5, 2005)

The Skype service is based on a proprietary peer-to-peer Internet telephony network, and it is competing against open VoIP protocols such as SIP and H.323 (www.wikipedia.com). Telecommunications experts are impressed by Skype superior

functionality and ease of use: While open VoIP protocols often have big problems with firewalls and NATs (network address translation, aka network masquerading or IP-masquerading), Skype seems to work without any trouble. Against this background it is easy to understand why the Skype service has been so successful.

The biggest difference between Skype and other VoIP clients is that it operates on a peer-to-peer model rather than the traditional server-client model. Unlike in the traditional systems with centralized management, the Skype user directory is entirely decentralized and distributed among the nodes in the network, which means the network can scale easily to large number of users without a complex and costly centralized infrastructure. It is, however, important to keep in mind that the Skype system is closed and based on proprietary protocol. (www.wikipedia.com)

The key components of the Skype service are the Skype client which allows Skype users to call other users with a similar client for free over the Internet. SkypeIn service allows non-Skype users to call Skype users from normal fixed or mobile phones, and SkypeOut allows Skype users to call ordinary phone numbers all over the world. Skype offers also a voicemail service.

The revolutionary nature of the Skype service has been widely notified, as the following statement by the chairman of the FCC demonstrates (retrieved from www.skype.com):

"I knew it was over when I downloaded Skype," Michael Powell, chairman, Federal Communications Commission, explained. "When the inventors of KaZaA are distributing for free a little program that you can use to talk to anybody else, and the quality is fantastic, and it's free – it's over. The world will change now inevitably."

Fortune Magazine, February 16, 2004

The success of Skype builds also heavily on the positive experiences of the existing users, and viral marketing or word-of-mouth type marketing. Skype eagerly uses the testimonial statements of their user base in their marketing:

"As I write this I'm travelling between Tokyo and London with Japan Airlines (I'm currently over Siberia I think) using their new wireless service provided

by Boeing (Boeing Connexion) and I've been able to phone both a colleague in London with peer to peer, and my wife back in Japan to our landline. Wayyyyyyy cool. Especially when the phones on board cost \$7.80 a minute!"
A user testimonial at www.skype.com (retrieved November 5, 2005)

Despite the technological advantages and wide user adoption, dark clouds are hanging over Skype. According to some experts opinions, Skype will face problems with national telecom legislation and regulations (“Tele- ja internet-maailmojen sota”, TiVi Nov. 3, 2005), and in many countries Skype service is violating telecom laws. On the European level, researchers and law makers are trying to figure out how to position Skype within the New Regulatory Framework (Concalves and Ribeiro, 2005). For instance in Finland TeliaSonera approached the Finnish Communications Regulatory Authority (FICORA) due to deal between Skype and TDC Song which allows Skype users to get a telephone number that belongs to the Finnish numbering scheme. TeliaSonera raised three questions related to the Skype service within the contemporary telecom regulations:

- Does the interconnection agreement between Song and Skype meet the requirements for interconnection set by the telecommunications laws and regulations?
- Are SkypeIn and SkypeOut interpreted as separate services, or do they compose – at least when used in conjunction with each other – a full telephone service?
- Is it possible to give area-specific telephone numbers to a service which is not a service of the fixed telephone network (PSTN), or to a telephone service that does not meet the requirements set to telephone service by the law?

In their response to TeliaSonera’s inquiry, FICORA responded that their jurisdiction covers only SkypIn service, which is expected to meet the requirements defined in the telecom legislation. However, despite the obvious problems for instance with E911 calls, according to FICORA’s own interpretation they do not have jurisdiction in this field. As a result, FICORA asked Skype and TDC Song to provide further information regarding the issue of E911 in the SkypeOut services, and the obligations related to

offering telephone services such as SkypeIn. (“TeliaSonera huolestui”, ITviikko, September 15, 2005).

This concludes our brief overview of eBay and Skype. The objective of this chapter was to give some background information of the two companies before we move on to the analysis of if and how the Skype service would add value to eBay’s online marketplace.

5 ANALYSIS OF THE EBAY ONLINE MARKET PLATFORM

Next we will move on to the analysis of the eBay online market platform in order to see what kind of benefits, if any, the free internet telephony service Skype could offer to the members of eBay. Figure 4 demonstrates the conceptual framework of the analysis: The core, or the “nucleus”, of the eBay online marketplace is the market platform which consists of various exchange processes. An essential part of the online market platform are the rules and regulations related to trading in the marketplace. The role of communications and computing technologies is to support the execution of the processes and related rules. In some cases the impact of technology can be negative when compared with the situation prior to the implementation.

This article builds on the Exchange Process Model by Kambil and van Heck (1998, 2002) which describes five basic trade processes and five trade context processes. The model was introduced in detail in Chapter 3 of this article. In addition to the ten trade processes, there is an eleventh process in the Exchange Process model called communications and computing which “enables integration of all other trading processes (Kambil and van Heck 2002, p. 27).

As Figure 4 shows, this article makes a distinction between the integrating or internal view (“the core”) and the external or customer-facing view of communications and computing (“the edge”). In online auction markets the internal view materializes in the auction platform, and the external view is materialized through the implementation of various multi-access technologies and services.

The concept of extending business processes across the boundaries of the focal firm is not new in business-to-business (B2B) type business arrangements. However, in business-to-consumer (B2C) or consumer-to-consumer (C2C) – or perhaps more accurately consumer-to-business-to-consumer (C2B2C) as in the case of eBay’s

online marketplace – one can argue that the multi-access technologies offered to consumers are “the process extension” in the world of online auctions. Another way of looking at the role of online market platform is that the processes run by the market maker eBay enable or support transactions between two consumers, or a consumer and a business entity selling through the eBay marketplace.

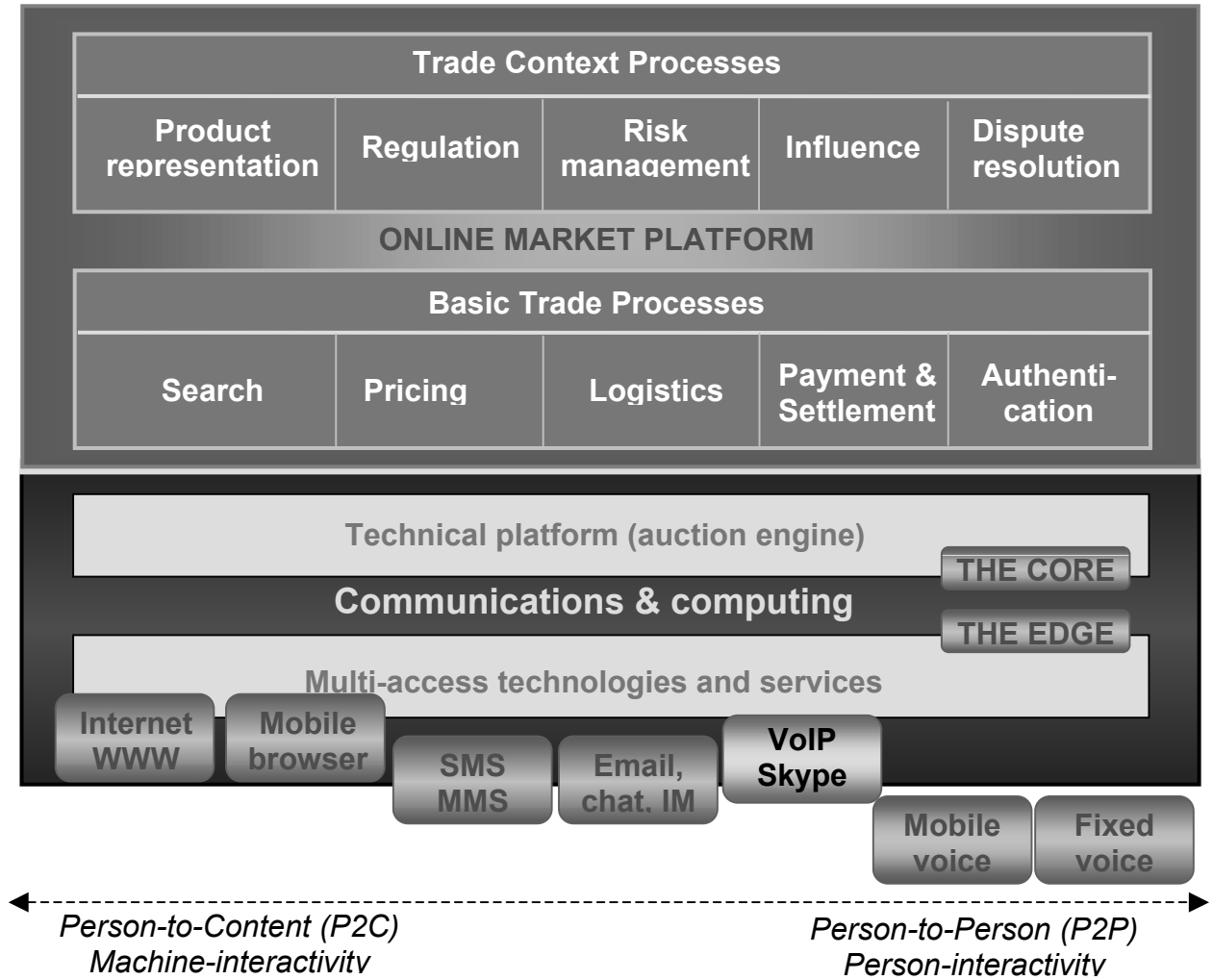


Figure 4. Framework for analyzing the implications of Skype on eBay

While keeping this conceptual framework in mind, we will now carry on with the analysis of the impact of the Skype service on eBay’s market processes. In the analysis of the current situation we utilize our earlier research on online auctions (Vesa and van Heck 2003, 2005a, 2005b). As the goal of this article is to demonstrate how Skype could enhance market processes, we will focus on the “after” part of our comparison. The overall perception of eBay’s current market platform is that it is very

advanced, and it offers rich set of features and functions that support online market transactions in each and every process category. Next we will go through the functionality of eBay online market platform process by process.

5.1 eBay's existing online market platform processes

The objective of this article is to increase understanding of what is the impact of the Skype free internet telephony service on exchange processes of eBay online marketplace. In order to recognize the potential for added value through Skype for eBay stakeholders, i.e. sellers, buyers, and the market maker eBay, we first have to describe “the baseline”. Next we will go through the ten process categories identified by Kambil and van Heck in order to find out the level of maturity of exchange processes the current eBay online market platform offers.

(1) Search process

According to Kambil and van Heck (2002), search processes “allow buyers and sellers to discover and compare trading opportunities”.

The eBay online market platform offers powerful search engine with rich functionality such as use of categories and advanced search for finding items with Boolean logic. In addition to typical search commands where you can search by using one or more keywords, by excluding certain words (by using minus sign), and by using “wildcards” (by using an asterisk), eBay’s search engine will automatically expand the search to include items based on the intent of the search (e.g., “Madonna” Tickets). Furthermore, eBay platform offers search by price range (min. US\$ - max US\$), by sellers (any seller, specific seller, My Favorite sellers), or by location (on eBay.com, items located in a specific country, items available to a specific country). Buyers can search for items near the buyer (within x miles of a postal code or a specific city), items sold in specific currency, items listed as lots (multiple item listings), “Buy It Now” items (which can be bought for a fixed price without a bidding process), items available through PayPal payment service, Gift items, and items that benefit nonprofit organizations. Buyers can also look for listings based on the number of bids (min – max) and on the remaining time in the bidding process (e.g. listings ending within 1 hour).

Our earlier research has shown that for search process, new technologies offer clear advantages over traditional auctions (Vesa and van Heck, 2003). However, there are major differences between various access technologies: the rich content and ease-of use of PC is superior to the search functionality available in mobile phones - although the search engine is basically the same both access technologies. This is a good example of the role of access technologies in online auctions: The user experience always depends on the weakest link in the chain – in this case the usability is defined by the medium or the device that the user is interacting with. On the other hand, mobile users can search interesting items whenever and wherever they are; the fact that the user is always connected to the service can make this access method superior. Furthermore, eBay allows buyers to watch selected listings through their personalized My eBay site, and to search for similar items in other listings. Sometimes even eBay’s online auction platform encounters technical problems. There following error message appeared on November 5, 2005:

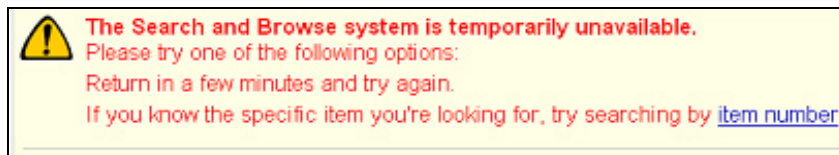


Figure 5. Technical error message at the eBay site on November 5, 2005

(2) Pricing process

According to Kambil and van Heck (2002), pricing processes “help buyers and sellers discover prices”. As our earlier analysis of online auctions demonstrated, one of the great advantages of using multiple access technologies is that pricing process, or bidding, is possible from remote locations. Online auctions are active 24 hours a day, seven days a week - making the pricing process continuous. What makes bidding process even more efficient is that most online auctions offer the possibility of using bidding agents. The buyer enters the maximum bid and eBay will bid on his behalf up to the maximum amount the buyer is willing to pay. The buyer gets an email confirming his bid. At the end of the listing, he receives another email indicating the result of the auction. (www.ebay.com, November 12, 2005)

The eBay auction engine offers multiple pricing mechanisms, or “selling formats”. The first selling format is “eBay’s standard online auction format” which represents a traditional ascending-bid auction better known as English auctions. In this auction

format a bidder finds an item he or she is interested in, checks the current high bid and decides whether to raise the bid by filling out a Web-based bid form (Lucking-Reiley, 2000). Other formats supported by eBay are setting a fixed price, using your own eBay Store, or listing an ad in the Real estate category.

The “Buy It Now” option is an auction-style listing which “gives the interested buyer an opportunity to get the item right away without waiting for an online auction to end” (www.ebay.com, Nov. 5, 2005). If the seller has defined a “Buy It Now” price for the item, a qualified member (see the “Risk management” process for further details) of eBay can buy it immediately. In the Fixed Price Format buyers click to buy at the price the seller has set with no bidding. In order to help potential sellers to set the starting price and possible reserve price, eBay advises the sellers to use the Completed Listings filter. With the help of this function one can “find a set of items that are similar to the one you would like to sell by using keyword search or by browsing the categories” (www. ebay.com, Nov 5, 2005). As this example shows, search functionality is valuable both to sellers and buyers.

(3) Logistics

The logistics processes are defined by Kambil and van Heck as “processes that coordinate the transfer of physical and digital goods between buyers and sellers” (2002, p. 26). Our earlier analysis of online auctions indicated that logistics is an area where new access technologies have not yet a clear role. It seems that consumer-to-consumer online auctions are relying on very traditional logistics arrangements, where the new technologies provide very little or no additional functionality for the stakeholders. The eBay online market platform helps the trading partners to define the terms and conditions for shipping of goods, and the cost of shipping can be seen for different destinations if the seller has defined them. eBay advises sellers to provide shipping costs up-front to reduce email exchanges with potential buyers, and to speed up the sales process in general. Members can also print shipping labels with PayPal.

(4) Payment and settlement

According to Kambil and van Heck, payment and settlement processes “transfer funds from buyer to seller” (2002, p. 26). In our previous analysis of the role of internet and mobile/cellular technologies in the payment and settlement processes of online auctions (Vesa and van Heck, 2004), the findings indicated that despite the numerous

new payment methods developed both for the electronic commerce, majority of Finnish online auctions relied on traditional payment methods such as cash against delivery or payment in advance. Payment and settlement process appeared to make very limited use of the technical possibilities available.

However, eBay's online marketplace seems to be more advanced when it comes to supporting novel payment methods. In addition to the traditional payment methods, such as credit cards, personal checks, cashier's checks and money orders, the PayPal option offered by many members of eBay "enables buyers to send payments quickly and securely online using a credit card or bank account" (www.ebay.com).

When a buyer clicks on the "Pay Now" button, they will be told how much to pay (including payment and shipping) and where to send payment. The Seller receives an email with the buyer's address and selected payment method.

(5) Authentication - existing

Authentication processes are needed in order "to verify the quality of the goods sold and the credibility of the buyers and sellers" (Kambil and van Heck 2002, p. 26). The eBay online market platform supports authentication processes in multiple ways. Functionality such as seller's or buyer's feedback from previous transactions, the membership history, the location of the seller, and the fact that eBay requires certain verifications when new people become members helps members of eBay to evaluate the credibility of the buyers and sellers.

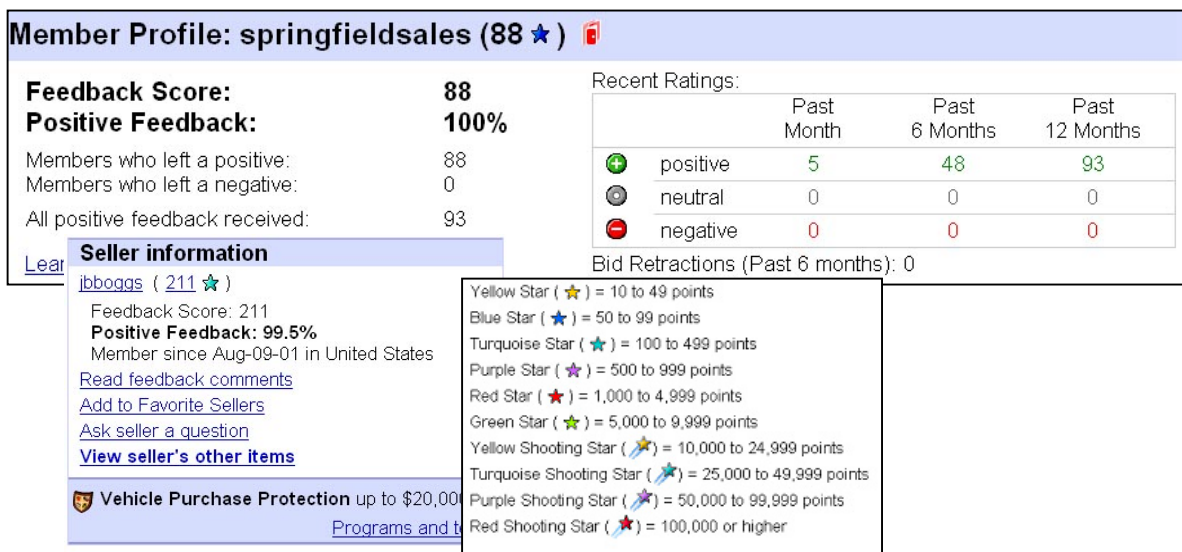


Figure 6. Feedback ratings help the assessment of seller's or buyer's credibility

Furthermore, the ID Verify service, which is available in the U.S. only and costs \$5, establishes buyers' and sellers' proof of identity – so others will trust them as trading partners. Another way of ensuring a member's identity is to rely on the PayPal Verification service. According to eBay, “verification helps reduce online fraud and increase the security of PayPal transaction” for everybody involved in the auction transaction (www.ebay.com).

Furthermore, eBay's Standard Purchase Protection Program “reimburses buyers for eligible transactions where an item was purchased on eBay and either not received or was received but significantly not as described” (www.ebay.com). The buyer fills out and submits the online Standard Purchases Protection Program claim form by clicking on the “Disputes Console” link from My eBay personalized user page. An eBay Claims Administrator may contact the person who submitted the claim for a Letter of Authenticity or Appraisal based on independent authenticator's physical inspection.

(6) Product representation

The next process category described by Kambil and van Heck consists of “product representation processes that specify the presentation of products and services to buyers and sellers” (2002, p. 27). Earlier analysis of Finnish online auctions (Vesa and van Heck, 2003, 2005b) demonstrated the advantage of the rich media capabilities of PCs connected the Internet and World-Wide-Web over mobile handsets. For buyers, the ability to get detailed product data made it easier to get a good understanding of the item sold. However, a couple of years back the use of animations, sound or video capabilities was limited. Odd enough, even in today's world of fast broadband access, powerful multimedia PCs, and digital camcorders / camera-phones with video capability, animations, sound and video are still missing at the world's leading online auction eBay.

Nevertheless, eBay offers a rich set of tools for sellers to create visually attractive and informative listings. Listed items are presented in categories, and they can include text and pictures. The language used in describing the items is not standardized between various sellers, i.e. there is no standardizes way of describe the condition of the listed item. By paying a Listing Upgrade Fee, the seller can improve the visibility of his item. Listings can be formatted (e.g., bold, border, highlight), a single item can be listed in two categories, or it may rotate into a special display on eBay's home page (“Featured Items” list) or on eBay's Buy Hub page. Home Page Featured was

available for \$39.95 per listing (www.ebay.com, November 5, 2005). There are multiple ways of using pictures in listings: First picture and preview picture are free, but additional pictures (\$0.15), picture show (\$0.25), supersize picture (\$0.75) and picture pack (\$1.00) cost extra.



Figure 7. Picture Show option costs \$1.00 extra for the seller

For more professional private sellers or businesses, eBay offers special Seller Tools for additional fees. These include, for instance, TurboLister (free), Selling Manager (\$4.99), and Selling Manager Pro (\$15.99). TurboLister is eBay's tool for medium to high volume sellers. It saves sellers' time by helping to create listings and uploading thousands of items in bulk.

(7) Regulation

Regulation processes “record and recognize the transaction within a framework of laws and rules to signal it as legitimate and conforming to a set of market rules and social principles” (Kambil and van Heck 2002, p. 27).

In their analysis of Finnish online auctions Vesa and van Heck (2003) concluded that in principle the rules and regulations of online auctions are very similar to those of traditional auctions, and that the role of access technologies was limited – albeit technology would have allowed for more. The Rules and Policies section of eBay explains eBay's policy regarding Offensive Material (i.e., items that “promote or glorify hatred, violence, racial or religious intolerance, or items that promote organizations with such views”), and prohibited or restricted items. Members are also warned against Shill Bidding which refers to artificially increasing an item's price or apparent desirability, or bidding by individuals with a level of access to the seller's

item information not available to the general eBay Community. eBay urges members to report any suspicions of Shill Bidding to eBay. The company also automatically tracks certain information based on a members' behavior on the eBay site.

(8) Risk management

The goal of risk management processes is to reduce buyer and seller risks in a transaction (Kambil and van Heck 2002, p. 27). Earlier analysis of Finnish online auctions (Vesa and van Heck, 2003, 2005b) showed that biggest benefits of multi-access technologies in this process category were in registration and rating/scoring functions. All five Finnish online auctions analyzed required registration and most of them did some kind of checking before a new user-ID could be used for the first time. Another useful service for all stakeholders was the concept of minimum rating for sellers and/or buyers. This service allowed participants to adjust "the risk" level they were prepared to tolerate when choosing trading partners.

The analysis presented in this article confirms that the risk management processes are perhaps among the biggest gainers when new information and communication technologies are introduced in online auction marketplaces. Next we will go through the various ways in which the online auction platform tries to manage the risks related to trading process, and what kind of role existing access technologies are playing.

Potential risks in online auctions are related to sellers and buyers (are they who they claim they are), to items sold (does the item match description, in what kind of condition the item is), to delivery (will I get the item once I've paid for it), and to payment (will I get the money for the goods).

As discussed earlier in this article, everybody who wants to sell or buy at eBay must register as a member. A person joining eBay is asked to provide information such as name, address, telephone number and a valid email address. Registration process begins on the eBay site but at a certain point the process continues by email. This way eBay can be sure that the given email address is valid.

According to eBay's Privacy Policy, the company does not "sell or rent your personal information to third parties for their marketing purposes without your explicit consent" (www.ebay.com). The eBay Privacy Chart in Figure 8 shows what kind of information eBay has on its members, and who have access to various pieces of this information.

	Advertisers	Internal Service Providers	External Service Providers	eBay Community	Legal Requests
Personal Information					
Full Name		2	3	4	X
User ID		2	3	X	X
Email Address		2	3	4*	X
Street Address		2	3		X
State	1	2	3	4	X
City	1	2	3	4	X
Zip Code	1	2	3	4	X
Phone Number		2	3	4	X
Country	1	2	3	4	X
Company		2	3	4	X
Password		2	3		
Area of Interest	1	2	3		5
Interested in eBay survey	1	2	3		5
Age Range	1	2	3		5
Education	1	2	3		5
Preferred Activity	1	2	3		5
Household Income	1	2	3		5
Secondary Phone		2	3		X
Gender	1	2	3		X
FAK		2	3		X
How Did You Hear?	1	2	3		5
Miscellaneous Marketing Questions	1	2	3		5
Personal or Business	1	2	3		X
Personal Correspondence		2	3		5
Financial Information					
Credit Card Number(s)		2	3		5
Expiration date		2	3		5
Billing Address		2	3		5
Bank Account Number		2	3		5
Social Security Number		2	3		5
Billing Account History		2	3		5
Shipping Information					
Name				4	X
Street Address				4	X
City				4	X
State				4	X
Zip				4	X

Figure 8. Privacy Chart by eBay showing who has access to customer data

Under some circumstances eBay may require additional financial information from its members. This may be the case, for instance, if a person is using an email account at a free mail service. Members' financial information is used to verify the accuracy of their name, address, and other information, as well as to bill them for their use of eBay's services.

The company also automatically tracks certain information based on members' behavior on the eBay site. This information may include the URL the member just came from (whether this URL is on the eBay site or not), which URL the member next goes to (whether this URL is on the Site or not), the member's computer browser information, and his IP address. If a person chooses to bid, buy or sell on the Site, eBay collects information about his bidding, buying and selling behavior. There are also additional ways of managing the risks related to the identity of the trading partner. For instance, in order to use the Buy It Now service (see Pricing process), the buyer must either have credit card (or debit card) on file or to ID Verify. The ID Verify service is available only in the U.S. and it costs \$5. According to eBay, "ID Verify establishes your proof of identity – so others will trust you as their trading

partner” (www.ebay.com, Nov. 5, 2005). Verified members can bid over \$15,000, can bid on Sothebys.com, and can sell on eBay’s Mature Audiences category.

PayPal Buyer Protection helps members to buy with confidence at eBay. When the buyer uses PayPal to pay for a qualified listing on eBay, PayPal Buyer Protection provides free coverage up to \$1,000. Buyers can identify which items are covered by looking for a PayPal Protection shield next to the Item Title with in Search and Listing results, or in the Seller Information box on an Item page.

Another way of managing risks related to the sellers and buyers is provided by member profiles which includes a rating number as well as comments from other members they’ve bought from or sold to. Feedback ratings are based on the sales and purchase history of each member – and they cannot be erased. Because feedback given to trading partners is permanent, eBay urges members to be sure to make only fair and factual comments. The feedback rating systems works so that a member receives +1 point for each positive comment, 0 points for each neutral comment, -1 point for each negative comment, and a start icon for 10 or more comments. Even though in most cases a high feedback score is a good sign, eBay recommends that you should always check a Member profile to read comments and look for negative remarks.

In order to help the buyers to learn more about the items being sold, eBay offers various Reviews & Guides. There are buying guides from “Cosmetics & Makeup Buying Guides” to “Star Wars Action Figures Buying Guides”. The guides are created by members, and eBay encourages experts and collectors to share their knowledge with other members. Another useful way of learning about products is to read members’ reviews on various items.

To conclude this brief analysis of the risk management processes on eBay it can be argued that the platform offers powerful ways of managing the risks related to online auction transactions. Several other process categories such as product representation, payment and settlement, authentication, influence and dispute resolution play also an important role when it comes to managing perceived and actual risks related to online marketplaces.

(9) Influence

According to Kambil and van Heck, influence processes are needed to ensure that commitments among trading partners are met (2002, p. 27). In their analysis of Finnish online auctions, Vesa and van Heck (2003, 2005b) found that this process category truly benefited from the use of new access technologies, such as member forums and reputation systems (in eBay this concept is called Feedback Forum). Certain problems related to online auctions, such as false identities and misbehaviour, have been tackled in the eBay system by the strict registration process and by automated tracking of members' behavior. The community effect of eBay is very strong. Through an extensive offering of various kinds of discussion boards, from general purpose discussion boards to category specific and community help boards, eBay makes sure that members have lots of opportunities to express their feelings about eBay services – and fellow members. Even though eBay emphasizes that postings should be “courteous and respectful”, in order to have “discussion without attack” and “debate without insult”, the discussions taking place on boards are very colorful. Further, services such as eBay Live! blog and The eBay Cafe strengthens the community effect. However, some disputes over feedback received are taking place in the eBay chat at the eBay Cafe (see Dispute resolution process). And finally, the fact eBay goes through all the trouble of collecting extensive personal and financial information about the members influences the way in which members behave and the way in which they fulfill their commitments towards their trading partners.

(10) Dispute resolution

The tenth process category identified by Kambil and van Heck is called dispute resolution and its goal is to “resolve conflicts among buyers, sellers, and market makers” (2002, p. 27). In their analysis of Finnish online auctions, Vesa and van Heck (2003, 2005b) did not find a clear role for multi-access technologies in the dispute resolution process category. They anticipated that the complexity of dispute resolution exceeded the capabilities of multi-access technologies. Perhaps a more important reason was the prevailing Finnish legislation which prevented the market maker from getting involved in the auction transactions between two consumers (if the market maker gets involved in the transaction, obligations imposed by consumer protection

laws will apply). Therefore, in the Finnish online auctions, if something went wrong, it was up to the seller and the buyer to figure out how to solve the problem.

However, as eBay's business model is very different from those of Finnish online auctions, eBay has much bigger involvement in the dispute resolution. The market maker does, of course, its best to have such a clear rules, policies and instructions that most disputes could be avoided. But if disputes emerge, the eBay online auction platform offers several tools to support dispute resolution, as the following examples demonstrate. One potential source of dispute is the feedback left for a member by a trading partner. In order to maintain the integrity of the feedback system, feedback left for a member generally becomes a permanent part of that member's record. According to eBay's policy, the comments cannot be edited at a later date. Therefore eBay encourages members to communicate with their trading partners prior to leaving feedback since most misunderstandings can be resolved quickly through direct communication. Sometimes bad feedback results from misunderstandings or circumstances beyond trading partners power as (see Figure 9 below).



Figure 9. Example of dispute over feedback at eBay Cafe chat room (Oct. 31, 2005)

Even though the feedback dispute shown in Figure 9. took place at the eBay Cafe, the Feedback Forum is a place for eBay members to express their opinions (see the Influence process above). eBay will not censor these opinions or investigate the comments for accuracy. If a person is unhappy with the feedback he has received or regret feedback he has left for another member, he has a few options to address the dispute: (1) Person who has received unfair feedback may tell his side of the story by responding to any comment that has been left for him; (2) Person who has left unjustified feedback and leave one follow-up comment to add information or to clarify; (3) If the seller and the buyer are able to resolve a problem after feedback has been left, they can mutually agree to remove the feedback rating (the comment will still appear in the member profile, but is no longer counted in the feedback score); (4) eBay's preferred dispute resolution provider, SquareTrade, can help users solve

problems related to their eBay transactions, and (5) In very exceptional circumstances eBay will remove individual feedback comments when they violate specific policies. Other disputes are related to the payments or the condition of the good purchased. For those transactions paid with PayPal online payment service, a special dispute resolution service is provided. The buyer can file a claim against the seller through a forum called Resolution Center, for instance if he paid for a physical good but never received it or if a physical good purchased on eBay is significantly different than what was described in the listing. Dispute Resolution specialists gather information about the transaction and help to resolve the issue. During the process, the buyer will be advised of the claim's status via email and on his PayPal accounts overview page. For the transactions that were not purchased by using PayPal, eBay provides a Security & Resolution Center, which can help if a buyer did not receive the item or he received an item that was different than described, or if the seller did not receive payment for an item he sold on eBay. Problems are reported by filling in a feedback form in the Security & Resolution Center on eBay.

As discussed earlier, eBay encourages trade partners to do their best to solve any unclear issues before they turn into disputes. If the buyer does not receive the goods he has paid for, he is first advised to email the seller. If the seller does not respond, the buyer can request the seller's contact information and give him or her a phone call. eBay reminds that "many issues are just simple misunderstandings that can be resolved with a single phone call" (www.ebay.com). And finally, eBay's Item Not Received or Significantly Not as Described process can be used to establish communication between buyers and sellers. This is done via the "Disputes Console" link on My eBay page.

Seller and buyer information does not show telephone numbers but a member of eBay can request another member's contact information if he is involved in a current or recent transaction with them. Trading partner's contact information is emailed to the person requesting it, and to the member whose information was requested. This information can only be used in accordance with eBay's privacy policy discussed earlier in this article. In case members wish to contact eBay Customer Support it is done by email. Email turnaround time is 24 – 48 hours. Before sending an email to eBay, the members are advised to check "Frequently Asked Questions" type database.

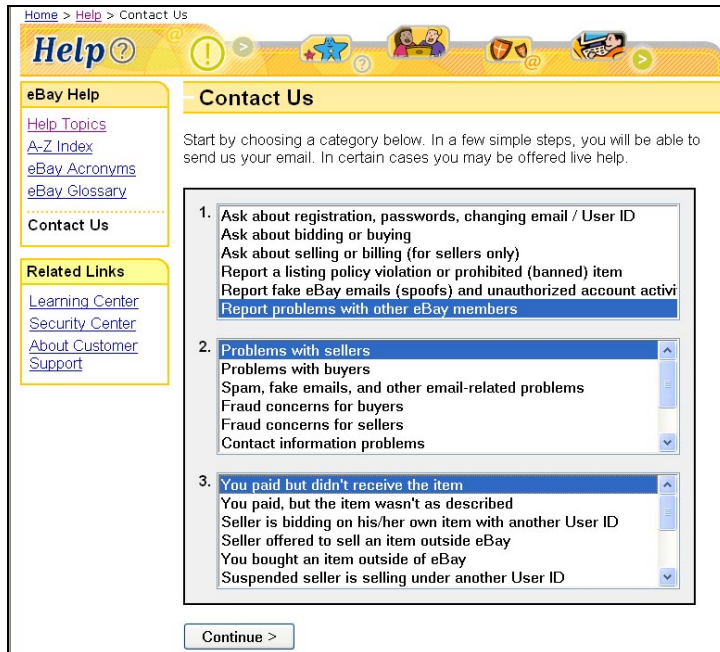


Figure 10. “Don’t call us – we call you” - eBay does not offer telephone service

This concludes this brief overview of the existing eBay online market platform. Next we will analyze how the integration of the Skype free internet telephony service would affect the ten exchange processes of eBay.

5.2 Analysis of eBay’s online market platform processes with Skype

(1) Search processes with Skype

As the search process of eBay online market platform is highly automated, it is difficult to see any role for the Skype service. Search is one-to-many type process, whereas the Skype service is a one-to-one or one-to-a few type service. As the trading partner is not yet identified during the search process, the focus is on person-to-content, or machine-centric communications (Vesa and van Heck, 2005a).

Skype impact factor: No impact (+/-)

(2) Pricing processes with Skype

Pricing processes “help buyers and sellers discover prices” (Kambil and van Heck 2002). This process is managed by the auction platform of eBay: The seller determines the starting price, possible reserve price, the pricing mechanism, and other parameters when adding the listing on eBay. The buyers place their bids by

interacting with the online market platform. Even in this process, the focus is on person-to-content, or machine centric (Vesa and van Heck, 2005a). Therefore it is difficult to see any role for the Skype service. In fact, it would be harmful for eBay if the seller and the buyer would attempt to discover the price by communicating directly with each other, i.e. bypassing eBay.

Skype impact factor: No impact (+/-)

(3) Logistics processes with Skype

Once the pricing process has discovered a price that has been accepted, the trading partners have to agree on the logistical arrangements. Albeit shipping terms and costs are typically mentioned as a part of the listing, due to the potential complexity of shipping of the goods for instance to another country, it is possible that the trading partners need to communicate directly in order to agree on details. Today this communication takes place over email, or in special cases by telephone (telephone number is not shown as a part of member profile but it can be requested from eBay). In this kind of situations the Skype service could be powerful tool: Trading partners Skype ID could be part of the seller or buyer profile, presence information would show if the person is currently connected to Skype, and because Skype calls are free (to another Skype user) the trading partners would not need to worry about the costs. Further, the instant messaging service of Skype could be used as an intermediary solution (faster response than emailing, less personal than telephone call).

These findings are in line with the media richness theory (Daft and Lengel 1986) which defines information richness as “the ability of information to change understanding within a time interval” (p. 560). In situations where the level of uncertainty (absence of information) and the level of equivocality (multiple and conflicting interpretations of the situation) are high, richer media are often needed. In these situations, telephone as a rich media can be more powerful than electronic communication channels such as web site, email or chat.

Skype impact factor: Positive impact (+)

(4) Payment and settlement processes with Skype

According to eBay’s policy, in the case of missing payments, the seller may request the buyer’s contact information, including telephone number. Integrating Skype into this process lowers the cost and in some cases makes it easier to reach the other party

(e.g., Skype's presence info). The richness of IP-telephone conversation helps to solve open issues. In fact, eBay encourages trading partners to communicate directly:

“eBay encourages members to communicate with their trading partners prior to leaving feedback since most misunderstandings can be resolved quickly through direct communication.” (www.ebay.com / “Resolving Feedback Disputes”)

This supports the conclusion that the Skype service can have positive impact on the payment and settlement process.

Skype impact factor: Positive impact (+)

(5) Authentication processes with Skype

According to Kambil and van Heck, authentication processes are needed in order “to verify the quality of the goods sold and the credibility of the buyers and sellers” (Kambil and van Heck 2002, p. 27). Albeit these processes can be supported by electronic communications channels (e.g. Feedback Forum, ID Verify, PayPal Verification, Disputes Console), in some cases the possibility to contact the trading partner by using the Skype service would help to verify the credibility of the person, but also to obtain more information about the quality of the goods sold. Once again, we can conclude that the objective characteristics of telephone conversation as a communications medium, i.e., person-interactivity, 1-to-1 communications model, richness of content with audio and even emotions, and being real-time communication (Vesa and van Heck 2005a, p. 187) adds value to the more complex exchange processes, such as authentication.

Skype impact factor: Positive impact (+)

(6) Product representation with Skype

Product representation processes “specify the presentation of products and services to buyers and sellers” (Kambil and van Heck, 2002, p. 27). In online auction markets the market platform manages these processes, that is, the sellers list their items in various categories and the buyers search interesting items through the search process and bid via the pricing process. As discussed earlier in this article, eBay offers a rich toolkit for the sellers to present their products to potential buyers. Interested buyers have the possibility of asking further details about the product by sending an email. However, turnaround times for emails may be reasonably long – sometimes too long when

taking the high “clockspeed” of online auctions into account. More real-time communications methods, such as texting (SMS), instant messaging or telephone calls, are not used in the context of this process on eBay. By integrating the Skype service more closely to the product representation processes, eBay could offer a rich and real-time communications option to the trading partners, either by IP-based telephone calls or instant messaging – supported by presence information. As Skype will become available also in mobile / wireless devices, the seller could be reached anytime and anywhere, and in many cases without additional costs to either party.

Skype impact factor: Positive impact (+)

(7) Regulation processes with Skype

According to Kambil and van Heck, regulation processes “record and recognize the transaction within a framework of laws and rules to legitimate and conforming to a set of market rules and social principles” (2002, p. 27). It is difficult to see any role for the Skype service.

Skype impact factor: No impact (+/-)

(8) Risk management processes with Skype

These processes reduce buyer and seller risks in transaction (2002, p. 27). Integrating the Skype service in to eBay online auction platform would help the members to reduce the risks related to transactions. However, this would happen indirectly, through other processes such as authentication processes (e.g. verifying the credibility of the trading partner) and product representation (e.g. being able to “Skype” the trading partner and to get richer description of the good through voice conversation).

Skype impact factor: Positive impact (+)

(9) Influence processes with Skype

According to Kambil and van Heck, influence processes are needed to ensure that commitments among trading partners are met (2002, p. 27). Various communications channels and media, such as discussion forums, chat rooms and blogs, are used already today. By integrating Skype into their online auction platform, eBay could offer an additional tool for communications between the trading partners. Skype service with presence information could function as a “deterrent” for potential

misbehavior: just the fact that the trading partner can “Skype” the other party may prevent potential disputes from emerging.

Skype impact factor: Positive impact (+)

(10) Dispute resolution processes with Skype

Dispute resolution processes resolve conflicts among buyers, sellers, and market makers (Kambil and van Heck 2002, p. 27). Already today eBay offers several tools to support the dispute resolution processes. Albeit neither traditional nor IP-telephony is integrated into eBay’s processes, members have the opportunity to request for their trading partner’s contact information in order to call them. As mentioned earlier in this article, eBay in fact encourages trading partners to communicate directly in order to resolve potential misunderstandings. This process could be supported by the integration of Skype service into the dispute resolution processes. Furthermore, eBay does not offer the possibility to call in case their members wish to discuss potential issues with the market maker. Instead, members are advised to contact eBay by filling in a feedback form in the Security & Resolution center on eBay (a policy widely adopted by various online markets). Skype service could support also this process.

Skype impact factor: Positive impact (+)

5.3 Before – after comparison of eBay’s exchange processes

Table 2. below summarizes the characteristics of eBay’s exchange processes today and once the Skype-service is implemented to its full potential.

Process	Current eBay platform	eBay with Skype
1. Search (+/-)	Powerful search engine (keywords, Boolean etc.), categories; search by price range, location, items near the buyer, specific currency, lots, Buy It Now, PayPal, Gift Items; search by number of bids or by remaining time etc.	<i>No impact</i>
2. Pricing (+/-)	Bidding via automated forms, sales history, reserve price, multiple auction mechanisms (English auction, Buy It Now, fixed price), bidding agents, completed listings filter etc.	<i>No impact</i>
3. Logistics (+)	Sellers have to communicate the location of their goods and a proposal for the logistical settlement (terms & conditions and the cost of shipping), shipping labels with PayPal.	Ability to contact the other party and to discuss the details of logistical arrangements could be integrated into the process.
4. Payment and settlement (+)	Traditional payment methods (credit cards, personal checks, cashier’s checks and money order) and PayPal online payment option using credit card or bank account. Pay Now button.	In case of missing payment, members of eBay may request the buyers contact information, including telephone number. Integrating Skype into the process lowers the cost and in some cases makes it easier to reach the other party (presence info).
5. Authentication (+)	Credibility of buyers and sellers: Feedback, verification during registration, ID Verify, PayPal Verification. Verifying the quality of the goods: Letter of Authenticity , 3 rd party physical inspection.	Possibility to contact the other party by using the Skype service helps to authenticate both the seller or buyer, but also to obtain more information about the item sold.
6. Product representation (+)	Text, pictures, listing upgrades (bold, border, highlight), single item in two categories, display on eBay’s home page, additional pictures, picture show, supersize picture, Seller Tools etc.	With Skype telephone or instant messaging service, eBay could offer a rich and real-time communications when buyers want to ask about the product.
7. Regulation (+/-)	Warning against offensive or illegal material and shill bidding; illegal or offensive items reported to the authorities; eBay automatically tracks members’ behavior on the Site.	<i>No impact</i>
8. Risk management (+)	Participants have to register. In some cases additional financial information is required (users of free email), along with physical address check; tracking behavior on the site; ID Verify; member profiles with ratings; Reviews & Guides.	Integration of Skype into eBay’s platform would help reduce risks, but this would happen indirectly, via other processes such as authentication and product representation processes.
9. Influence (+)	General and topic specific forums and chat rooms, Feedback Forum, eBay blog, eBay Cafe, penalties, incentives.	Skype could be one more tool for communications between members, “deterrent” against misbehavior.
10. Dispute resolution (+)	Feedback Forum, dispute resolution services & Resolution Center (PayPal), Security & Resolution Center, Disputes Console.	Skype could support dispute resolution process between members, and between the market maker eBay and the members.

Table 2. Exchange processes of eBay before and after the Skype service

5.4 Analysis of the identified benefits of Skype

We have now analyzed the eBay online market platform as it exists today, and also tried to identify those processes that could be benefit from the integration of the Skype service into eBay’s platform. But let’s take one step back and look what kind of expectations eBay had for the potential benefits of Skype for their members.

When eBay announced their plans to acquire Skype, they presented a large number of arguments supporting the deal (eBay, Sep. 12, 2005). The company noted that communication is the key to e-commerce:

- The online transaction process requires various communication points along the way: Q+A before purchase, closing transaction, order status etc.
- Five million e-mail messages are initiated per day between eBay buyers and sellers, and 30% of eBay bids take place in the last 2 hours.

Against this background it is easy to understand why eBay sees Skype as “leap forward in communications” in transaction flow - offering instantenous, private and free communication with rich experience and advanced functionality (eBay, Sep. 12, 2005, slide 26). The process-based analysis of eBay today and after a full-scale integration of Skype supports this view.

According to eBay, the global online marketplace has “historically removed friction” from the world of e-commerce. The company demonstrates this by identifying Friction points and Solutions to remove them (see Table 3). Based on the analyzes presented in this article, a third column has been added – mapping various processes of the Exchange Process Model (Kambil and van Heck 2002) to them friction points and solutions provided by eBay:

Friction point	Solution	Process (Kambil & van Heck 2002)
Trust & safety	Feedback	(8) Risk management (9) Influence
Description	Pictures	(6) Product representation
Payments	PayPal	(4) Payment & settlement
Shipping	USPS Priority Mail	(3) Logistics

Table 3. Mapping exchange processes and friction points of e-commerce

By combining eBay online market platform, PayPal online payment service and Skype free Internet telephony services eBay believes it will create “an unparalleled e-commerce and communications engine” (eBay, Sept. 12, 2005).

The analysis presented in this article supports the view that by integrating the Skype service with its online market platform, eBay is in the position of bringing IP-based communications services, such as IP-telephony and instant messaging, closer to the core of the auction platform. Communication is a crucial element of online markets, and VoIP service like Skype can offer better functionality and thereby add value to stakeholders. More efficient online market platform with more efficient processes is in everybody’s interests.

6 DISCUSSION AND CONCLUSION

The objective of this article was to analyze what kind of benefits the integration of Skype with eBay online market platform could offer. The process-based analysis of eBay service revealed several exchange process that could benefit from a closer integration of IP-telephony and for instance instant messaging.

This article builds on our earlier research on online auctions (Vesa and van Heck 2003, 2005a, 2005b). By taking one very advanced online auction market, eBay, and one advanced access technology, Skype, as units of analysis, we managed to drill deep into the functionality of eBay online market platform.

The analysis described in this article tested also whether the Exchange Process Model by Kambil and van Heck (2002) manages to capture the essential functionality of eBay online auction site. Several new processes were identified that should – or at least could – be integrated into the Exchange Process Model:

- **Learning:** eBay offers plethora of ways of learning (including eBay University) how to use eBay efficiently, how to become successful seller, how to learn more about certain product categories etc.
- **Community building:** Auctions are often described as an efficient way of discovering prices for products and services, and also as an efficient mechanism to take care of individual business transactions. However, the secret of eBay seems to be strong community effect, supported by virtual

meeting places such as The eBay Cafe, and various chat rooms, eBay blog, and real-life rendezvous like eBay Live! meetings.

- ***Customer care / customer service***: The customer service processes offered by the market maker to sellers and buyers seem to be missing from the Exchange Process Model.

There are some limitations in the way in which this research was conducted. Albeit the analysis of the current eBay online market platform was reasonably straight forward, the implications of the eBay-Skype integration were more difficult to perceive because that kind of integration has not taken place yet. However, earlier research on communications channels and media made it possible to identify potential areas of improvement. Once actual integration has taken place, it will be interesting to repeat this analysis to find out how Skype will be used in conjunction with the eBay service.

And finally, eBay's announcement to acquire Sky was a jackpot for a researcher who has spend the past three years in analyzing how various new access technologies (e.g., the Internet, mobile/cellular, digital television) are used in online auctions. The novel technical architecture of Skype combined with its phenomenal growth made it an exiting unit of analysis, not to mention the world's leading online marketplace eBay. For once, the ongoing academic research and the desperate need of business analysts to understand the logic behind the huge investment made by eBay in Skype seemed to collide.

The goal of this article was to shed new light into the "hodgepodge of ideas" (Fortune, October 3, 2005, p. 11) eBay offered on how it might build Skype into its auction business. This analysis confirms that eBay's justification is based on the characteristics of online auction market. One could, of course, always question whether it was necessary for eBay to acquire Skype in order to achieve the synergies between internet telephony – or more accurately internet communications – and its online market platform. Or perhaps the eBay management team simply saw Internet telephony as such an attractive market that they wanted to move in to match similar moves by their competitors Microsoft, Yahoo and Google. But that's another story.

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