



A TECHNICAL BUSINESS NETWORK EXECUTIVE REPORT

Wireless: Delivering Return on Investment

by Emily Sopensky, The Iris Company

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FORWARD

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With the tumultuous events and economic jolts of 2001, the market for wireless technologies is one of the few that still has luster.

As we look at indications of an economy beginning to right itself, the case studies and analysis of last September's briefing still hold true. The business of technology is as much a part of changing our legacy business processes as it is adopting to new technologies. The decision is still about what and when is the return on investment. The use of technology in business is still about using tools to make our businesses more efficient and our business case stronger.

In this executive report, I think you will find fresh and compelling information about wireless technologies.

I look forward to hearing your thoughts on this and other technology matters as it affects business.

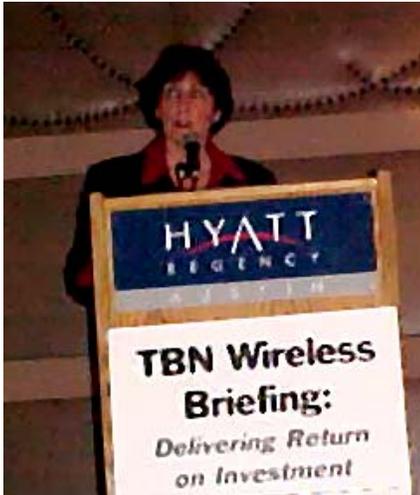
Please feel free to contact me at +512.795.8394 ex 207.

Sincerely,
Sonia St. James
President and CEO
Technical Business Network

Wireless – Delivering Return on Investment

“There is no question that wireless technologies offer opportunities for cost optimization and predictability that will change our current paradigm of doing business” – Sonia St. James, President, Technical Business Network

by Emily Sopensky, The Iris Company



Sonia St. James welcoming attendees

Overview

Businesses are dependent on being connected. Whether its people, manufacturing lines, or supply chain logistics, where business would not exist if the flow of information was stifled or data needed for decision management is lost.

“There is no question that wireless technologies offer opportunities for cost optimization and predictability that will change our current paradigm of doing business,” said St. James. More than 750 million cell phones and 15 million PDAs have entered the market in the last five years. All predictions show this market accelerating as well as for other wireless applications.

Wireless technology that enhances or replaces existing hardware processes can also expand how and where work is performed. For example, a deskbound worker can be free to retrieve information while on the go. Workers in the field can do more of their data entering and research in the field, instead of scrambling back to the office to finish reports. By shortening the tasks in between, the sales cycle can be shortened.

The **Technical Business Network’s Wireless Briefing** held in Austin on September 18, 2001 explored case studies of how traditional industries are improving business processes by incorporating wireless technologies.

Sonia St. James, president of TBN, in welcoming attendees and sponsors, noted that the presentations were particularly interesting since they all involved short-term return on investment – often a scarce commodity in employing new technologies.

Agenda

The keynote speech was delivered by **David Perkins**, President and CEO, **Metrowerks**. Metrowerks, provides professional software development tools, and support services for development communities. The company, an independent subsidiary of Motorola SPS, is headquartered in Austin, Texas and employs 540 worldwide in 11 countries.

The first case study was presented by **Erin M. Defossé**, co-founder and CTO of **Isochron Data Corp.** about his companies success with the Coca-Cola Bottling Company of Chicago.

A panel on “Strategy & Deployment” was moderated by **Wes Breyfogle**, Austin regional sales director for **Momentum Software**. Panel members included **Michael Barre**, partner **Baker Botts LLP**; **Scott Eggleston**, President and CEO of Momentum Software; **Bill Marsh** Vice President of Strategy & New Markets for **Traq Wireless**; and **Mike Lasky** of **Symbol Technologies**.

The second case study, “ROI for Mobile Financial Services,” was presented by **Ken Lee** of **724 Solutions** **Clyde Miner** of **MD Anderson Cancer Center**, followed with a presentation entitled “The Perils and Pitfalls of Deploying a Wireless Strategy.”

Bill Swanstrom, a partner with **Locke, Lidell & Sapp** in Houston, presented the last case study, “Securing the Lawyer-Client Relationship Wirelessly.”

Keynote Briefs



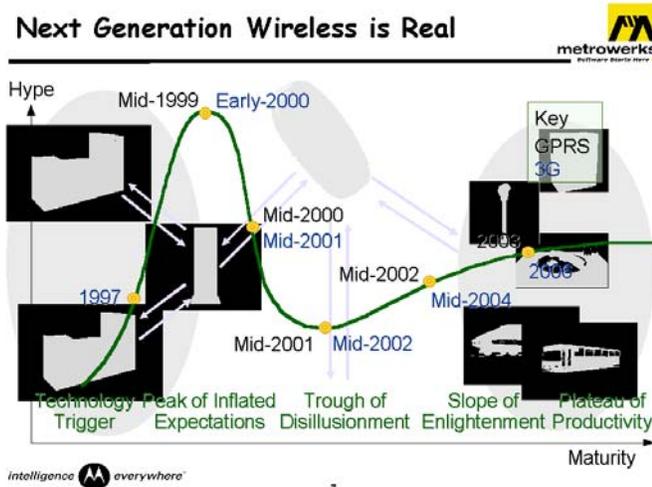
David Perkins, President & CEO, Metrowerks, Motorola SPS

David Perkins provided some background on **Metrowerks**, which develops the core technical infrastructure software that connects devices over a network. Its software development tools are focused on four

markets in the embedded marketplace. Wireless, consumer electronics, transportation and games such as Sony Nintendo. Metrowerks developed the original code for the Palm Operating System.

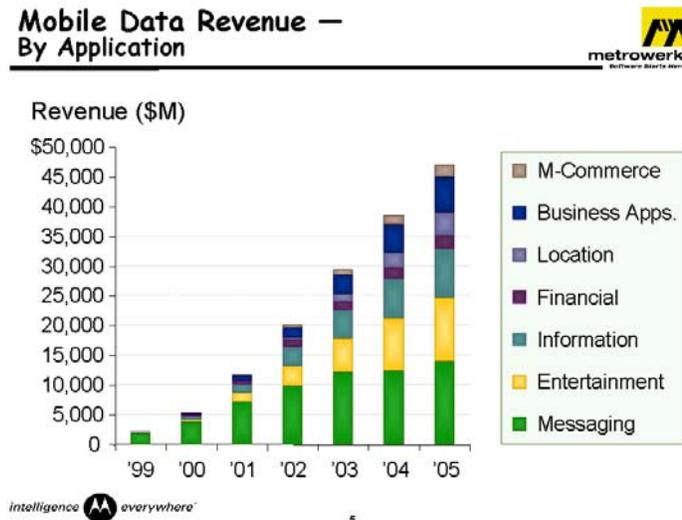
The company is very much involved in wireless, including both 2.5g and 3g, which some critics, impatient for the economic tide to change, question the viability of these next generation technological developments.

Next Generation Wireless is Real



According to Perkins, Gartner analysts believe that the Messaging and Entertainment sectors will be the biggest revenue generators, which are notably the complete antithesis of the desktop world.

Mobile Data Revenue — By Application



Industry surveys, Perkins says, report that there are very few devices in the near term that will provide the features and functionality mobile users are looking for—small and portable devices that satisfy all needs and uses imaginable. The real revenue generators will be voice services, especially as quality increases dramatically. While wireless devices are already widely used in Europe with 1.2 billion text messages exchanged, U.S. was behind in development.

The nature of the marketplace is changing dramatically from desktop server to the wireless device market. But it's not about computing—the power will be the same as a desktop 3 to 4 years ago. But we get our information will be different.

“What we know about the market from inside information and from Dataquest is that in 2002 there will be 70 million Java users in the wireless space,” Perkins said. The Java framework is important in wireless technology for connectivity back to the office.

The consumer applications sector is an on-and-off play, said Perkins. With wireless mobile devices, you cannot have dropdown screens with applications all over. The penetration of cell phones is so much higher than the desktop.

Perkins provided perspectives and insights on much of the wireless applications in development and their prospects for return on investment, for example:

- 3G video conferencing is rated low. Perkins is skeptical that this will be a strong application because video streaming requires a tremendous investment. However, he says, “There are fabulous things in the lab.”
- News and Sports are the prime interests for consumers. The target markets for wireless applications make an interesting paradigm. Since cell phones are purchased by business, business applications are a natural, but actual usage tends to be more consumer-oriented.
- To appeal to young metropolitans is a challenge as recovering investments will be in this market. Packaging is very important.
- The dollars involved in games for the young and mobile are bigger than in the movie industry.
- With regards to animation, virtual pets like the Animochi bring in a whole new class of applications. They are simple applications, which do not require heavy processing power, but do draw network traffic.
- Integrating into carrier networks is rudimentary. Application providers who can integrate into the closed environment and provide location-based services, will provide a lot of hype but will be readily deployable once the 911 infrastructure for mobile phones is installed.

He concluded that consumers are a significant target to whom wireless services will be delivered.

Featured Speakers Briefs



Erin Defossé, co-founder & CTO, Isochron Data Corporation
Successful Deployment of Wireless Solutions in Traditional Industries

As prelude to presenting **Isochron Data Corp.** and The Coca-Cola Bottling Company of Chicago case study, **Erin Defossé** explained the importance that ROI played in the success of this story.

“Traditional bricks-and-mortar companies have developed their existing business processes over a period of many years,” said Defossé. “Such legacy processes generally can be improved using wireless assisted solutions. However, key buyers within these organizations generally are suspicious of any technology purchase that cannot demonstrate a compelling ROI.”

In 1997, Isochron began developing wireless applications to help companies manage field operations. The company’s wireless solution is initially targeted on vending machine maintenance. Isochron’s solution minimizes truck rolls to vending machines for maintenance, repairs and refills.

With revenues over \$900M in 2000, the Coca-Cola Bottling Co. of Chicago is the largest independent bottling company in the U.S. The company, which maintains over 100,000 vending machines throughout Illinois, Indiana, Wisconsin, Pennsylvania, Ohio, and New York, is perceived as a marketing and technology leader in the industry.

But the company had a few problems:

Coca-Cola of Chicago is not known for being technically innovative or on the leading edge. “When we first talked with them, they did not even have desktop PCs, and were still operating totally on mainframes. Just a year-and-a-half ago, middle management received PCs.

With a lack of information coming from the field warehouses, too, were operating without information. There was no mechanism to reconcile cash. Losses were estimated at five percent of total revenues. Because of poor service, the employee churn rate was 40 percent. Company officials knew they had a huge problem in the field but had no first-hand knowledge. No one in the field could call if they ran into a mechanical problem.

A slide titled "CCBC Background and Problems" with the Isochron logo in the top right corner. The slide is divided into four sections: Operational, Sales and Marketing, Cash Accountability, and Maintenance. Each section lists several bullet points. The Operational section lists: 30% of machines visited daily don't require product refills; Difficult to grow business without adding trucks and people; Trucks loaded with incorrect products. The Sales and Marketing section lists: 40% customer churn; 75-80% of machines have brand management issues; Declining throughputs. The Cash Accountability section lists: 5% cash shortage. The Maintenance section lists: 25% of machines down daily; 20% follow up maintenance calls; 30% of service calls are "nuisance"; 20% reduction in sales. The slide also has a copyright notice at the bottom: © 2001 Isochron Data Corporation.

“We installed our Isochron System Architecture using third-party wireless networks. To get daily reports, Coca-Cola of Chicago now daily polls each machine automatically from its central offices,” says Defossé.

Coca-Cola now uses the Isochron solution to optimise its product mix. Because machines are visited only when service or products are needed, trucks are loaded only with exactly what is needed. There is no “lost” product and business grows without additional trucks and drivers. Reports generated include a comparison between expected versus actual cash collected. The number of machines a driver handles per route is now 238—up from 125 machines.

In less than 12 months, Coca-Cola of Chicago saw a return on its investment in Isochron’s wireless solution.

One of the reasons for Isochron’s success its careful approach Recognizing that the intangibles, such as business process re-engineering, are as important as the financial analysis the company chose one route to deploy the system. Now, Isochron has 1000 devices deployed. Sales are now up 10 to 12 percent and there has been a significant decrease in operational costs.

While the truck drivers are unionized, they are compensated on a commission basis. Because Isochron’s solution translates into higher commissions for the drivers, changing the business processes to be able to use the wireless application was not an issue.

“We sell a system solution,” Defossé said. “We deliver turnkey solutions.”

ROI for Mobile Financial Services

In the second case study, **Ken Lee**, a financial solutions consultant, explained that **724 Solutions** seeks to be “powering every mobile transaction where money changes hands,” whether it be credit card, discount brokerage, retail banking. With a combined customer base of over 400 million, the company has world-class customers like Wells Fargo, Bank of America, Bank of Montreal, Citigroup, Credit Suisse Group, The Bank of Kuwait and the Middle East, K.S.C.

The six pillars of ROI for wireless financial services are customer retention, cross selling, increased transactions,

customer self-service, employee productivity and new business models.

Lee said that 724's research indicates that 30 to 35 percent of mobile device users are interested in using their devices for enacting financial services transactions. In customer retention in credit cards is tough. Based on their research, 724 found half willing to switch to another provider. Most welcome relevant offers. One major financial institution estimated the cost of acquiring a new retail banking customer at \$50 with over half of that cost going to marketing expenses.

So 724 concluded that the benefits of mobile financial services are increased customer retention, effective cross-sells, increased customer self-service and more transaction fees. They've defined their market in these terms:

Defining the Target Market			
	2002	2003	2004
Growth	-	10%	10%
Online Users	1 M	1.1 M	1.210 M
% Addressable	9%	18%	27%
# Addressable	9 K	198 K	326.7 K
Users with addressable mobile devices that will take the offering:			
% Uptake	5%	15%	35%
# Uptake	4.5 K	29.7 K	114.3 K

Their strategy is to align with the telcos, offer non-core services, include desktop alerts, integrate with CRM, and emphasize ease of use

724 estimated that the benefit of discount brokerage customers executing just one additional transaction per year can be \$1.1 million in 2004 with a base of just 111,000 users. By eliminating just one telephone inquiry, 724 estimated a savings in the same user with the same number of users as can be almost half a million dollars.

Explaining his background as a Harvard trained bank economist, Lee sees his challenge is to focus on how to fit the technology to their business.

"People prefer a visual menu versus a voice menu," he said. "The program launch is the most expensive part of the proposition. It's not the technology but the human element that counts."

The Perils and Pitfalls of Deploying a Wireless Strategy

Before deploying his company's wireless strategy, **Clyde Miner** of **MD Anderson Cancer Center** conducted considerable research with institutions across the U.S. After receiving intensive feedback on what these institutions have done, how they implemented it, and what they learned within their respective wireless environments, Miller reports that worked intimately with the process of deploying a wireless strategy from inception through implementation.



Clyde Miner

Here was the thought: Let's find out if wireless technology makes a productive healthcare difference at M. D. Anderson by first evaluating a pilot (i.e., 25 Physicians/Nurses in our Breast Center unit), Miner explained.

What he found was that first, "You gotta have a strategy so that the PDA is not just another device that they have to carry around. We're still in that phase" of earning credibility. It may be "one of the latest tools" for managing efficiency, but does it help cancer cure and prevention?

"Alone IT is not an enabler," he admonishes geek-aholics.

Analyzing the cost, culture, devices, deployment, time and motion, environment, structure, security, support to change the way people do things. The wireless application's total cost of ownership is an issue. It doesn't replace but instead extends. There is still a lot of required hardware, software, and training involved, where ROI is measured by patients smiles.

Miner introduced some of the questions MD Anderson addressed: "We did a culture time and motion study to see how it does work and doesn't. How often is a nurse at the bedside to entering information using it? Is performance: too slow? Too fast? Not believable? Why are we doing this?"

"There's a lot of education involved. You got to let them play with it," he concluded.

Securing the Lawyer-Client Relationship Wirelessly

With the last case study, **Bill Swanstrom**, a partner with **Locke, Lidell & Sapp** in Houston, talked about an in-house application that the firm uses for data communication. Called **Wireless Shuttle™**, Swanstrom claimed that it enabled users to provide high quality, trustworthy and secure data exchange at costs much less than alternatives. The firm continued to use their existing wireless carriers and devices. The service is plug-and-play and ready to be used. Plus, the lawyers had continuous connectivity with real-time access to critical client information at any time and from anywhere.

- Allows lawyers to have contact with clients, partners, internal resources and counter parties in writing from anywhere at any time.
- Efficiencies created with real-time access to email, tasks, appointments and the global address book.
- Protects the lawyer client confidentiality by storing all client data behind our firewall.
- Increases frequency, clarity and thoughtfulness of remote collaboration between all parties
- Promotes faster resolution of all issues dependent on ongoing communications
- Improves customer satisfaction by offering more personal service and responsiveness
- Detailed attachments can be opened remotely.
- No need to wait until a lawyer gets back to the office to see if important correspondence has arrived.
- Lawyers and clients can send, receive and reply to messages when it is most convenient.
- Data messages can be sent even in situations where the wireless voice communications are not acceptable.
- Client data is inaccessible if the handheld device is lost or stolen.
- No confidential information need ever be stored outside of the firm's firewall, even when accessed on a handheld device.
- There are no unsecured intermediary sites or servers.
- The firm leveraged existing investments in secure collaborative environments (MS Exchange, Lotus Notes) and corporate firewalls to deliver real-time, content rich wireless communications.
- There was no capital outlay.

By increasing quality, productivity, relationships, trust and convenience at relatively low cost, secure wireless access to a server-based messaging system enhances the overall value of the attorney client relationship substantially

Locke Liddell & Sapp chose the Wireless Shuttle™ subscription solution because:

- It's simple, extremely flexible, robust and secure
- It requires minimal amount of internal time to maintain.
- It provides end-to-end services. Each lawyer can choose his/her own device and carrier.

Panel: Strategy & Deployment



Mike Laskey, Bill Marsh, Scott Eggleston, Michael Barré

Moderator **Wes Breyfogle** of **Momentum Software** introduced panel members **Michael Barre** of **Baker Botts LLP**, **Scott Eggleston** of **Momentum Software**; **Bill Marsh** for **Traq Wireless** and **Mike Lasky** of **Symbol Technologies**. The following are some of their observations:

“My first observation,” said Bill Marsh, “is that this market opportunity is huge, but the only killer application for wireless is voice. The same data penetration that exists in the wired world must exist in a voice-centric world for a shift in the enterprise.”

“The challenge of wireless is of moving from thousands of users to tens of thousands. The provisioning barrier with carriers will be a big challenge.”

Make Lasky is with Symbol Technology, which is a \$2 billion company that provides tools for barcode scanning, advance data collection and wireless LANs.

He told of one company that went from paper and pencil data capture to 16,000 wireless users in 30 states. It took them 24 months to install it. Another 12 months was planned for recouping ROI.

In another case, a company planned on an ROI in 12 months to move to a newer version of a product. On paper the planned return on investment looked good. But in actuality, they overlooked the key ingredient – training because the company assumed those in the field were already using the older version.

In the first example, the user received a full day of training and in-field usage. Instead of 12 months to see a ROI and successful deployment. Company A saw ROI in 3 months – 9 months sooner than it had planned.

Now, after September 11, Lasky stated that the value of security and safety will be higher and ROI will be affected. “It’s not about dollars and cents. It’s about lives,” he said.

Scott Eggleston concurred. “The bar for ROI is much higher for the current economic situation. Before there was a compelling fear that if they didn’t participate and they’d be left behind. Now, I don’t sense that in the wireless market this year. Decisions will be stalled while they evaluate. As a result we at Momentum have a constant reassessment process that we’re looking at every 3-6 months.”

Michael Barré sees two critical aspects. With wireless, the most important assets are IP. How do you maximize return, develop the appropriate IP strategy and adjust accordingly, given the rapid changes in standards and laws?

Companies purchasing wireless solutions must understand the IP and the market. Security measures such as encryption, set for the Frequent review of the IP at least every three to six months. The impending rollout of 2.5g and 3g rollout, and discussions already under way regarding 4g can stunt deployment of any wireless solution.

Conclusion

Whether using wireless applications now or planning to, the insights that the speakers provided at this briefing return to the basic principles of conducting business. Using old or new technologies must make business sense. Employing new technologies must provide a better than average "chance" of improving the business processes and therefore the bottom-line. Also, deploying new technologies does not necessarily mean that the return on investment must be delayed. Instead the ROI should be part of every decision in going to a new technology.

Emily Sopensky, writes for and about companies and technology. Armed with an East Coast MBA, she focuses on the business implications of technology. The Iris Company works with businesses to hone their message and technical communications. You can email her at emily@iriscompany.com.

Biographies

Michael R. Barré, attorney, **BakerBotts LLP**

Barré practices intellectual property law at Baker Botts L.L.P., with a particular emphasis on patent procurement in the field of computer software. Mr. Barré has drafted and prosecuted numerous patent applications in areas including software, networking, user interfaces, processing hardware, and telecommunications. Registered to practice before the U.S. Patent and Trademark Office, Barré is a member of the State Bar of Texas, the Travis County Bar Association, and the Louisiana State Bar Association. He received his B.S. degree in computer science from the University of New Orleans in 1990. After which, he worked with object-oriented platforms as well as 3GL and 4GL environments at the LSU Medical Center. In 1997, Barré graduated from the Washington and Lee University School of Law, where he was a Sparks Family Scholar.

Wes Breyfogle, Regional Sales Director, **Momentum Software**

Breyfogle is responsible for sales and business development for Momentum Software's Outsourced Development. Momentum Software is a software development and consulting firm with offices in Austin and Dallas.

Erin M. Defossé, Co-founder, Chief Technology Officer, Director **Isochron Data Corporation**

Defossé is responsible for all technology initiatives at Isochron, establishing strategic relationships with technology partners and managing all company's IT assets. He is also a member of the Board of Directors. Before joining Isochron, Defossé held executive level and technical development positions with companies such as Navtrax, NASA's Jet Propulsion Laboratory and A. Kearney. He holds a B.S. in Aerospace Engineering and an MBA from the University of Texas at Austin as well as an M.S. in Aeronautics and Astronautics from Stanford University.

Scott Eggleston, former President and Chief Executive Officer, **Momentum Software**

Scott joined Momentum Software in July 1999 as President, Chief Executive Officer and a member of the Board of Directors. He brings extensive experience in business strategy, operations, managing rapid growth, and building world-class professional services organizations. Prior to joining Momentum, he led Clarify's professional services practice, growing it to over 100 professionals. He was

instrumental in making Clarify a leading manufacturer of customer relationship management ("CRM") software by ensuring successful implementations at Fortune 500 customers such as Microsoft, General Electric, Hewlett-Packard, Merrill Lynch, and Cisco. He earned a Bachelor of Business Administration, with a minor in Computer Science, from Iowa State University.

Mike Lasky, **Symbol Technologies**

Symbol Technologies shares their vision. We connect data and decision maker for greater productivity, competitiveness and profitability. For those with a vision, Symbol Technologies has the innovative products, industry systems expertise, business partnerships and global services and support to make it a vision without boundaries.

Bill Marsh, Vice President of Strategy & New Markets, **traq-wireless**

As a co-founder of traq-wireless, Marsh developed the original architecture and algorithms behind the company's wireless asset management offerings. In his current role, he is responsible for identifying and driving the long-range business objectives for the company, including the development of new market opportunities. Prior to traq, he worked for Motorola where he held several positions, including European sales director and product operations director for the Wireless Local Loop business unit and director of strategy for the Cellular Infrastructure Group. Marsh was also a principal at Cambridge Strategic Management Group, an international consultancy serving the telecommunications industry.

Clyde Miner, MIS Manager, Technical Services, **M. D. Anderson Cancer Center**

At M.D. Anderson Cancer Center, Miner manages the HL-7 Interface Engine and various Oracle-based system development efforts. He also manages some R&D for wireless and PDA applications as well as Enterprise Application Integration, DB backend connectivity and XML. Miner developed and taught the first wall-to-wall software development at McDonald Douglas. He managed the IT Center in Riyadh, Saudi Arabia for the Royal Saudi Air Force and was chief technologist for Northrop Grumman. .

David Perkins, President, **Metrowerks**, a subsidiary of **Motorola SPS**

Perkins was appointed President in October of 1999. He joined Metrowerks in 1995 as Chief Financial Officer, becoming the company's Senior Vice President of Business Development the following year. In this role, he was instrumental in developing Metrowerks' strong partnership with Motorola - a partnership that created the foundation for the subsequent acquisition by Motorola. Other key partnerships developed under Perkins' direction were with Sun Microsystems, with many of the industry's Real Time Operating System (RTOS) vendors, and numerous strategic alliances with software and hardware tools providers and semiconductor vendors. Prior to joining Metrowerks, Perkins was an audit partner with Coopers & Lybrand, and developed expertise in finance, sales, business development, and mergers and acquisitions.

Barton E. Showalter, Regional Sales Director, **Momentum Software**

Showalter received his bachelor and master of science degrees from the Massachusetts Institute of Technology in Aeronautical/Astronautical Engineering with an emphasis on electrical engineering and computer science. Graduating cum laude from Southern Methodist University School of Law, he was a Hatton W. Sumners Scholar, editor-in-chief of The Journal of Air Law and Commerce, and a member of the Order of the Coif. His practice includes all aspects of intellectual property law, especially patent litigation, procurement and licensing in the Internet, telecommunications, and electronics. A member of the State Bar of Texas, the Dallas Bar Association and the Dallas Association of Young Lawyers, the Director of the Dallas Bar Intellectual Property Section, and chairman of the Computer Use and Technology Section.

Bill Swanstrom, Partner, **Locke Liddell & Sapp LLP**

Practicing in securities and M&A, Swanstrom has broad experience in the telecommunications industries public and private securities offerings, early structuring, licensing and contracting and antitrust. His extensive venture capital experience is gained representing both investors and companies. Swanstrom is active in a number of civic and charitable functions. He holds a Juris Doctor degree with high honors from the University of Texas School of Law.

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