(54) Title: SYSTEM AND METHODS FOR UNIVERSAL BUSINESS EXCHANGE

(57) Abstract: The market for business-to-business e-commerce is new and rapidly evolving and competition is expected to increase significantly in the future. The inventive method and system offers comprehensive B2B e-commerce and e-marketplace services to small-to-medium-sized (SME) companies worldwide, and jointly markets these services through business communities such as vertical trade associations, regional chambers of commerce and online business communities. The present invention provides a full e-commerce platform, Universal Business Exchange (UBX), which allows a business community to create and manage co-branded integrated electronic marketplaces that include The Virtual TradeShow, The Product Showcase, The Offer Exchange and The Auction House, providing their member-companies access to a variety of business services, industry content and e-commerce products and services.
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
System and Methods for Universal Business Exchange

This application is related to and claims the benefit of provisional application 60/163,014 filed November 1, 1999, the teachings of which are hereby incorporated herein in their entirety, including all appendices.

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates generally to the field of e-commerce and more particularly to an integrated, multi-mechanism application platform for business communities to create and manage electronic marketplaces within worldwide commerce.

Background of the Invention

Electronic commerce is transforming the way business is conducted around the world. Business to business e-commerce is defined as conducting trade between companies on the Internet. Business-to-Business (B2B) e-commerce encompasses the entire commerce cycle, from awareness to product research, comparison, selection, supplier sourcing, negotiation, trade documentation, payment, logistics, and post-sales support.

Four key trends are driving the rapid expansion of the Internet economy: the rapid growth of domestic B2B e-commerce; the globalization of e-commerce and trade; the emerging power of small and medium-sized enterprises; and the rise of online vertical
business communities and marketplaces. Total business-to-business Internet commerce – defined as the value of goods and services purchased over the Internet by businesses – is growing exponentially.

While it is theoretically possible for one company to go online and conduct business with one of its suppliers and buyers individually, as was the set-up in the electrical data interchange (EDI) mode, the Internet’s technology makes it much more efficient for companies to conduct business from a central hub – often referred to as a marketplace or e-marketplace. E-marketplaces make it easier for companies to conduct business with existing suppliers and buyers as well as new clients without having to establish a proprietary information technology investment for each partner.

A new breed of infomediaries, also called “electronic hubs”, is emerging to facilitate business-to-business e-commerce. These e-marketplaces take on a number of different forms. Some are vertical marketplaces aimed at a very specific industry, and are completely oriented towards the needs of this group. Examples include eSteel and Chemdex, marketplaces for the steel and chemical industries, respectively.

Other marketplaces are horizontal or functional, and not tailored to the need of a specific industry, but to functions important in many industries. One well-known process, which various B2B marketplaces wish to simplify and automate, is the procurement of MRO (maintenance, repair and operating) supplies or C articles (replacement parts, factory supplies and office materials).
Some online marketplaces will begin serving both horizontal and vertical markets. COVISINT, the auto industry exchange backed by GM, Ford and DaimlerChrysler, will eventually facilitate the purchase of auto parts and non-production goods such as office supplies and maintenance equipment.

E-marketplaces allow commerce to be conducted using a variety of trading mechanisms. Pinboards are the simplest kind of B2B marketplaces that function basically as an online classified advertisement. Catalog-based services aggregate product catalogs, made up of the regular offers of different suppliers, and allow greater selection and price comparisons. The catalog services may be either buy side (catering to companies looking to buy products) or sell side (serving the need of suppliers) or both. Originally, CommerceOne and Ariba were created as sell side catalog solutions.

Exchanges are often known as matching systems. They represent an extension of pinboards but actively search for trading partners for buyers and sellers, often using a RFP/RFQ service. Exchanges take on a number of different forms, with searching being conducted based on a number of varying technologies.

Auction services are very similar to exchanges, but are less flexible, as the item or service must be clearly described, so that price alone suffices for the selection and acceptance of offers. Auction services are most applicable for companies looking to liquidate stock overruns or other excess inventory and C stock. Likewise, companies looking to purchase these items at a discount would naturally gravitate toward an auction of these materials. Some B2B solutions started out offering one transaction mechanism but now are offering more than one.
The potential for e-commerce growth is not limited to the United States, but is truly international with approximately 30 million businesses worldwide that want to identify, qualify and conduct business with one another. Europe, Asia-Pacific and developing countries are experiencing accelerating economic growth as a result of B2B e-commerce.

Businesses of all sizes will adopt e-commerce because e-commerce technologies and services will radically change their competitiveness, enabling them to reduce transaction costs and transaction cycle time, expand new market opportunities, reach new customers and suppliers, and create new alliances and partnerships. Small and medium sized enterprises (SMEs) have become a major engine of U.S. economic growth. SMEs account for 98 percent of all U.S. businesses, represent about 50 percent of the Gross National Product, and spend approximately $445 billion annually on information technology products and services. SMEs, in particular, are interested in identifying and qualifying new business opportunities, increasingly on a global basis. Although a range of e-commerce products and services have emerged to improve information flows between large corporations and their existing suppliers and distributors, there are currently no comprehensive e-commerce solutions available today that address the needs of the great majority of SMEs.

Businesses operate within established communities, vertical markets or other business groupings sharing common interests and protocols. For example, trade associations and chambers of commerce have been established to facilitate member businesses in their efforts to create commercial relationships and to pursue common interests.
While the Internet creates the potential for unlimited new opportunities, markets must be organized in a manner where businesses with common interests can meet and transact in a familiar and trusted environment. Electronic business communities (EBCs) are often organized around vertical industries to provide a forum for these new electronic markets.

Any e-commerce marketplace focusing on SMEs requires a strong “natural” business community leader around which SMEs can congregate, well-defined supplier/manufacturer or buyer/seller relationships and rules, and strong “hub-spoke” marketing and distribution frameworks between the business community and its member companies. Such communities include Trade Associations, Trade Show Organizers, On-line Business Communities, Global Commerce Service Providers, and Trade Development Organizations.

Industry Trade Associations such as the National Confectionery Association (NCA) and Automobile Parts Rebuilders Association (APRA) are examples of traditional organizations established to represent business communities. These associations, therefore, have legitimate authority as a “natural” business community organizer within their niche industry. In the United States, there are over 50,000 registered trade associations, each representing hundreds of member companies. The global market is at least three times the size of the U.S. market in terms of the number of associations and active businesses.

Trade Show Organizers organize thousands of industry-specific trade shows each year in which buyers and sellers gather to conduct business and exchange ideas. Trade show organizers have an established presence among businesses in a specific industry, and have defined supplier/manufacturer relationships. By partnering with trade show organizers, one is positioned to offer their registered companies an efficient electronic method of marketing,
buying and selling products and services. When used in conjunction with a physical trade show, this approach is very effective, and the concept of a virtual trade show is one entrance into the Universal Business Exchange.

The target business communities also include online vertically-focused trade publishers, such as Thomas Register, and industry-specific online communities that offer highly targeted content and services, such as Cahners. Also included in this target market are new and existing online communities that lack e-commerce capabilities, services or marketplaces. These communities offer comprehensive content or other values to their focused member audiences. By partnering with online business communities, the present invention provides member companies with the ability to conduct commerce online.

Global commerce service providers may also serve as business community partners. This target includes global financial institutions such as Chase, NatWest and American Express, credit and verification information service providers such as D&B, Veritas and Dialog, communications service providers such as ISPs, and transportation services providers such as Federal Express and UPS.

Trade Development Organizations are another set of business communities in need of e-marketplace support. Trade Development Organizations include Non-governmental Organizations (e.g., the World Bank, the U.S. Chamber of Commerce, and the Thailand Federation of Industries), Government Organizations (DOC, Canadian Government and the EU) and Regional Development Organizations (NASDAQ, International Chambers of Commerce and UNCTAD).
Within each business community type, there are multiple industries and organizations, the vast majority of which do not have the e-commerce capabilities that the present invention offers. Applicant has initially concentrated its business development and sales efforts on trade associations due to the strength of these “natural” business community organizers and the distribution channels already developed by the membership organizations. In order to develop the strongest and most efficient e-marketplaces in the trade association community, Applicant developed a set of criteria and a process to select the industry and the appropriate business community partner.

Applicant has several criteria for choosing an industry segment for the development of an e-marketplace. Applicant focuses on adding value to the business operations of the target’s members and, in order to do so, selects industries with specific characteristics.

E-marketplaces work best when there are a critical mass of buyers and sellers. When there is a critical mass of participants, member companies are introduced to a greater number of potential business partners, thereby increasing trading options and potentially increasing volume sales. Since SMEs are less likely to use electronic data interchange (EDI), the advantages of Applicant’s inventive e-marketplaces are heightened.

Applicant also focuses on a specific industry’s value chain, and strives to improve the business practices of member companies by overcoming inefficiencies in the chain. This may take a number of forms, including disintermediation of wholesalers/distributors, introduction to more business partners, or automation of paper-based exchange services. Applicant’s inventive e-marketplaces add value by reducing marketing costs, increasing sales, and
decreasing product cycle time. Furthermore, the value chain must be accessible to Applicant. For instance, industries that are highly vertically integrated or those producing highly specialized products may not have a space for e-marketplaces. The majority of industry participants must be in regions suitable for e-commerce.

Additional criteria are used to target electronic marketplace opportunities overseas, including Internet/Telecom infrastructure, dependency on Export/Import, and the existence of trade development organizations and initiatives.

Once Applicant has chosen a sector and business community using the evaluation criteria, Applicant designs the optimal e-marketplace, forms an alliance with the natural business community leader (trade show, on-line community, entrepreneur, etc.), and develops a plan to market and grow the community.

Using the process described above, Applicant has already established seven on-line business exchanges, with many others in the development stage. Current communities include ManufacturingCentral.com (the on-line mega-exchange for the National Association of Manufacturers), as well as business exchanges focusing on automotive parts re-manufacturing, wood products, confectionaries, and other specific industries. Development stage communities include such diverse areas as banks and financial institutions, telecommunications companies and ISPs, an on-line research exchange for the scientific community, an on-line boating community, as well as exchanges focused on e-commerce with China and Africa.
SUMMARY OF THE INVENTION

The present invention provides a full e-commerce platform, the Universal Business Exchange (UBX), which allows a business community to create and manage co-branded integrated electronic marketplace functions that include *The Virtual Tradeshow, The Product Showcase, The Offer Exchange and The Auction House*. The UBX platform provides Unibex member companies with access to a variety of business services, industry content and e-commerce products and services.

The UBX platform also provides companies with flexible, easy-to-use e-commerce services and tools that enable them to create and customize, on their own, a complete B2B e-commerce presence within their business community’s electronic marketplace, and to successfully conduct commerce online. These services and tools include a virtual *Tradeshow Booth, Web Site, Product Catalog, Offer Manager, Distribution Chain Builder, and Auction*.

In addition, UBX provides integrated support services to help companies consummate transactions in their e-marketplaces. These services include verification and due diligence support, transaction support, logistical services and reporting services. Other UBX services include community news, industry news and financial reports, and community forum.

SMEs are principally interested in e-commerce as a means for locating and qualifying new business opportunities, both domestically and increasingly on a global basis. The present invention is the only known comprehensive e-commerce solution available today that addresses the specific needs of the great majority of small and medium-sized enterprises. Applicant’s invention provides SMEs with a complete suite of integrated, inexpensive and intuitive e-commerce tools and services. Using the described method and system, businesses
can quickly and inexpensively join the world of B2B e-commerce without the need to develop new technology, retrain staff or change business processes. With the invention, SMEs can easily find new suppliers, buy and sell products, develop markets and research potential partners both within their particular Unibex community and across the entire spectrum of business communities and companies that comprise the Universal Business Exchange.
BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 illustrates the overall configuration of the business exchange according to the present invention;

Figure 2 illustrates in block diagram form the model business community relationships;

Figure 3 illustrates the e-commerce development process and revenue flow of the present invention;

Figure 4 is another illustration of a portal architecture with exchange applications according to the present invention;

Figure 5 illustrates a screen print of a community portal according to the present invention; and

Figure 6 is a flow diagram of a system configuration according to the present invention.
DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention offers comprehensive B2B e-commerce services to small and medium sized enterprises (SMEs) worldwide and within specifically defined industries and business groups. The invention targets specific industry groups that are generally represented by a strong "natural" business community-leader, that are populated by many dispersed SMEs, and that have defined supplier/manufacturer or buyer/seller relationships and rules.

The full method and system, the Universal Business Exchange (UBX), is a comprehensive, integrated, multi-mechanism e-market platform. The Universal Business Exchange focuses on providing electronic commerce solutions to two audiences: business communities and their member companies. It allows any business community to create and manage a variety of electronic marketplaces in which their member companies can buy, sell, trade, partner and form strategic alliance. The UBX platform also enables member companies to create and manage a complete e-commerce facility and to participate in their community's e-marketplace by posting and identifying various business offers and proposals, searching and identifying new business partners, suppliers and distributors, and completing trade electronically via the integrated Unibex services.

Illustrated in Figure 1 is the Unibex system 100. A Public Exchange (Community Portal) 102 is provided as a tiered umbrella exchange. A Private Exchange (Corporate Portal) 104 is provided under the Community Portal 102. An Enterprise Application (Company Site) 106 resides under the Corporate Portal 104. A "mega-hub" portal, denoted as a Parent Exchange, may reside over multiple community portals 102. An example of such a "mega-

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hub" Parent Exchange is ManufacturingCentral.com, the on-line portal created by Unibex for
the National Association of Manufacturers portal, which comprises many diverse
manufacturing communities. Likewise, Private Exchanges may be formed under the
Corporate Portal 104 or even the Company Site 106, whereby existing business relationships
with known rules can be transferred seamlessly on-line. With the Private Exchange,
relationships between known business partners are maintained and new partnership
relationships may be formed.

Central to the Unibex system 100 is the exchange server 110. The exchange server 110
provides the functionality for e-commerce transactions: hosting catalogs, auctions, offer
exchanges, RFQ/Proposals, e-procurement, supply chain and trade shows. The exchange
server 110 also hosts horizontal electronic services such as global payments, logistics and
reporting, and horizontal business offerings such as surplus goods, office supplies and
business development leads.

Medium sized companies 120 interface with the exchange server 110 to conduct e-
commerce. Back Office support 122 can be provided to medium sized companies 120,
including payments, logistics and tracking. Smaller companies 130 interface with the
exchange server 110 to conduct business. Application Solution Provider services 132 are
made available to smaller companies 130 through the exchange server 110.

The inventive method and system also offers a host of integrated support services to
support the completion of transactions, from content to help the decision making process
(verification and due diligence), to global payments, to logistics and other procedures and
documentation processing necessary to consummate a transaction domestically or
internationally. Figure 2 illustrates a general organization of the Universal Business Exchange and how a business community and its member companies can participate.

Figure 2 illustrates the overall relationship model for the UBX platform 200. Buyer 202 can interact with Supplier 204. At the same time, numerous suppliers 206 and numerous buyers 208 can also conduct e-commerce through the Unibex exchange server 110. The suppliers 206 can be part of an enterprise portal 210, while the buyers 208 can be part of another enterprise portal 212. A private market 214 (comprising known buyers) and a private exchange 216 (comprising known suppliers) can all be part of a larger public exchange 220.

The public exchange contains both new and known buyers and sellers.

Other Unibex markets 222 and 224 are bi-directionally tied to the public exchange 220. Unibex market integration is performed by an integration device 230. The integration device 230 connects other private markets 232 and 234 as well as public markets 236 to the public exchange 220.

The Universal Business Exchange empowers business communities to setup and manage integrated e-marketplaces. It is possible to create an electronic marketplace inside every major business-to-business community on the Internet. Applicant’s invention addresses the e-commerce marketing and procurement needs of SMEs by providing business communities and their members the tools, services and functionality needed to organize markets and conduct commercial transactions with one another on a global basis.

Electronic marketplaces replicate the physical world and address every “real world” need of their business community members: researching and identifying potential business
partners, customers and suppliers; conducting due diligence on a potential business partner and its products; determining and negotiating the terms of a deal; shipment and related services; and closing and documenting transactions.

The presently described solution allows business communities to set up their own co-branded electronic marketplace for member companies interested in conducting B2B e-commerce. Applicant provides the services, technologies, expertise and support to enable the business community to offer a comprehensive, integrated electronic marketplace to its members.

The set up process for a company to become a part of the Universal Business Exchange is illustrated in Figure 3. First a profile is made to build an enterprise site as in step 303. Next the buy side relationship rules are established step 304. These are matched to the sell side desires of the company in step 306. Once these are set up the company is ready to transact business as in step 308. Desired services such as payment and logistics are selected in step 310.

The Universal Business Exchange derives revenues from license and set up fees, monthly hosting fees, monthly subscription fees for particular services, and per-transaction fees for auction, RFP/RFQ, catalog and associated e-services. These revenues are apportioned between the Applicant and the respective business and parent communities.

Through the Universal Business Exchange platform, the invention offers several integrated electronic marketplaces and marketplace-enhancing services to business communities. These electronic marketplaces offer a variety of e-commerce capabilities and
services. The Unibex marketplaces operate in a similar manner and offer similarly comprehensive benefits and services to the community and end-user member companies. These marketplaces include trade shows, catalogs of products, offer exchange, auctions, supply chain, RFQ/Proposals and e-procurements.

Communities typically offer all marketplaces to their members, integrating membership database information and community news features into the capabilities available through the Universal Business Exchange. Each marketplace provides unique value to the business community and its member companies.

Services available through the Universal Business Exchange are provided to enhance and enable community and member-company participation in e-commerce. These services include tools to enable business communities to set up and manage e-marketplaces for their members. Applicant also offers member companies a complete suite of e-commerce tools and services to help them participate in e-marketplaces. These tools and services include Tradeshow Booth Toolkit and Service, Website Toolkit and Service, Product Catalog Toolkit and Service, Offer Manager Toolkit and Service, Distribution Chain Builder Toolkit and Service, and Auction Toolkit and Service.

The UBX platform includes Integrated Support Services that help a business identify, research, and verify the credentials of any potential business partner, and to complete an online transaction. The Integrated Support Services include verification and due diligence tools, logistics, payment, transportation, and other professional services.
The Universal Business Exchange is a web-based solution for the conduct of global electronic commerce. As such, the development and deployment of the data management software requires state-of-the-art development tools. Applicant utilized the Allaire Cold Fusion development environment to construct the UBX platform. The Cold Fusion tool set provides Applicant with the ability to rapidly meet the functional demands of member user communities, because it is a web-optimized tool set that combines the server-side Cold Fusion Markup Language (CFML) with the Hypertext Markup Language (HTML). CFML provides the ability to control the behavior of applications, integrate a wide range of server technologies, and dynamically generate the content returned to the Web browser.

Cold Fusion provides the ability to quickly and easily integrate the three broad areas of technology that are the basis of Web applications: Browser, Server and Database. On the client side, Applicant uses the Cold Fusion applications to employ the Web browser as a universal client and user interface, thus enabling any of the technologies supported by Web browsers to create user interfaces. On the server side, the Inventive application of Cold Fusion integrates all of the major services offered by the Web, including directory services and email. For database integration, the invention employs the Cold Fusion Professional Edition to eliminate any constraints imposed by the selection of database engines, such as Microsoft SQL Server or Oracle.

A primary reason for the selection of the Cold Fusion tool set is that any business exchange system developed must be able to scale significantly, because it is built on a multi-threaded service architecture that supports advanced features, such as just-in-time compilation and caching, to ensure high performance on the most demanding sites. Since the inventive product offering is global in nature, the Cold Fusion deployment platform provides the ability
to employ multi-server clusters, because such a system has native load balancing and fault resistant characteristics to serve high volume, transaction-intensive applications reliably.

The invention also uses JavaScript for performing client side operations mainly to achieve the functions of client side validations and also because of an easier User Interface. This helps by significantly reducing network traffic to the server, thus improving system performance.

The inventive method and system exploits the strength of stored procedures offered by the Microsoft SQL Server RDBMS platform to provide an extremely fast search capability. This process enhances both the performance of the Offer Exchange and the user experience when locating data.

As the Universal Business Exchange grows, it must be able to quickly conform to emerging standards and embrace additional capabilities. The Cold Fusion platform is extensible with a wide range of technologies, including emerging standards such as the Extensible Markup Language (XML) and Common Object Request Broker Architecture (CORBA), security services on every level from development through deployment, and multilingual features to present products in different languages.

The system is responsible for the real-time support of communities, member companies, and the inventive Electronic Community. It is a robust, redundant, highly reliable, secure state-of-the-art implementation. The key features considered in the design of the system include: ability to integrate many potential applications, potential for unlimited client population, zero tolerance for variation in availability, and zero tolerance for variation
in performance. Multiple ColdFusion/Web Servers are expected to be required to meet the service level requirements of the hosted applications during peak periods.

The supporting hardware and software consists of Microsoft NT web servers on the front end (where web traffic is managed) and a Sun Microsystems UltraSparc processor coupled with Redundant Arrays of Inexpensive Disks (RAID) executing the Sun Solaris operating system on an Oracle relational database system. The choice of the Sun UltraSparc and Oracle combination conforms to the industry standard for mission-critical information systems. The current technology provides for clustered web servers, redundant file servers and replicated databases to ensure the highest possible availability of the system for subscribers.

The invention provides the highest level of customer service and support. The hardware and software supporting the software suite has been selected to ensure a high level of performance, responsiveness and scalability in response to rapid growth. The server computer system is managed in-house and in conjunction with Unibex's selected technology partner for Internet hosting. The system employs "best of breed" technologies to ensure the highest level of support for subscribers. For example, the system may be standardized on Compaq multi-processor servers for the backbone of the hardware suite and Sun servers for the database systems.

The current configuration employs a Router and Load Balancer connecting the system to the Internet. The next level down consists of two web servers that share the subscriber load between them. A file server and database server are directly connected to the web servers. In
addition, a Sun Microsystems UltraSparc is deployed for the operation and management of the Dun & Bradstreet World Base system.

The inventive Electronic Marketplace service deploys industry standard systems such as the Microsoft Windows NT operating environment, Microsoft Internet Information Server as the web server, Cold Fusion Server as application server, and Microsoft SQL Server as the database server. The Sun Microsystems UltraSparc that hosts the DNB World Base database runs with the Solaris Operating system, Sun Java Web server, Cold Fusion Server and Oracle Database Server.

The Microsoft Internet Information Server brings unprecedented power, both as a Web server for corporate Intranets and public Internet sites, and as the superior platform for the next generation of line-of-business applications.

To support the data requirements of the service, the Microsoft SQL Server is currently employed to enhance performance, reliability, and scalability by simplifying the processes of developing applications, managing systems, and replicating data.

To support the DNB World Base, currently 19GBs of data, the Sun Microsystems UltraSparc, with the Oracle relational database system, is used to manage the database and to search and retrieve records with relative ease and efficiency. The size of the database is the primary reason for maintaining this system separately from the main production database.

With regards to system testing, the invention currently has a single server hosting both the web server and the database server. This will be enhanced in the next round of upgrades
to a separate server for the database, and multiple web servers to simulate the actual product environment.

Business communities occasionally organize their members in a well-defined and easy to-understand context. Typically, they will offer participation in a Trade Show to allow their members to review new products, search out suppliers, research partners, investigate competitors, and buy or sell products or services. The Virtual Trade Show component of the inventive UBX platform is a comprehensive on-line equivalent of "real world" trade shows.

The Virtual Trade Show is an e-commerce enabled trade show organized by a Unibex business community for its member companies. Trade booths created by the member companies are aggregated within the Virtual Trade Show marketplace and categorized by industry and company. A virtual trade booth typically will include general background information about the company, company contact information, access to the company's web site & product catalog, detailed profile information about the company offered in a standard and searchable format, business preferences, references and trade information about the company's practices, email requests for more information or to make a contact with a company official, statistics and web reports on the number of visitors to the trade booth, or to any of the additional web pages accessible from the booth.

A business community is provided with all the tools and support to manage their Virtual Trade Show marketplace and its membership. The marketplace can be run year-round or offered for specific times or seasons in any given region. The community has the option to hold a virtual trade show in conjunction with their physical show, allowing members to sign
up for both, schedule appointments, check calendars and research companies from one online resource.

Member companies wishing to set up a trade booth in the Virtual Trade Show marketplace also have the support and tools necessary to create a professionally designed web presence. The invention offers tools to help a company choose, design and create content for a trade booth. These tools include hundreds of booth, web site and catalog designs, as well as specific customization tools, education and training, and support services. These tools are described below.

Virtual Trade Shows provide valuable contacts and sales opportunities for member companies, and generate revenues for participating Unibex business communities. The Virtual Trade Show provides a business community with a year-round opportunity to host community meetings and marketplaces. The benefits to member companies include augmenting their participation in “real-world” trade shows, and the critical ability to have a targeted, context-specific online presence where potential customers and existing business partners have easy access to information, products and services.

Paper-based catalogs allow an individual to browse a list of companies and corresponding product lists for needed items. Catalogs lack the ability to be easily cross-referenced, can be easily out of date when published, and can be costly to update and publish each year. Physical catalogs require significant expenditures of time and money for review of the company’s product information, designs to best present the company and its products, and costs to publish, print and distribute the catalogs.
Online product catalogs provide many features not available on paper-based catalogs. Online catalogs are always current because the company has the ability to change information at any time. Online catalogs allow searching and comparison of products. Online catalogs are also cheaper to manage and present to the community participants. The inventive Universal Business Exchange platform includes a unique online product marketplace that aggregates the online catalogs of companies into a Business Community’s Product Showcase as part of the suite of UBX services.

The Product Showcase marketplace within the UBX platform is a searchable, transaction-enabled marketplace organized by product category, product type and name. The Product Showcase automatically aggregates product information of a business community’s member companies who choose to have online catalogs hosted in or tagged into the virtual marketplace. The Product Showcase marketplace offers a visitor or procurement person the opportunity to search for any product offered by any member of the community in a single location. Purchases can be made within the marketplace. When a user selects a product from the search result, they are connected instantly to the member’s catalog for full details of the product including cost (in their currency of choice), shipping, and warranty information. The products in the Product Showcase are indexed and cross-referenced for ease of use. The visitor may browse, search, research and compare potential suppliers of goods and services.

The Unibex Offer Exchange is another comprehensive UBX marketplace that augments the current business process with features that enable a business community to offer value-added e-commerce capabilities to its member companies. These services result in cost savings, shorter transaction cycles, and expanded market opportunities. The Offer Exchange
provides a powerful platform where buyers and sellers submit requests, offers, proposals, import/export offers, and business development opportunities to one another. The Offer Exchange will then automatically match a company’s requests with another company’s offers, as defined by the Unibex global agent, and provide verification and validation facilities that businesses may utilize when a match has been made. The Offer Exchange provides an exclusive area where members can search all offers, proposals and opportunities posted by community members, as well as comprehensive company product and background information including offer details, web sites, catalog pages, profile information and verification services.

The Offer Exchange allows business communities to provide enhanced and expanded e-commerce services for their members. The Offer Exchange benefits individual companies by allowing them to trade seamlessly online. The company is able to search, browse and match with other companies wishing to do business of a similar nature. The profiling and registration services allow a company to submit an offer to purchase, sell or otherwise to partner with companies within the business community. The main benefits to a company using the community’s Offer Exchange marketplace include reduced costs associated with transactions and shorter transaction cycles.

Businesses are increasingly using auctions as an efficient and flexible sales channel to sell commodities, excess inventory, overstocked manufactured goods, and used equipment. Physical auctions can be costly and time-consuming for organizers to manage, expensive and time-consuming for individuals to attend and browse, and success rates can be highly variable. A Virtual Auction marketplace, also referred to as an auction house, is a cross-
referenced collection of product auctions within a business community or industry, including auction event schedules, qualifications, product descriptions and terms of sale.

The Unibex Virtual Auction marketplace is another marketplace offered to business communities and companies operating within the inventive UBX platform. The Virtual Auction House provides several different types of auction environments to a business community and allows member companies to auction off overstocked items, used equipment, excess inventory or even excess production capacity. The UBX platform offers companies a variety of different auction procedures to utilize.

A visitor or member of the community is able to browse the list of auction products, search, bid and purchase the items being auctioned. The invention offers verification and due diligence tools that enable the auction manager to verify the business credentials of prospective partners and customers. The UBX Virtual Auction also offers transaction support, logistical services, and pre-qualification services for business communities and their members.

An illustration of the portal architecture with exchange applications is shown in Figure 4. The overall system 400 can transact dynamic roles for both buyer 402 and supplier 404 or both 406 simultaneously. A four-tiered portal is shown, consisting of a mega or parent portal 408, a community portal 410, a company portal 412, and a personalized or private portal 414. The exchange server 420 provides an interface between marketplace services 422 and partner services 424. The exchange server 420 provides industry news, community news, business opportunities, and other content to users. The exchange server provides services and tools for buyers and sellers to source and build catalogs, construct business offers, conduct
auctions, bid/proposals, a storefront showroom and a distribution chain. Purchasing and
selling can be performed online with negotiations, pricing, terms, contracting, and
documentation (purchase and sales orders) all done on-line.

The exchange server 420 has logistics services to calculate landed cost, track
shipping, and investigate complaints. Payment and settlements can be made online with
electronic invoicing, credit, escrow and e-payments. Various communication methods can be
employed with the exchange server such as facsimile, email, and XML protocols.

The exchange server tools include community builder, master catalog builder, auction
house builder and trade show builder. The exchange server also offers a company portal
builder, web builder, exchange configuration, workflow management and relationship
management tools.

Marketplace services 422 make available e-procurement, supply chain distribution and
customer relations management. Partner services 424 include accounting, inventory, human
resources, payroll, banking, collections, travel and expense accounting among other services.

A typical screen print of a community portal 500 according to the present invention is
shown in Figure 5. Fire Protection products are made available online. An offer exchange
502 allows matching of prospective trading partners. An auction house 504 is available for
companies to participate. A virtual tradeshow 506 highlights products and services available
to users and members. The product showcase 508 combines catalog information with
complete transaction processing. Shown at the bottom of the screen print is a business
resource center 510 that can be utilized by business community participants.
Applicant recognizes that many businesses have already established a web presence and, in some cases, electronic commerce capabilities. For this reason, the Universal Business Exchange platform adopts an open environment that allows a company both to establish and operate a complete global electronic commerce operation directly, and to establish links back to existing web sites, electronic catalogs or ordering systems. In this manner, the UBX platform is not directly competitive with existing services, and can easily co-exist with more specialized customized electronic commerce products and services. For companies that have not established an effective web presence, they may use the available UBX tools to build their web assets on their own.

Illustrated in Figure 6 is a flow diagram of a system 600 configured according to the present invention. Exchange server 602 contains e-commerce marketplaces such as aggregated catalog, offer exchange, auction, and RFP/RFQ. Tiered portal layers 604, including mega hub portal 606, community market builder 608, company e-business portal 610, and corporate internal information technology facilities 612, interface with the exchange server 602 and the SME buy.side 614 and sell side 616. Integrator processors 618 and 620 provide an interface between the SMEs and application services provider (ASP). The ASP for large company buy solution 622 provides various popular software solutions. Likewise the ASP for sell side 624 makes available inventory, accounting and other popular software solutions for the sell side.

Interfacing with both the exchange server 602 and the ASPs 622 and 624 are various verification and due diligence tools 626, payment and transaction processing 628 and global logistics 630.
In sum, the Universal Business Exchange invention comprises a multi-tiered portal that provides a comprehensive, flexible and inexpensive "many to many" B2B e-commerce platform focused on the special needs of small and medium-sized companies. Any user of the system can search for products, offers and companies across the entire spectrum of the system. For example, a company in a particular business community such as Auto Parts can run a search that will include not just the Auto Parts Community, but also the Truck Parts Community, the Remanufactured Parts Community, the Machinery Community, etc. -- the entire spectrum of companies and organized markets within the proprietary Unibex system. This ability to instantly "go global" can generate many additional hits and leads for a company.

In addition to this unique multi-tiered search ability, the Universal Business Exchange will match all the hits that are generated, across all venues (auction, RFP, catalog) and communities, and enable a company to consummate the transaction within the system.
WHAT IS CLAIMED IS:

1. A system for facilitating transactions between participants comprising:
   an exchange server;
   an interface connected to said exchange server for receiving offer data and solicitation
   data from and sending said solicitation data and transaction data to said participants;
   an account registry database connected to said exchange server for storing account
   information for each of said participants;
   a solicitation database connected to said exchange server for storing said solicitation
   data received from said participants; and
   a computing means connected to said exchange server, said account registry database
   and said solicitation database for matching said offer data with said solicitation data from said
   participants.

2. The system according to claim 1 wherein said exchange server interfaces with
   the Internet.

3. The system according to claim 1 wherein a single entity controls and maintains
   said exchange server.

4. A computer implemented method for market participants for automatically
   identifying and matching offer data with solicitation data, said solicitation data stored in a
   solicitation database, said method comprising the steps of:

   receiving offer data from a participant;
   storing said received offer data in a database;
   comparing the stored offer data to corresponding solicitation data;
   identifying solicitations with matching offers;
   transmitting identified matching solicitations to market participants.
5. The method according to claim 1 wherein the offer data and the solicitation data are received over the Internet.
Figure 4
Figure 6