**Wireless
Equipment-
Driven
Service
and
Re-Supply
Commerce
Applications
for
Global
Industrial
Manufacturers**

WIRELESS COMMERCE AUTOMATION

BUSINESS PLAN

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Business Opportunity

Wireless Commerce Automation brings the power of re-supply automation and service automation to industrial equipment manufacturers who sell through global, highly mobile trading partners. The company delivers cellular wireless and Bluetooth™ wireless applications that automate mobile commerce, services, sales and marketing business processes across multiple demand chain, supply chain and value chain trading partners.

Global companies that sell high-value industrial capital equipment must also re-supply consumables (e.g. grinding teeth, blades, etc.), forward-deploy repair parts and quickly respond to service problems. Because industrial capital equipment produce significant revenue for their owners, down-time due to delays in delivering consumables, parts and service can have dramatic financial consequences. Wireless Commerce Automation exploits equipment intelligence to enable pro-active service and re-supply automation. By integrating existing intelligent capital equipment with wireless mobile e-business (m-business) and mobile e-commerce (m-commerce) applications we can speed the exchange of equipment and business information such as:

Fixed and mobile solutions

Exploit intelligent pervasive computing

- Diagnostic Information from Machines;
- Service Information to Repair Personnel;
- Machine Consumables Re-supply Orders;
- Inventory Levels from Factory Floor;
- Product Availability to Mobile Sales Force;
- Sales Material to Field Dealers;
- Purchase Authorization to POS;
- Freight Documents to Loading Dock.

Mobile Internet services that deliver end-to-end solutions

Wireless Commerce Automation delivers these second generation wireless business applications based on a secure wireless application framework that supports a wide variety of wireless and wired devices. In addition, Wireless Commerce Automation provides the equipment monitoring agents required to collect and consolidate service and re-supply business information. Finally, Wireless Commerce Automation provides the back-end commerce infrastructure and back-office integration required to successfully deploy wireless commerce solutions.

From Machine to Palmtop to Desktop to Server

Wireless Commerce Automation is the only company that can currently provide an integrated wireless Commerce, Service, Sales and Marketing Automation solution. Based on a high-level analysis of the products in this early emerging market, the Company estimates that it has an 18 month product and marketing lead-time within our target markets over possible competition. Wireless Commerce Automation seeks $10 million to exploit this leadership position and to capture a significant share of the wireless business application market as it matures into a multi-billion dollar market. The company will require additional capital to expand international sales and marketing efforts and consolidate market position, as deemed timely by the Board of Directors, during its second and third years of operation.

Industrial Supply and Service Challenges

Wireless Commerce Automation has worked with a number of industrial manufacturers and customers to understand their supply and service problems, and to identify potential solutions to those problems. We have selected 5 examples that are representative of the challenges faced by manufacturers and users of high-value capital equipment:

Heavy Equipment Manufacturer – For a Fortune 50 Construction, mining and agricultural equipment manufacturer, field product service problems can mean the loss of tens of thousands of dollars in revenue for their customers. Proactive wireless service

automation can resolve potential service problems before the equipment suffers downtime. Existing equipment diagnostics can often identify potential service problems well in advance of a break-down. Currently the diagnostics report major problems on an operator display once they have occurred. This requires the operator to then notify the dealer and request service support. Depending on the problem, the location of the equipment and the availability of service personnel, the equipment may be unusable for hours or days. Using wireless technologies these problems can be caught earlier by reporting questionable diagnostic information to the dealer or manufacturer well before a problem is serious enough to stop operation. For instance, when the internal diagnostics recognize a measurement that is outside of normal operating thresholds, the equipment reports diagnostic information via a cellular connection to the dealer service automation server. The server then;

1. downloads additional diagnostic software and data to the equipment;
2. determines what potential problems might have caused the diagnostic anomolies (an analysis that is often not possible within the equipment itself, and which is often updated as the manufacturer and its service personnel gain experience with a product);
3. orders likely repair or consumable parts for forward deployment to the customer site;
4. generates a work order for appropriate service technician to perform pro-active maintenance;
5. downloads relevant collect diagnostic information to the service technician's wireless device along with the work order;

Once the service person arrives on site, the equipment (recognizing an authorized service technician) downloads additional and most up-to-date diagnostic and service information to the technician's wireless device using a BlueTooth personal area networking connection. The technician's wireless device becomes the monitoring and management station for the equipment to be repaired.

Elevator Manufacturer – The Elevator Division of a Fortune 50 corporation has aggressively pursued Asian installations. Unfortunately, a shortage of experienced local service technicians has created a global support problem. Since their elevators are already heavily instrumented, and an experienced help desk team is available in Greenwich CT, an integrated wireless solution could allow their inexperienced local technicians to learn on the job with no loss of customer satisfaction. In this example, elevator diagnostics recognize when a potential problem has occurred and triggers a global response that engages local dealer service and the US-based manufacturer's help desk . As with the heavy equipment case, diagnostic and service information is exchanged, this time via satellite, local cellular and BlueTooth personal area networking. Once the local technician is within range of the elevator to be serviced additional information is exchanged with the equipment and a wireless collaboration session is set up with the help desk.

Heavy Equipment Rental – A major Heavy Equipment manufacturer's low-end and mid-range heavy equipment is often rented for specific construction projects. While such equipment may not require the expense of cellular connection to the dealer, once it is returned to the rental depot, BlueTooth-based personal area networking would allow the equipment to be automatically checked in as it passes in the gates. In addition, detailed operating information (e.g. total number of operating hours) and diagnostic information can be transmitted to service personnel to ensure the appropriate servicing is performed before the equipment is returned to the line for re-rental.

Aluminum Mining and Manufacturing – To streamline operations in their manufacturing and maintenance, a major aluminum producer would like to put wireless devices into the hands of MRO personnel that will ease ordering required materials, tools and parts from

internal stores (stock cages).   Automatic re-supply ordering as stores' inventory falls below minimum stock thresholds and authorized special order processing will ensure MRO personnel get material quickly with a minimum of administrative overhead.

Construction Tools Distributor – The dealers for a construction tools distributor carry tens of thousands of products from hundreds of manufacturers. Much, but not all of their inventory is sourced through this distributor. To increase sales and consolidate their distribution position, the distributor would like to make re-supply ordering simpler for their dealers. By putting a wireless device into the hands of their dealers that can be used to capture inventory information (via bar code) from the floor, they can recognize when inventory levels drop below preset thresholds and automate the reorder process from the, now, preferred distributor.

For more than a decade many of these pieces of high-value capital equipment have supported supply monitoring and diagnostics reporting accessible to visiting field service technicians and sales personnel. In recent years some manufacturers have supported hard-wired telephone connections that allow customers, manufacturers and dealers to access this information remotely. However, this approach only works with permanently installed equipment (e.g. elevators, boilers) in regions with reliable telecommunications infrastructure (e.g. Europe, North America, etc.).

The advent of ubiquitous microprocessor controls installed in even the simplest of devices and the deployment of global wireless networks creates the opportunity for smart machines (e.g. from vending machines to locomotives) to be monitored, managed, and serviced more effectively via wireless service and re-supply solutions. Proactive re-supply automation can reduce sales time and travel. Proactive service automation can reduce downtime and service time by diagnosing potential problems, reporting status, recognizing potential solutions, order replacement replacement parts and consumables, and schedule service or sales calls well before a piece of equipment becomes inoperable. This decreases lost revenue, decreases lost work, decreases service costs, increases reliable life of the equipment and increases potential profit.

For example, when a mining machine suffers a failure, the opportunity cost can be onerous. Many of these machines produce thousands of dollars in revenue per minute. In addition, the idled labor costs often include unexpected overtime pay for workers awaiting equipment repair. So, even brief downtime is expensive. Since, such machines are often located miles within the earth at mine complexes in remote corners of the world, turn-around time for required replacement parts can be days if the parts are not forward deployed nearby. Compounding the problem is the potential for ancilliary equipment damage from an unchecked breakdown. The cost of an unrecognized and unreported problem can grow to hundreds of thousands of dollars (even millions of dollars in a few infamous cases, e.g. breakdown related Chunnel construction delays).

Solutions

Within the next 12 to 24 months software vendors and their service partners will be able to deliver end-to-end service and re-supply solutions that exploit:

1. wireless Global Area Networks (e.g. Teledisc Satellite Networks) to report information to the original manufacturer in another country,
2. wireless Wide Area Networks (e.g. GSM Cellular Networks) to report information to a regional dealer or regional ASP,
3. wireless Local Area Networks (e.g. wireless LAN) to report information to local customer device management, and
4. wireless Personal/Machine Area Networks (e.g. BlueTooth) to report information to an attending service or sales representative.

Wireless Commerce Automation is delivering applications and services which enable the aggregation of industrial-driven commerce up, and down, the supply/distribution chain via machine-driven re-supply and service e-commerce. These solutions will allow our customers to extend their diagnostic and supply chain systems from the machine to field personnel to dealer to manufacturer to supply chain partners in seconds any time anywhere around the globe.

Wireless Commerce Automation's products allow companies to deliver and manage a wide range of multi-national and multi-lingual commerce, service, re-supply and sales information to cell-phones, e-books, laptops, desktops, and servers via multiple wired and wireless protocols (e.g. WAP, SMS, WHTML, DHTML, XML, etc.). Wireless Commerce personalization and SmartAgent technology ensures that only the most critical information is delivered to each user. Wireless Commerce security technology ensures that only that information appropriate to a particular trading partner or user is accessible to the client device. Wireless Commerce integrates this information across the entire distribution/supply chain through multiple electronic commerce and supply chain protocols (e.g. WAP, EDI, OBI, cXML, ebXML, BPMI, Rosettanet, BizTalk, CPFR, etc.). The companies products include:

- Wireless Commerce Automation Suite
- *Wireless Service Automation Suite*
- *Wireless Sales Automation Suite*
- *Wireless Marketing Automation Suite*
- Secure Wireless Application Server
- EDI Commerce Integration Server
- *GCI Commerce Integration Server*
- *ebXML Commerce Integration Server*
- *cXML Commerce Integration Server*
- *Rosettanet Commerce Integration Server*
- *BizTalk Commerce Integration Server*
- *OBI Commerce Integration Server*
- *CPFR Commerce Integration Server*
- *SNMP Diagnostic Integration Server*
- *SNMP Service Diagnostics Agents*

Market Analysis

Wireless Commerce Automation is delivering wireless service, re-supply, sales and marketing solutions to industrial equipment manufacturers. To understand the our market potential, we need to understand the trends across multiple technology-specific horizontal markets. These include:

1. global cellular device and telecommunications;
2. wireless Internet;
3. wireless business services;
4. e-commerce and m-commerce;
5. customer relationship management.

Wireless Application and Service - According to Zdnet, wireless penetration rates run as high as 50% in Finland, Norway and Sweden, while in the US about 30% of the population use cell phones. By 2001, 8% of Europeans will be using wireless Internet services compared to just 1.3% in the US. This differential can partially be explained by European cellular telecommunications tariffs that do not allow service providers to charge for incoming calls to cell phones. In addition only about 20% of European consumers have PC access to the Internet compared to 50-60% of US consumers –

resulting in lower use of electronic mail for personal communications. Finally, fragmentation of U.S. cellular infrastructure as a result of deployment of multiple incompatible cellular technologies may have kept price competition at bay and throttled broad consumer adoption.

In Asian, as in Europe, multinational adoption of GSM as the cellular technology of choice has enabled business and personal users to travel at will. In addition, due to the relative lack of hard-wired telecommunications infrastructure in rural areas there is an opportunity to supplant aging hard-wired systems with new cellular systems. The Pacific Rim is a wireless market poised to explode in the next decade.

Given the dramatically smaller number of PCs in Europe and the Pacific Rim and the dramatically higher number of cell phones deployed or expected to be deployed, we predict that Europe will be the first market in which major wireless applications will be test marketed over the next 2-3 years and that Asian countries will be the largest potential market for those applications within 3-5 years. The US market, while important as a wired commerce automation market, will lag behind both Europe and the Pacific Rim in deployment of wireless commerce automation applications due to the continued fragmentation of US cellular telecommunications standards.

Convergence of wireless and internet devices - The predicted wide adoption of cellular technology in Europe and Asia/Pacific is creating a new opportunity for delivering enterprise class applications over wireless devices. Motorola predicts convergence of wireless and Internet devices by 2005 with wireless devices growing from 300 million in 1998 to 1 billion in 2005 and Internet devices growing from 200 million in 1998 to 1 billion in 2005. Motorola also projects 100 million WAP-enabled devices by 2001, with nearly all devices Internet-enabled by 2005. This is echoed even more aggressively by The Yankee Group, which in 1999 predicted that "New mobile phones growing faster than wired Internet accounts – 1 billion mobile phones expected by 2003 with over 60% capable of wireless Internet access."

Convergence of Internet and Wireless
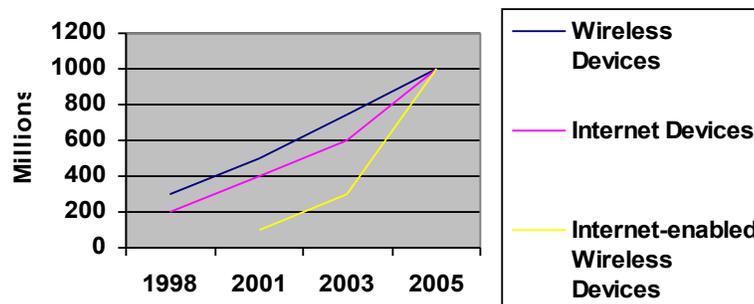
Business use of wireless data services - This spring Cap Gemini America projected that "the number of business people using cell phones for wireless data will soar from 3% of current wired users to 78% over the next 12 months." The Yankee Group in 1999 predicted that "the number of wireless and mobile data subscribers topped 7 million in 1999 and will climb to 21 million in 2002." While we have seen some softness in use of wireless services in Europe and Asia, it is believed that this is the result of the current lack of a "killer application" to drive market adoption. Given the relative simplicity of current wireless solutions, we still believe that, as predicted by META Group Research, by 2003, half of all business users will be mobile data service and business application users. As cellular and Internet converge, we believe that by 2005 in Asia and Europe wireless devices will become the de facto terminal for ¾s of all business users.

E-commerce/m-commerce market trends – Forrester Research predicts B2B e-commerce revenues will climb from $109 million in 1999 to $840 million in 2002. The
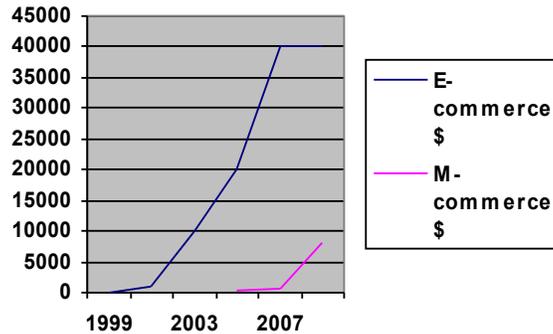
Gartner Group predicts that B2B e-commerce revenues will climb to $7.29 trillion by 2004. As a segment of this overall e-commerce industry, Strategy Analytics predicts that by "2005 mobile electronic commerce will expand rapidly to 14 billion transactions with a total value of $200 billion." [RCR Radio Communications Report, 1/10/2000] If mobile commerce grows at a rate similar to total B2B e-commerce, m-commerce is predicted to grow to ~$800 million by 2007 and up to $8 billion by the end of the decade.

CRM Application Market Trends - Customer Relationship Management (CRM) encompasses Field Service Automation, Help Desk, Sales Force Automation and Marketing Automation. The CRM market is one of the hottest enterprise software markets with annual sales in excess of $2 billion and projected growth of 50% CAGR for the next three to five years (Adams, Harkness & Hill). However, the leading vendors in this market (for example, Pivotal, Siebel Systems) focus almost exclusively on the needs of direct sales organizations and largely ignore the needs of those organizations who market, sell and service through channels. In addition, their focus on PC-based and hard-wired Internet solutions fails to support the needs of companies selling through highly mobile service and re-supply personnel.

If mobile CRM grows at a rate similar to historic growth of wired CRM, m-CRM is predicted to grow to ~$200 million by 2002 and up to $800 million by the end of the decade.

Managed Equipment - There is the potential for one to two orders of magnitude (10-100 times) more machines than humans as potential client licenses. Once integrated into the service and supply chain via wireless, machine-driven sales and service will result in high-value transactions and high-value cost savings.

Target Markets

Wireless Commerce Automation recognizes that deployment of enterprise-class applications requires an understanding of not just one broad market, but potentially

Wireless Business for Manufacturers of Industrial Components:

- Construction Tools
- Machine Tools
- Electronics
- Automotive
- Trucking
- Construction Equipment
- Aerospace
- Defense

These verticals have similar:

- Service & Support
- Supply Chains
- OEM Relationships
- After-market Distribution

Customer Relationship Management Market

dozens of application-specific vertical markets, industry-specific vertical markets and global regional markets. With the limited resources of a startup company, we can only address a small number of these market combinations at a time. With attention paid to the potential markets we can carefully map out market attack tactics that lead to early success and profitability within a small number of niche markets while resulting a long-term broad strategic success across multiple related global industries. The markets that we expect to attack over the coming 36 months include:

Application Horizontal Markets:
- **Commerce Automation** (product delivered 1Q2000)
- **Mobile Service Automation** (product available 4Q2000)
- **Mobile Resupply Automation** (product availale 4Q2000)
- **Mobile Industrial Marketing Automation** (future opportunity)
- **Fulfillment Inventory Automation** (future opportunity)
- **Manufacturing Inventory Automation** (future opportunity)
- **Freight and Transportation Automation** (future opportunity)

Industry-specific Vertical Markets:
- **Heavy Equipment** (e.g. Caterpillar)
- **Building Equipment** (e.g. Otis)
- **Construction Tools** (e.g. Stanley)
- **Healthcare Devices** (e.g. Agilis)
- **Computers** (e.g. HP)
- **Networking Devices** (e.g. Cisco)
- **Mobile ASPs** (e.g. UptoDate, Wholesaler Direct)

Regional Markets:
- **North America** (2000)
- **Europe** (2001)
- **Asia/Pacific Rim** (2001)
- **South America** (2002)
- **India** (2002)

Wireless Commerce Automation delivers Internet-based wireless business applications that span Business-to-Business E-Commerce, Service Automation, Resupply Automation and Supply Chain integration to meet the needs of global manufacturers who market, sell and service through indirect channels. As the vendor with the clearest and most-complete product vision, Wireless Commerce Automation expects to drive the definition of wireless business applications and capture a significant share as it matures into a multi-billion dollar market.

Based on an analysis of companies within our target Industrial Equipment market (SIC Codes 3411 to 3873), our core market comprises over 22,000 companies that are $100 million or larger in revenues and over 10% of these companies (2,675) are $1 billion or larger in revenues (InfoUSA 1999).

Anticipated customer base

Wireless Commerce Automation is attacking these global, large, rapidly growing, multiple target vertical markets. With significant similarities that allow solution portability across verticals, the Industrial Capital Equipment vertical markets represent a market four times larger than the High Tech markets traditionally addressed by Silicon Valley-centric startup companies. By addressing the under-served service and re-supply needs of these high-value capital equipment manufacturers we have a unique market opportunity with a large potential market lead.

Given the large number of Global 2000 companies headquartered in the US, Wireless Commerce Automation is targeting wired commerce automation applications to US-based companies in specific vertical markets as a means to gain access to future wireless sales. In parallel, Wireless Commerce Automation will participate in European, Asian and International wireless application standards development to gain international market recognition. We will test market products in Europe and Asia both in conjunction with US-based Global 2000 companies (e.g. Caterpillar) as well as European and Pacific Rim companies.

Product Description

Wireless Commerce Automation is delivering service and re-supply wireless business solutions to the global manufacturing market. These solutions allow Channel Service Executives to deploy standard diagnostic, maintenance and service information while collecting product problem and warrantee information. They allow Channel Sales Executives to manage re-supply and proactive sales through indirect channel partners, internal direct sales and end-customer Internet sales while managing and easing channel conflicts. They allow Channel Marketing Executives to collect critical equipment, customer and market information from channel trading partners

These products are based on the following application and infrastructure products:

	Product	Version	Availability
Applications:	Commerce Automation Applications	1.1	*Now*
	Service Automation Applications	2.0	*Q4 2000*
	Re-Supply Automation Applications	2.2	*H1 2001*
Servers:	Secure Web Application Server	1.1	*Now*
	Secure Synchronization Server	2.0	*Q4 2000*
	EDI Commerce Integration Server	2.0	*Q4 2000*
	Secure Wireless Application Server	2.2	*Q1 2001*
	XML Commerce Integration Server	2.2	*H1 2001*
Developers Kits:	Software Developers Kit (SDK)	2.2	*H1 2000*
	Agent Developers Kit (ADK)	2.2	*H1 2000*

Once this initial product line is complete, Wireless Commerce Automation plans to develop add-on products that meet the specific requirements of vertical markets such as Construction Tools, Machine Tools, Automotive, Trucking, Heavy Equipment, Aerospace, Electronic Components, and Defense.

In addition to developing products that meet the needs of global manufacturers within these vertical markets, Wireless Commerce Automation is also considering how we meet the needs of the mid-market and SMB sectors within these verticals. We are developing packaging options that would enable us to reach the smaller participates at the extremes of the supply and distribution chains by selling through Value-Added Resellers, partnering with Wireless Application Service Providers to offer subscription-based services and partnering with market-specific Wireless Commerce Portals.

Product Benefits

Improved Field Service and Retention – by being able to respond more quickly with more up-to-date information, Wireless Commerce Automation enables greatly improved field service through their distributors.

Enhanced Customer Feedback – by capturing and distributing equipment information throughout the supply and distribution chain, Wireless Commerce Automation enables the capture of market information and customer feedback to drive, for example, the product design process.

Increased Sales – by targeting training, information and promotions at their distributors' sales, marketing and service personnel on a one-to-one basis, Wireless Commerce Automation enables a better-trained, better-informed and more motivated distribution chain.

Active Management –by supporting the timely collection of critical business information on service situations, customer problems, product problems and distributor performance Wireless Commerce Automation enables the active management of the service, resupply, sales and marketing processes across their partners.

Cost Savings – by providing easily accessible, wireless servicing, product and pricing information, Wireless Commerce Automation reduces the need for costly, printed service manuals, technical communications, parts lists, and catalogs. This enables manufacturers to reduce the people, time and money spent servicing repetitive requests for basic service information.

Competitive Differentiation

Wireless Commerce Automation's product line includes many technical and functional features that differentiate our products from current and potential competitors. These include:

1. Incorporation of management agent technology, service automation, sales automation and commerce protocols to create complete end-to-end global equipment support solution;
2. Systems integration tools that speed deployment of customer solutions that tightly integrated customer legacy systems with Wireless Commerce Automation products;
3. Peer-to-peer communication between equipment, dealers, manufacturer and field representatives;
4. Commerce, Sales, Service and Marketing applications that adapt to the specific features of each user's wireless devices.
5. SmartAgents which simplify the wireless business experience by automating the processing of business information and personalizing the information delivered based on the user's role, business need and user location.
6. Enterprise-class business services which automate commerce processing and integrate with back-office and trading partner systems via a broad range of standard commerce protocols and interfaces.
7. Support for multiple standard commerce protocols that ensure interoperability with any and all customer trading partners.

Compelling Customer Value Proposition

Wireless Commerce Automation's products help equipment manufacturers and dealers to pro-actively manage and deliver repair and re-supply services. The result for our customers will include:

1. reduced equipment downtime;

2. improved deployment of consumable and repair parts;
3. reduced inventory costs;
4. improved control over service and re-supply processes;
5. reduced overhead and field personnel costs;
6. increased revenue;
7. increased manufacturer's customer revenue;
8. increased manufacturer's customer loyalty;
9. increased manufacturer's customer satisfaction.

As a consequence we expect our customer's return on investment (ROI) to be measured in months not years – independent of magnitude of investment.

Problem Analysis

Intelligence is migrating from center of networks (e.g. servers) to edges (e.g. mobile devices). In many cases these mobile devices are associated with machinery rather than humans. As we've seen with the Caterpillar Mining Machine and Otis Elevator case studies, intelligent wireless-connected capital equipment can reduce equipment downtime, improve deployment of consumable and repair parts and increase customer satisfaction. However, integrating intelligent high-value capital equipment with service and re-supply automation systems has been difficult - particularly for globally installed or mobile equipment. Some non-mobile equipment had been connected via satellite in the past, but the high-cost of dedicated satellite up-links limited this approach to only the most critical equipment. The advent of local cellular data networking and global satellite data networking will result in ubiquitous connectivity of high-value capital equipment.

The same ubiquitous connectivity is revolutionizing the work of the highly mobile repair and re-supply personnel that service this equipment. While the wireless devices now exist that would enable improved servicing and re-supply, the wireless applications required do not yet exist.

Most first generation wireless solutions simply reformat, summarize and filter existing web content for mobile devices. These first generation applications have limited interactivity and integration due to dependence on simple HTML content translation from existing HTML-based web sites. Given that most wireless data enabled cell-phones, pagers and PDAs have very limited screen sizes and data network bandwidth, simple content translation leads to a very frustrating experience when attempting to do business using these first generation wireless solutions.

Quote: Steve Harmon, Chairman & CEO, e-harmon.com

"…the basic technology to make the Web wireless is far from figured out. The early PCS or minibrowser attempts are not ready for prime time. These are the small screen cell phones with
limited Web browsing functionality.

I tried the Sprint PCS MiniBrowser once -- that's right, once -- and found it to be akin to sticking your tongue on a frozen lamp pole.

The flaw with the cell phone as browser approach is fairly straightforward: a 3-inch screen can never offer what a 21-inch PC monitor can offer.

Yet scores of engineers at some of the world's top tech firms toil on this shrinkage approach daily. I call it the 'Honey I Shrunk The Web' approach. It's not a good idea to take visual elements that want to be 21-inches diaplayed and put them on a 3-inch display."

For example, most cell phones have 3 to 5 lines of text at 15 to 17 characters of text per line. They may also have 1 to 3 lines of smart menu and status information. The Sprint PCS NP1000 offers 9 lines of 17 character text. Even the Qualcomm (Kyocera) pdQ SmartPhone (a cross between a cell phone and a Palm III organizer) can only offer 12 lines of 35 character text. And text entry using standard telephone keypads can be torturous. While two-way pagers such as the Motorola PageWiter 2000X and Research in Motion's Inter@ctive Pager 950 have larger screens and tiny QWERTY keyboards, connect time can take 30-90 seconds. Wireless PDAs such as the Palm Pilot VII, or a Palm V with a Novatel Omnisky CDPD modem offer larger screen sizes and stylus-based interaction. And larger hand-held PCs, such as the HP Jordana offer half-VGA to VGA resolutions screens (albeit significantly smaller than laptops). The challenge for wireless application developers is to be able to deploy applications that allow users of any of the very different devices (and even traditional laptop and desktop users) to successfully and enjoyably interact with critical business applications to perform their jobs – whether from their office, an airport or a customer site.

Experience has shown that there are significantly different application paradigms required for hard-wired and wireless applications. The current trend towards condensing, filtering and summarizing existing web sites for display through wireless devices is a fatally flawed approach to delivering useful applications to mobile users. Simply condensing and reformatting the information on a "hardwired" web site results in many screens of information that must be paged through on many mobile devices just to find the few pieces of business information that are important to the wireless user.

Zdnet>eWeek: "Wireless Internet users are not satisfied with static pages. They want to be able to use their cell phones to receive information interactively and even execute simple web-based transactions. An Excite/Nokia survey in March 2000 determined that "People were anxious to execute transactions as opposed to looking and researching."

Mobile application user interfaces must not only be clear, concise and efficient, but must also adapt to the capabilities of the devices and the current needs of the user. Wireless Commerce Automation goes a step further with the use of active business information agents (WCA SmartAgents) that relieve the beleaguered mobile application user by automatically handling many of the detailed steps of processing standard business transactions (e.g. PO limit rules, auto-approvals, pre-filled forms, etc.)

Wireless Commerce Automation uses multiple different templates that deliver only the most appropriate information required by the user based on the user's role, the application and the device being used. If the user is creating a purchase order on a Palm Pilot VII, extraneous details of the order, such as addresses, descriptions, even unit costs are suppressed to ensure the critical line item and total information are readily available. Other, less pressing, information can be accessed with one to two additional menu selections.

Product Technology

Wireless Commerce Automation's products have been designed and developed by an engineering team with a combined 120 years experience developing distributed Internet-based enterprise applications. We are exploiting technology developed by members of the company over the past decade for web-based application, equipment management, channel automation and service management. These technologies include:

Policy-directed Business Processing – Wireless Commerce Automation supports XML-based business processing templates that drive many of the processing decisions across all participating devices and equipment.

Follow-me - Wireless Commerce Automation's "Follow-Me" technology recognizes when critical business documents are required for making specific decisions (e.g. sales contracts, loan folder, product problem histories, etc.) and transfers copies of those documents to the appropriate devices for processing under control of Wireless Commerce Workflow technology.

AgentFactory – Wireless Commerce's AgentFactory is a development and systems integration tool that uses device and equipment-specific XML templates to generate Java code specific to the needs of the equipment and function to be performed. This reduces integration time for new types of equipment and devices to 10% of the time required for hand-coding support for the new equipment.

Device-sensitive personalization – Wireless Commerce Automation uses Policy-directed technology to determine which information is downloaded to a device based on the type of device, current business role and end-user preferences.

Device-sensitive application interfaces – AgentFactory generates XML display templates for new wireless devices based on policies defined for various business applications. These XML templates determine what business information is displayed where on the screen for each wireless device. (In cooperation with Voice technology companies, this technology can be extended to voice-based interfaces as well.)

SmartAgents- By combining "Policy-directed" technology with Agents generated by AgentFactory we create business processing agents that can autonomously handle standard business and service problems independent of location or processing device.

MobileAgents – Combining "Follow-me" technology with "SmartAgents" generated by "ManageFactory" produces intelligent mobile agents that can fulfill a business function across multiple different wireless devices. For example, assume an industrial engine or motor begins to run below specification thresholds:

1. engine-resident diagnostic agent recognizes potential problem
2. collects all relevant diagnostic information as defined by diagnostic policy
3. transmits a copy of itself and its information to the dealer server
4. collects the latest diagnostic and resolution policies
5. generates a pick-order for policy-required parts
6. identifies available service technician
7. then transmits itself and it's newly acquired diagnostic information to the technician's device
8. once within repair range of the equipment transmits updated diagnostic information to equipment
9. coaches the technician through the required repair.

Cellular Wireless Protocols – Wireless Commerce Automation exploits WAP technology to remain independent of the underlying cellular protocols. Since the cellular industry is still very fragmented, this protocol independence is critical to the company's success. In addition, our support of low-bandwidth connections will be important over the next three years. 3G (third generation) wireless networking technology is under development that will dramatically increase bandwidth for wireless applications. The first GSM 3G networks, with 2mbps data rate, are being tested in Singapore with projected deployment to Japan in 2001 and Europe in 2002. Unfortunately, the fragmented US wireless market is not likely to see broad deployment of this technology until 2005. However, chip, device and network device manufacturers are working to boost speeds for CDMA, TDMA and 2G GSM speeds from current 9.6-14.4Kbps up to 56Kbps within the year, supporting basic application requirements. This is comparable to current wired telephone (POTS) modem connections. There is the potential for incremental increase

for these 2G systems up to 112Kpbs by 2002. So, while many application developers are focused on the Holy Grail of high bandwidth wireless, Wireless Commerce has focused on ensuring support for even the lowly 9.6Kbps devices of today.

Commerce Integration – Wireless Commerce Automation's Integration Server architecture provides pre-defined integration for most common commerce protocols. In addition, Wireless Commerce Automation exploits the dominance of EDI for integration with a broad range of back office legacy systems. Wireless Commerce Automation is supporting XML-based interfaces being defined for Commerce Transactions, ERP, Workflow, Policies, etc.

Scalable Architecture - Wireless Commerce Automation's product has been designed to scale and to provide a fast, stable environment to even the largest global corporations. This has been achieved by implementing n-tier client-server products as 100% Pure Java Applets and Servlets that are driven by XML templates and display pages.

Business Information Sources **Business Processes** **Supply Chain Integration**

Equipment Agents
Equipment Managers
Business Policies
Service and Sales Personnel
Supply Chain Managers
Mail
Commerce Servers
Forecasts

Electronic Data Interchange
ebXML, cXML, Rosettanet
Open Broker Interface
WCA Synchronization
Electronic

Online Fax
Distributed Printing

Policy-Directed
Follow-me
SmartAgents
MobileAgents

Service, Re-supply Sales, and Marketing Information Flow

Vendor Independence - The Wireless Commerce Automation Servlets integrate with Netscape's Enterprise Server, Microsoft's Internet Information Server, Apache Web Server and Sun's Jeeves Server. Wireless Commerce Automation implements a hybrid object-relational database schema on most relational databases accessible through JDBC/ODBC. The client-server protocol is based on HTTP and RMI to access and invoke reusable Network Business Objects.

Standards - The Wireless Commerce Automation Synchronization Server supports XML, EDI, OAGIS in addition to the Wireless Commerce Automation Server-to-Server Synchronization protocol. The Wireless Commerce Automation architecture is RMI and CORBA compliant.

Security – Wireless Commerce Automation's security features ensure that channel partners are able to access information appropriate to their relationship with the supplier (e.g. per partner price plans and exclusive product offerings) while protecting sensitive information from their sales

Marketing, Sales, Distribution & Service

Business Model

Wireless Commerce Automation's business strategy is to build a strong product company that goes to market through a direct sales organization making extensive use

of third party resources in areas such as implementation to support a rapidly scaleable business model.

Revenue Model – Wireless Commerce Automation has a scalable revenue model that exploits exponential and viral capture of industrial vertical markets. By enabling machine-driven sales and service e-commerce we support aggregation of industrial market sales up and down the supply/distribution chain. We enter vertical markets through major "anchor accounts" which become beach-heads for entire supply/distribution chains. We attack these markets with a product strategy enhances product value to current customers when the initial customer's trading partners also install Wireless Commerce Automation products. This provides the initial motivation for our anchor account customers to provide introductions. We follow-up with a sales strategy that rewards existing customers for introductions to and support closing sales to trading partners by providing discounts on follow-on licenses for each successful introduction.

These marketing, product and sales strategies are leveraged by service strategies that are designed to deliver follow-on recurring revenue streams for wireless business information brokering, commerce trading hubs and product maintenance. These value-added services have the potential to be worth two to twenty times the initial product revenue. Each dollar of product sales delivers two to twenty dollars in follow-on product sales, equipment client licenses, maintenance subscriptions and ASP subscriptions over the following 5 years. (e.g. for each $1 in initial product sales over the following 5 years we predict $1 total in maintenance subscriptions, $1 in follow-on internal sales, $2 in follow-on equipment licenses, $1 in follow-on maintenance subscriptions, 2-10 dollars in follow-on trading partner sales, 1-10 dollars in ASP service subscriptions.)

We believe that machine-driven commerce will drive sales of one to two orders of magnitude (10-100 times) more "client" licenses than pure human user-based systems; Each machine that participates in the wireless service and commerce environment (e.g. tractor, elevator, manufacturing machine) requires a "machine client license" in addition to each human that supports the service and commerce environment (e.g. service representative, sales representative) requiring a "user client license". While machine client licenses sell for 10% of a human user license, the dramatically higher numbers of licenses result in 2 to 10 times the revenue of a pure human user application.

Product and Services Mix - Wireless Commerce Automation is not in the business of systems integration and our business model is therefore based on an 80:20 product to services mix. However, we recognize the paramount need to develop highly satisfied, reference-able customers and we will therefore "own" initial implementation and integration contracts. Our model will be to engage our Systems Integration business partners in these projects on a mentored basis with a view to transferring our knowledge to these partners and enabling them to complete future projects independently. We believe that this will be an attractive model to Systems Integrators as our product has the potential both to enable rapid deployment of highly functional solutions where time-to-market is critical and to open up significant integration and customization opportunities.

Revenue Sources – Global 2000 corporate "end-user" licensing form a robust foundation for follow-on value-added subscription-based services and OEM sales to industry-specific wireless trading hubs. The revenue is heavily weighted towards new end-user licenses in the initial two years. However, in later years maintenance subscriptions, direct and indirect value-added services make up 50% of annual revenue.
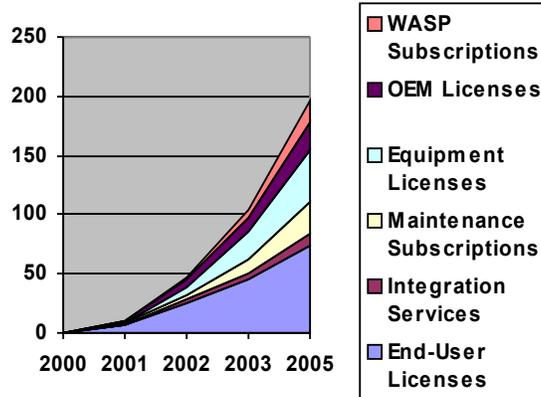
Application Revenue Mix – In the first two years the application end-user license revenue mix is dominated by sales of Commerce Automation and Wireless Service Automation products. In later years growth in sales of Wireless Re-supply and other applications will result in a relatively balanced revenue mix.
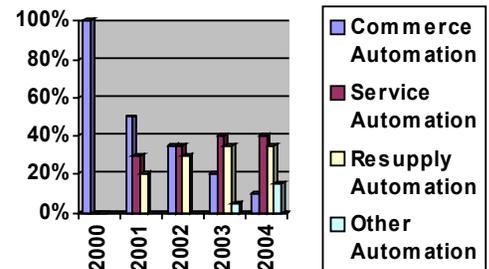
Pricing Strategy - Wireless Commerce Automation's pricing model is based on Application Module and Infrastructure Server Licensing basis plus per concurrent user and machine pricing.

Typical configurations and prices are anticipated to be as follows:

Customer	Application Licenses	Server Licenses	User Licenses	Machine Licenses	Total $
Division	Commerce Automation $50,000	Secure Application $50,000	50 @ $1,000 $50,000	1000 @ $100 $100,000	$250,000
Regional	Commerce Automation Service Automation $100,000	Secure Application Server Integration Server $100,000	250 @ $800 $200,000	2500 @ $80 $200,000	$600,000
Global	Commerce Automation Service Automation Sales Automation $150,000	Secure Application Integration Synchronization $150,000	1000 @ $500 $500,000	10,000 @ $50 $500,000	$1,300,000

Market Focus

Wireless Commerce Automation's products meet the commerce, service, sales and marketing needs of high-value capital equipment manufacturers. We are initially focused on the Industrial Equipment markets which supply the Automotive, Aerospace, Construction Equipment and Defense vertical markets. Manufacturers in these markets have similar needs, similar distribution strategies, and, often, common distribution and supply networks.

Market Access

Design Partner Program - Wireless Commerce Automation has created the Design Partner Program to engage the thought and technology leaders in these vertical markets in the design of solutions for their industry. Members of the Wireless Commerce Automation Design Partners Program provide feedback on product plans, are given early access to products and receive license discounts for their participation.

Industry Joint Ventures - Wireless Commerce Automation is exploiting consortium-driven, industry-specific, technology projects to access vertical market thought and technology leaders. For example, participation in the InfoTest Enhanced Product Realization project provided access to Caterpillar, 3M and HP, resulting in our first sale to Caterpillar's Parts and Services Group. Wireless Commerce Automation will continue to use joint ventures to access additional markets and gain valuable market-specific references to support our sales efforts.

Joint Venture Project	Markets	Participants	Venue
EPR	Heavy Equipment, Electronics	Caterpillar, 3M, TI	InfoTest
VehiX	Automotive, Heavy Equipment	Caterpillar	SAE
BPMI	Consumer Goods	HP, WalMart	OASIS
RosettaNet	Electronics, PC	Motorola, Intel	RosettaNet

Market Penetration

To provide effective solutions to our customers, Wireless Commerce Automation must be able to integrate our products with a wide range of application and infrastructure products from other vendors. At the product level, Wireless Commerce Automation is developing interfaces that support multiple information exchange and integration protocols. At the business level, we will build leverageable Strategic Alliances that enable us to more rapidly penetrate target markets than we would be able to do ourselves. Strategic Alliances will be targeted with companies such as ERP and Supply Chain Vendors, Enterprise Application Integration Vendors, and EDI Vendors as well as infrastructure and platform vendors such as IBM, Microsoft, Netscape, and Sun Microsystems. Additionally, we will look at Strategic Alliances that allow us to extend our sales model into areas such as offering our product on an Application Hosting basis.

Customer Acquisition Strategy

Wireless Commerce uses a business model that compounds growth upon growth so that revenues accelerate exponentially rather than linearly. Wireless Commerce implements this strategy by leveraging previous and current sales to close and deliver follow-on sales within the supply chain with minimal additional content and integration effort. This business model exploits highly respected reference customers (often market makers and market leaders within an industry, a.k.a. "anchor accounts") to influence their upstream and downstream trading partners within a supply chain. In addition, since early adopters often make the investment in industry-specific systems integration (e.g. Rosettanet) and product content development for multiple suppliers, follow-on sales within the supply chain can be quoted with significantly lower integration costs. Since Wireless Commerce applications can deliver even more value to all "WCA-enabled" customers within a supply chain, there is intrinsic value for each customer to encourage their upstream suppliers and downstream distributors to buy Wireless Commerce products. However, in addition, in return for joint sales results Wireless Commerce offers key existing customers discounts on future follow-on licenses. Supply chain references and dramatically lower integration costs make Wireless Commerce a preferred vendor within a industry after a handful of industry sales.

Marketing Strategy

Over the first 24 months, Wireless Commerce will focus 75% of it's marketing efforts on specific highly-mobile application markets, high-interest vertical markets and global-regional markets with the highest potential for delivering sales. Only 25% of its marketing budget will targeted to general "wireless industry", "commerce" and "potential investor" markets. The objective of these marketing tactics is to quickly interest, identify and qualify potential customers to deliver sales that result in early and broad profitability. As we gain defensible footholds in specific application, vertical and regional markets we will broaden our focus to address new potential application, vertical and regional markets. The overall goal of this strategy is to build to a domino effect across multiple markets that leads to a perceived dominance of Wireless Commerce in the future global wireless business application industry.

Sales Strategy

Wireless Commerce Automation's initial customers will be predominantly global manufacturing companies with revenues in excess of $1 billion. Within this target company base, Wireless Commerce Automation will target "Anchor Accounts" such as Caterpillar to whom we have already made a sale. Success within these accounts will enable us to leverage the "pull" of these companies within their divisions and across their distribution and supply chains. Our first project with Caterpillar, for example, opens up a market of over 125 major Construction Tools suppliers, 10 Caterpillar distributors and 6 other Caterpillar divisions.

We will sell our products through a direct sales group supported by Systems Integration partners who will provide implementation, integration and customization services in partnership with Wireless Commerce Automation's Client Services organization. These Systems Integration partners will be predominantly Big Five and large-scale integrators who have the access, resources and experience to leverage Wireless Commerce Automation within our target accounts. As our business model develops, some of these relationships may develop into Value-Added Reseller partnerships, especially in international markets.

Wireless Commerce recognizes that its customers can be its best sales tools. Companies buy Wireless Commerce products to automate their business interaction with trading partners up and down their supply and distribution chains. This positions each happy customer as a reference account for Wireless Commerce sales to their trading partners. In addition, early sales may pave the way for follow-on sales by shouldering the initial burden of catalog content development and industry-specific commerce integration. Our initial sales efforts have targeted such "Anchor Accounts" and reward current customers with discounts on future licenses in return for their support closing new customers amongst their trading partners.

As specific vertical and horizontal markets mature, opportunities are created to automate across many individual companies. Often it is the market leaders within these markets that are best positioned to capture these industry-wide opportunities… assuming they have the technology to deliver the solutions to the industry. Wireless Commerce targets vertical-market automation opportunities as OEM sales, often to original Anchor Accounts (e.g. Caterpillar for the Heavy Equipment market). Wireless Commerce targets horizontal-market automation opportunities as either OEM or strategic partner opportunities for general online wireless services (e.g. Concert for Pacific Rim Wireless Sales Automation services).

Sales Cycle - The sales cycle for Enterprise Application Software, which is the major horizontal industry for Wireless Commerce Automation, is normally 6-12 months from initial contact to close of sale. Given properly qualified prospects, a sales manager can

expect to work 10- 20 prospects for each closed sale. Deployment of each sale takes 3- 12 months, depending on the amount of custom systems integration required. The early sales within each newly targeted vertical market will required either long-term strategic partnership value, Koretsu-type introduction or steep discounts and other sales incentives to secure the critical first market reference sales.

In addition, in the first year, prospects will likely require payment schedules that spread license and integration fees over the integration lifecycle. Once the company is entrenched in a vertical market, has strong reference sales and has a robust corporate history, we can demand license fees at closing with only integration costs spread over the integration lifecycle.

Wireless Commerce Automation uses the concept of Anchor Account within a vertical market to create Koretsu-like demand within the supply and distribution chains of the target Anchor Accounts. While the large Anchor Accounts within a new vertical will still require 9-12 month sales cycles, follow-on sales amongst the Anchor Account's trading partners can be accomplished within 3-6 months. This dramatically shortens the sales cycle and increases the number of potential sales that can be closed within a vertical market in the second year of targeting the market.

Sales Channels - Company is initially selling direct to Global 2000 companies. In addition, the company is developing OEM and reseller relationships with global Wireless Service Providers (WSP) targeting mid-tier companies starting in CY2001.   Finally, within 18 months the company expects to partner with one or more WSPs to roll out an online wireless service offering to capture and bolster market position in low-end individual market.

Partnerships and Alliances

Marketing – Wireless Commerce Automation's products will exploit features in forthcoming wireless communications devices, wireless computing devices and wireless infrastructure protocols. This makes our products valuable to the marketing of these new systems by other companies. WCA will partner with these wireless equipment providers to jointly market WCA's products and the provider's new technology. These marketing partners may include:

Wireless Devices:
1. Motorola
2. Ericsson
3. Gwcom
4. Symbol
5. Palm Computing

Wireless Protocols:
1. Motorola
2. Phone.com
3. Software.com
4. Across/iD2

Sales – Wireless Commerce Automation will partner with wireless telecommunications providers and with wireless application service providers (WASP) to resell the company's products to mid-market customers as service offerings. Since we expect initial demand to be strongest with technology leaders amongst Global 2000 corporations, we do not expect the mid-market opportunity to blossom for three years. However, the company believes that pilot partnerships with potential resellers in the next 18 months will help to solidify long-term relationships and identify mid-market product requirements. These potential sales partners include:

Wireless Telecommunications Providers:
1. ATT Wireless
2. BT Wireless
3. Concert (ATT/BT Joint Venture)
4. MCI Worldcom
5. NTT Wireless
6. Teledisc
7. Verizon

Wireless Portals/WASPs:
1. Aether
2. Airflash
3. Byair
4. Datalink.net
5. Everypath
6. Netmorf
7. OracleMobile
8. Wireless Commerce Ltd.

Service – Enterprise-class commerce products generally require integration with legacy back-office systems owned by each customer. While initial integration will be done by a modest Wireless Commerce Automation services organization, the company can close more sales and e more profitable if integration work can be out-sourced to systems integration specialists. These include wireless web developers and traditional systems integrators:

Wireless Web site Developers:
1. Aether
2. Centura
3. LiveSky
4. MobileLogic
5. Netmorf

Traditional Systems Integrators:
1. Anderson
2. PCW
3. Cambridge Technology Partners
4. USWeb

Technology – The company believes that some required technology can be cost-effectively acquired from third party software product developers. These may include:

1. Sun Microsystems
2. Hewlett Packard
3. IBM
4. Motorola
5. Microsoft
6. Oracle
7. Phone.com
8. Software.com
9. across wireless/SmartTrust/iD2

Competition

Wireless Commerce Automation believes we have the most complete product vision and the strongest application-level and technical functionality in the wireless business market. Our target markets have traditionally had to turn to internal IT Departments or Systems Integrators for solutions on the scale that Wireless Commerce Automation delivers. We believe that IT Departments and specialty wireless web Systems Integrators will remain our major competition. With both IT Departments and Systems Integrators, our strategy will be to partner rather than to compete. We believe that this strategy will succeed because end-user customers are demanding time-to-market, robust and scaleable performance that only a product-based solution can deliver. We believe that most integrators recognize this reality and we will make it attractive for them to partner with Wireless Commerce Automation.

Because the wireless application industry is still in the very early stages of development, there is still little direct competition. However, as a hot investment space, we expect significant competition to develop over the next three years.

Key competitors

We have identified Corrigo as being our closest current functional competitor. However, Corrigo is focused on the Real Estate MRO market – a market far removed in product requirements and target customers from our focus on industrial manufacturers. In addition, Corrigo does not support sales automation or marketing automation – limiting their potential penetration up and down the supply chain.

We have identified Meridex and Datalink as being our closest market competitors. These companies offer wireless e-commerce products that are mid-market in functionality and they are focused on marketing these products primarily to technology companies. Additionally, these products do not support marketing or service automation - therefore companies who need more than wireless e-commerce solution will be forced to implement a multi-vendor solution.

Our broader functionality and wireless focus will also enable Wireless Commerce Automation to beat out competition from predominantly hard-wired oriented CRM vendors such as Siebel Systems and Pivotal. These Windows-centric companies have been slow to support channel-oriented solutions, port to other platforms and to embrace web-based technologies. Even when they do follow through on promises of support for these new technologies their implementations are incomplete and lackluster. While they have indicated the intent of supporting wireless devices, past performance lead us to believe that it will be at least three years before they have comprehensive application support for wireless.

Sustainable Competitive Advantages

Wireless Commerce Automation offers the following competitive advantages:

Business Knowledge – Our deep knowledge of channel sales issues in such areas as cyber-mediation solutions has been cited by both customers and partners as their reason for working with us over our competition.

Fully Integrated Solution – Wireless Commerce Automation is the only vendor who can offer a wireless business solution that meets the real world need of global manufacturers for an integrated view of their distributors' sales, marketing and service activities.

Pre-Defined Integration – Wireless Commerce Automation's Integration Server technology recognizes the need to integrate with existing EDI, ERP and legacy applications to support tasks from populating product catalogs, through exchanging information at the EDI level to creating seamless business processes around the emerging XML standard.

Vendor Independent, Standards Compliant – Wireless Commerce Automation has worked with technical and industry standards bodies (for example, InfoTest, GCIP and Rosettanet) to ensure that our product is compliant with emerging industry standards (for example, XML, Java and CORBA)

Globalized and Localizable – Wireless Commerce Automation's product has been designed to support the needs of large-scale global manufacturers and to support unlimited local languages, currencies, local taxes, duties, etc.

Barriers to Entry

Wireless Commerce Automation is erecting the following barriers to entry for any potential competitors:

Account Control - via fast, tight integration using AgentFactory, CommerceAutomation

Vertical Value-Chain Control - via installed base dominance, Anchor Account control

Distribution Channels Control - via contractual lockins

Market Technology Control - via standards, raise the bar
Technology Complexity …convergence of commerce protocols, cellular wireless, personal area networking wireless, satellite wireless, enterprise management protocols,

device management agents, intelligent agents, workflow management, rules-based business process automation

Market Mover Control - via product features, 1st to market
Application breadth management automation, field service automation, sales force automation, ecommerce

Intellectual Property Control - via patents, licensing

Management Team

Company was founded by service, sales and management automation software veterans with involvement in a number of successful startup companies. Initial marketing, finance and engineering staff is in place.

Executive Team

Management Team:

Brian D. Handspicker, President
David Cruise, CFO
Julia Tiernan, Controller
Vincent Spoto, VP Business Dev.
TBH, VP Sales
Robert Ferri, VP Marketing
Jon Coleman, VP Engineering
Bob Emery, Chief Engineer

President – Brian D. Handspicker is a business automation entrepreneur, having delivered one of the first mobile field sales automation solutions for Pfizer Pharmaceuticals in the mid-70s, followed by successes in office automation in the 1980s and Internet management in the 1990s. With startup experience at Prime Computer and Banyan Systems, most recently Mr. Handspicker led the self-funded startup company WebEnable, Inc. from 1996 to 2000.

CFO – David Cruise is a veteran financial officer with a specialty in leading early revenue companies to profitability. Brought into PRI Automation he helped the company become one of the largest most profitable companies in New England from a loss of $xxx,000 on $x,xxx,000 in revenue.

Controller – Julia Tiernan is a seasoned financial and administration officer, serving as CFO for Boston startups and as Vice President of Administration and Finance for CorpTech.

VP Business Development – Vincent Spoto is former CEO of ImageLabs. With a long history of entreprenuerial leadership in local imaging and Internet companies, Vin's will be contributing to Investor Relations, Strategic Relationships, Business Opportunity Development and Managerial Guidance.

VP Sales – **TBH**

VP Marketing - Robert Ferri is a communications and marketing expert focused on financial services electronic commerce. Prior to his involvement with Wireless Commerce Automation, Mr. Ferri launched the marketing and corporate communications groups for NASDAQ, Montgomery Securities, and E*Trade.

VP Engineering - Jon Coleman is a senior software management professional with deep expertise in distributed application software development gained through almost twenty years of experience at Digital Equipment Corporation, TRW, and Charles Stark Draper Laboratory.

Chief Engineer – Robert Emery is a senior software development professional with expertise in Java application development, workflow scheduling,

Board of Advisors

Frank Dodge – Founder, McCormack & Dodge; Entrepreneur in Residence, Babson College

Jeff Timmons - Distinguished Professor of Entrepreneurship, Babson College

Don Lupfer – President, Lupfer & Associates; Former head of TRW Electronics distribution

Harry Schult – Retired Partner, Ernst & Young

Ken Kuna – Retired VP Ford Motor Company; Former General Manager Ford Glass

Paul Lavalle – President of the Americas, Prime Response, Inc.

Bob Hoyt – VP Sales, SAS

Corporate Advisors

Wireless Commerce Automation is in discussions with the following companies to assemble a world-class corporate advisory board that can be leveraged for market insight, guidance, strategic partnerships and potential reseller relationships:

Wireless Service Providers	**Wireless Device Manufacturers**
➤ ATT Wireless	➤ Ericsson
➤ Concert (ATT/BT)	➤ Hewlett Packard
➤ Sprint Wireless	➤ Kyocera-Wireless
➤ Verizon	➤ Motorola
➤ Worldcom	➤ Nokia
	➤ Palm Computing
	➤ Qualcomm
	➤ Research in Motion

Operations

Sales Prospects

Caterpillar Rental
Caterpillar Parts
Caterpillar Tractor
Caterpillar OEM
Apache
Goldblatt
Stanley
…etc.
HP
"Insurance ASP"
"Medical ASP"
Wholesale Supply
Intellify

Operational Status

Wireless Commerce Automation has deployed its Commerce Automation and Sales Automation products with its first customer, a Fortune 50 construction heavy equipment manufacturer. This deployment includes reseller catalogs for 56 construction tools manufacturers. Follow-on sales are possible to up to 125 trading partners of this first customer, plus addition internal sales are expected over the coming year. In addition, a Fortune 50 computer manufacturer is evaluating use of the Sales Automation product. Finally, OEM prospects in wireless online services (medical) and commerce online services (insurance, plumbing supplies, commerce broker) offer opportunities for ongoing license revenue streams. Support for Secure Wireless Application Services is expected to increase our Global 2000 penetration in European and Pacific Rim countries.

Wireless Commerce Automation has supported initial product development and early sales through a total of $145,000 in revenue over the last four years and $100,000 in loans and investments. Sales potential has been throttled by lack of capital to support a professional sales force and effective marketing campaign.

Intellectual Property Protection

Wireless Commerce Automation depends on its ability to develop and maintain proprietary technology for market leadership and dominance. To protect this intellectual property we will rely on a combination of contractual provisions, confidentiality procedures, trade secrets, and patent, copyright and trademark law.

We will license rather than sell our products – requiring our customers to enter into license agreements which impose restrictions on their ability to utilize the software outside our target business intent. In addition, we work to avoid disclosure of our trade secrets through confidentiality agreements, restrictive access to potential secrets and technical restrictions on access to our source code and secret data.

The company has a number of potential patentable technologies that we are researching for future patent applications.

Risk Management

There is significant risk associated with any new business venture. Changes in technology standards, slow market adoption, inappropriate product definition, or competitive surprises can undermine a company's success. Wireless Commerce Automation has identified the following risk management tactics that may be exploited by the Board of Directors if required:

Technology - The global wireless industry is still bedeviled by a number of technology risks, including: useability (screen size, bandwidth), Cellular Telecommunications Technology Fragmentation (CDMA, WCDMA, TDMA, IDEN, EDGE, GSM, UMTS) and Wireless Application Technology Adoption (WAP/WML, SMS, WHTML, XML, WIM). In the case of device-based risks, Wireless Commerce Automation can fallback to deploying products on large-format devices such as PDAs, eBooks, Pagers. In the case of wireless technology adoption risks, Wireless Commerce Automation can fallback to focusing on specific regional markets (e.g. GSM-only).

Alternative Markets – While Wireless Commerce Automation is focused on industrial vertical markets, the products that we are developing may also be applicable to High Tech, Financial Services, Real Estate, Food Services, Transportation, amongst many other markets where highly mobile trading partners need up-to-date business information. We continuously track these alternative markets and should our focus on industrial manufacturers fail to deliver required revenue, we will be prepared to refocus our marketing and sales efforts.

Alternative Products – Wireless Commerce Automation is focused on automating machine-driven sales and service commerce. However, should market opportunities or market realities require, we have the expertise and technology to deploy products for Marketing Automation, Online Equipment Management, Rental Store Automation, Training Delivery and Management amongst other potential alternative products.

Alternative Services – While Wireless Commerce Automation is planning on deploying wireless-based application services in support of equipment resupply sales and service, our products and technology can also be used to deploy Online Trading Hubs, Business Information Brokering (e.g. translating EDI messages into ebXML messages), Sales and Marketing Automation ASPs, Online Storefronts amongst other potential alternative services.

Potential Cash Cows – Wireless Commerce Automation owns or holds unrestricted licenses to numerous technologies and products that may be productized over time as "cash cow" products (legacy, low-growth products that require little ongoing development and that could be licensed to end-customers or sold off to OEM customers). These potential products include: ManageFactory, CommonAgent, SmartAgent, MobileAgent, Secure Web Application Framework, Java Display Engine, Java Workflow Engine, Commerce Integration Servers (e.g. EDI, ebXML.), etc. These technologies form the foundation for the Wireless Commerce Automation's wireless business solutions. Marketing these technologies as independent products at this time would defocus our marketing and sales efforts. However, tremendous success or catastrophic failure in the high-growth wireless business application market could be answered with these additional potential independent products.

Patents – Wireless Commerce Automation is pursuing numerous potential patents. While these patents will not be granted in time to provide effective near-term competitive advantage, they may form the basis for a long-term royalty revenue stream and bolster the value of the company for potential acquisition or liquidation.

Expansion Plans

Wireless Commerce Automation is currently headquartered near Boston Massachusetts in the USA. area. We plan to expand into additional territory sales offices within the midwest and west coast of North America and additional regional sales headquarters offices in Europe, Asia/Pacific and South America. These additional offices will be opened as market opportunities, financing and revenue allow.

Current expectations are to expand in the US in early 2001 to enhance sales of existing core commerce solutions while wireless solutions are being developed and cellular infrastructure is deployed in Asia and Europe. In late 2001 to early 2002, with products and infrastructure starting to mature, we will open offices in Asia and Europe. We expect to expand into South America in late 2002 if industrial market opportunities allow.

Hiring Plans

Wireless Commerce Automation has a critical need for a VP of Sales and associated sales personnel. Series A financing will be used to build the foundation for a professional sales organization, including a chief sales officer. We have started discussions with potential executive search firms to be able to start a search immediately upon close of Series A.

Wireless Commerce Automation currently has 26 technical prospects interested in engineering, services and IT positions. These prospects have worked in the past with one or more of the members of the management team, and thus are known to be well qualified for their potential positions. We will be recruiting the majority of our engineering staff from the broad and under exploited New England software industry. Pending Series B investment, these additional technical personnel will be hired as revenue allows.

Heads Year-End	2000	2001	2002
Administration	4	10	13
Sales & Marketing *	6	13	28
Services **	7	10	15
Engineering **	13	16	28
Total	30	49	84

* does not include third-party channel sales partners
** does not include out-sourced integration projects

Additional senior management, sales, marketing, services and administration personnel will be required for each regional office (e.g. Europe, Asia/Pacific offices) opened over the next two years. In addition, sales, service and administration personnel will be required for each territory office opened (e.g. Chicago, San Francisco, Sydney, Tokyo offices). Where possible, these offices will be staffed with local personnel to contain relocation costs and enhance regional cultural sensitivity.

Financing Status and Plans

Wireless Commerce Automation has been funded to date by management and operating revenues. Company is seeking $500,000 in 3Q2000 for national industry-specific sales and marketing, to be followed by $10,000,000 in 4Q2000 for world-wide, multi-industry product launch. Company will require additional capital to expand internationally and consolidate market position, as deemed timely by the Board of Directors, during its second and third years of operation.

Exit Strategy

With the trend towards high-valuation mergers and acquisitions within the Wireless, Enterprise Application and E-Commerce markets, a near-term acquisition by a larger player may be both acceptable and cost-efficient. However, we believe that the opportunities for Wireless Business Application vendors within the overall Enterprise Applications market will grow explosively over the coming decade creating the potential for even greater stockholder value as an independent player. On this basis, Wireless Commerce Automation's plan is to grow the company targeting an IPO in 2002 with the intention of sustaining our growth through international expansion, mergers and acquisitions in 2002 and beyond.

Investment Opportunity

Investment Required - Wireless Commerce Automation seeks $500,000 Series A and $10 million Series B to exploit its leadership position and to capture a significant share of the Wireless Business Application market as it matures into a multi-billion dollar market. Proceeds will be used to build a world class, global sales and marketing organization to formally launch the company and product lines.

Compelling Reasons to Invest – Wireless Commerce Automation believes that it's Series A and Series B investment opportunities to be compelling because it has secured four fundamental criteria for success:

Scalable business model:
1. Exploits exponential viral growth within targeted vertical markets;
2. Enablers of machine-driven sales and service e-commerce enable aggregation of industrial market sales up and down the supply/distribution chain;
3. Anchor accounts are beach-heads for entire supply/distribution chains;
4. Product strategy enhances product value to current customers when trading partners also install Wireless Commerce Automation products;
5. Sales strategy rewards existing customers for introductions to and support closing sales to trading partners;
6. Service strategies deliver follow-on recurring revenue streams for wireless business information brokering, commerce trading hubs and product maintenance worth two to twenty times the initial product revenue;
7. Machine-driven commerce drives sales of one to two orders of magnitude (10-100 times) more "client" licenses than pure human user-based systems;
8. Machine-driven sales and service results in high-value transactions and high-value cost savings;
9. Global, large, rapidly growing, multiple target vertical markets with significant similarities that allow solution portability across verticals.

Tightly managed investment risk:
1. Current and sustainable revenue from wired commerce products and services provide revenue bridge to wireless products;
2. Sustainable competitive advantages;
3. Wireless technology risk abatement plans;
4. IPO fallback tactics include potential acquisition or industrial investment

World-class existing product:
1. Secure Web-based Application infrastructure complete;
2. Secure Common Agent complete;
3. AgentFactory tools complete;
4. Commerce Automation product deployed with Caterpillar Rental Store Supply;
5. Sales Automation 80% complete;
6. Service Automation product 70% complete;
7. Marketing Automation product 60% complete;
8. Training Automation product 40% complete.

Experienced management team:
1. President pioneered mobile sales software in the 1970s, Internet applications in the 1980s and web-based commerce software in the 1990s;
2. President and VP Engineering have lead or contributed to 6 successful early stage companies;
3. CFO has lead 3 early-stage companies to profitability and successful exits for investors;
4. VP Marketing has successfully launched marketing and communications groups for NASDAQ, Montgomery Securities and E*Trade.

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