# **Contributors**

**Alessandro Acquisti**, Associate Professor of Information Technology and Public Policy, Heinz College at Carnegie Mellon University

Mr. Acquisti is an associate professor at the Heinz College at Carnegie Mellon University (CMU), and the co-director of the CMU Center for Behavioral Decision Research. His research focuses on the economics of privacy. He has been the recipient of the PET Award for Outstanding Research in Privacy Enhancing Technologies, the IBM Best Academic Privacy Faculty Award, the Heinz College Award for Teaching Excellence and multiple best paper awards.

He is a member of the National Academies' Committee on Public Response to Alerts and Warnings Using Social Media and Associated Privacy Considerations. He has had visiting positions at Harvard University and the Universities of Rome, Paris and Freiburg, at Microsoft Research in New England, and at Google.

### **Ross Anderson**, Professor of Security Engineering, University of Cambridge

Mr. Anderson is the professor of security engineering at Cambridge University. He was one of the founders of the academic discipline, economics of information security. Mr. Anderson was also a seminal contributor to the idea of peer-to-peer systems and an inventor of the Advance Encryption Standard finalist encryption algorithm "Serpent."

He has written publications on other technical security topics, including hardware tamper-resistance, emission security, copyright marking and the robustness of Application Programming Interfaces. He is a fellow of the Royal Society, the Royal Academy of Engineering, the Institution of Engineering and Technology, and the Institute of Mathematics and its Applications. He also wrote the standard textbook, Security Engineering—A Guide to Building Dependable Distributed Systems.

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Chris Bierbaum, General Manager, Mobile Commerce,

Sprint Nextel Corporation

Mr. Bierbaum is general manager of mobile commerce at Sprint and has led this group since 2002. He has been involved in the telecommunications industry since 1997, serving in financial, strategy, corporate finance, and innovation and product development positions with Sprint Nextel.

Mr. Bierbaum has served as Sprint's representative to several organizations, including the Massachusetts Institute of Technology Media Lab, and has been on the board of directors of the Mobile Payment Forum and a mobile commerce startup. He currently represents Sprint with the Near Field Communication (NFC) Forum and GlobalPlatform. Mr. Bierbaum led the team that launched two industry-first NFC trials in the United States. Mr. Bierbaum also represented Sprint for three years as the Head of Product & Technology Development and Information Technology for ISIS Mobile. Before joining Sprint, he had senior positions at Koch Industries, ConAgra and several investment banking firms in New York.

# **Paul Breloff**, Managing Director, Venture Lab, ACCION International

Mr. Breloff is the managing director of the ACCION Venture Lab, a seed-stage investment fund sponsored by ACCION International. Venture Lab provides capital and management support to identify and jump-start innovative financial inclusion startups globally, focusing particularly on technology enabled financial services in East Africa and India. He advises on policy and technical issues related to branchless banking for Consultative Group to Assist the Poor, an independent research center focused on financial inclusion and housed at the World Bank. He also has been engaged by Root Capital, Shell Foundation and others on access to finance issues in Latin America, Asia and Africa.

Previously, Mr. Breloff worked with SKS Microfinance, India's largest microfinance institution, leading business development and strategic initiatives. He has also practiced corporate and real estate law with Mayer Brown, worked as a consultant for McKinsey & Company and worked as an advertising account executive for Leo Burnett.

## Michael Brown, Chairman and Chief Executive Officer,

Euronet Worldwide

Mr. Brown is the co-founder, chief executive officer and chairman of the board for Euronet Worldwide, a processor of secure electronic financial transactions. He is actively involved in the day-to-day operations of Euronet through oversight of the company's business strategy, development and financial performance across all markets.

Mr. Brown has 30 years of combined experience in the computer software and electronics payments business. In 1979, he founded Innovative Software, which developed integrated business software, primarily for personal computers. In 1988, Innovative Software merged with Informix, a leading provider of advanced database software technology. During his time at Informix, he served as president and

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chief operating officer as well as president of the workstation products division. In 1993, he was a founding investor of Visual Tools, a company that writes and markets component software for the Visual Basic and Visual C++ developer market. Visual Tools was acquired by Sybase Software in 1996. He currently serves on the boards of Nexxus Lighting Inc., Bank of Blue Valley and the Greater Kansas City Community Foundation.

#### Nicholas Economides, Professor of Economics,

Stern School of Business, New York University

Mr. Economides is professor of economics at the Stern School of Business of New York University and founder and executive director of the NET Institute. He taught at Columbia University from 1981 through 1988 and at Stanford University from 1988 through 1990. He is editor of the Journal of Economics & Management Strategy, Netnomics, The Quarterly Journal of Electronic Commerce, The Journal of Financial Transformation, The Journal of Network Industries, International Journal of Management and Networks Economics and Economics of Networks Abstracts by the Social Science Research Network (SSRN). He is also a past editor of the International Journal of Industrial Organization and is on the advisory board of Journal of Competition and Regulation in Network Industries and of the SSRN.

He has advised or is currently advising the U.S. Federal Trade Commission, the governments of Canada, Greece, Ireland, New Zealand and Portugal, the attorneys general of New York and Texas, major telecommunications and high technology companies, a number of the Federal Reserve Banks, the Bank of Greece and major financial exchanges. He serves on the advisory board of the Economist Intelligence Unit and Quadriserv.

### Malcolm Edey, Assistant Governor,

Reserve Bank of Australia

Mr. Edey was appointed to his current position as assistant governor of the Reserve Bank of Australia (RBA) in April 2009. In this role, he is responsible for the RBA's work on financial stability, including production of the twice-yearly Financial Stability Review, as well as the RBA's oversight of the payments system. He is a member of the RBA's senior policy committees and deputy chairman of the Payments System Board. Prior to his current role, Mr. Edey headed the RBA's Economic Group for seven years and had a number of other senior positions in economic and financial markets groups. In the mid-1990s, he spent three years at the Organisation for Economic Co-operation and Development (OECD) in Paris where he worked as a senior economist in the Money and Finance Division. In December 2010, he was elected chairman of the OECD Committee on Financial Markets, He is a member of the Basel Committee on Banking Supervision.

#### David S. Evans, Founder,

Market Platform Dynamics

Mr. Evans is an economist, business adviser and founder of Market Platform Dynamics. He is an expert on the design and implementation of platform business xii Contributors

strategies. His body of work is captured in *Invisible Engines: How Software Platforms Drive Innovation and Transform Industries*, a book he co-authored with Andrei Hagiu and Richard Schmalensee that won the 2006 American Publishers Association Best Business Book Award.

Mr. Evans is the author of six additional books and more than 100 articles and book chapters. These include two books co-authored with Richard Schmalensee that analyze platform strategies in a variety of industries: Catalyst Code: The Strategies Behind the World's Most Dynamic Companies and Paying with Plastic: The Digital Revolution in Buying and Borrowing. His recent work, "How Catalysts Ignite: The Economics of Platform-Based Startups," focuses on how new platform businesses solve the "ignition problem," which involves securing a critical mass of customers to generate sustainable growth through positive-feedback effects.

Mr. Evans has deep experience in financial services, Internet-based, online advertising, online and traditional media, payment cards, software platforms and telecommunications industries. He has served as an adviser to a number of the world's largest corporations. He has served as an adviser to more than 20 start-ups and is a member of the board of directors of several, including PYMNTS.com, which is a joint venture between Market Platform Dynamics and Berkshire Hathaway's Business Wire.

### Joseph Farrell, Director, Bureau of Economics,

Federal Trade Commission

Mr. Farrell has been director of the Bureau of Economics at the Federal Trade Commission since June 2009. He was previously deputy assistant attorney general for economics with the U.S. Department of Justice, chief economist at the Federal Communications Commission, a principal member of the technical staff at GTE Laboratories and national fellow at the Hoover Institution. He served on the Computer Science and Telecommunications Board at the National Academies of Science. He was editor of the *Journal of Industrial Economics*, president of the Industrial Organization Society and chair of Berkeley's Competition Policy Center.

He joined the University of California at Berkeley in 1989 as an associate professor and became a full professor in 1991. He was elected a fellow of the Econometric Society in 2002.

# **Gary Fish**, President and Chief Executive Officer, FishNet Security

Mr. Fish is the founder, president and chief executive officer of FishNet Security Inc. In 1996, he founded FishNet Security, which under his leadership has become the largest independently owned information security solutions provider in the United States. Mr. Fish has advisory board positions with a number of global technology companies and is an active angel investor. In addition to founding FishNet Security, he is co-founder and chief executive officer of FireMon, a software company.

Mr. Fish has received honors and accolades from industry peers. Among his honors, he was selected one of the Top 25 Executives for the New Millennium in

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computer-related fields. Ernst & Young has honored him as the Technology Entrepreneur of the Year for Kansas and Western Missouri, and CRN has honored him as a Security Superstar.

#### Alan S. Frankel, Director,

Coherent Economics, LLC

Mr. Frankel is founder of Coherent Economics, LLC, and a Senior Editor of the Antitrust Law Journal. He also serves as a Senior Advisor to the economic consulting firm Compass Lexecon.

Mr. Frankel has written and spoken extensively about competition in payment systems. Since 1990, he has been involved in many high profile disputes involving network access, interchange and other fee setting practices, and network rules that constrain merchant strategies at the point of sale. Mr. Frankel has been involved in legal or regulatory proceedings relating to these issues on behalf of competition authorizes or merchants in the United States, Canada, the United Kingdom, the European Union, Australia, and New Zealand.

# Esther L. George, President and Chief Executive Officer,

Federal Reserve Bank of Kansas City

Esther L. George is president and chief executive officer of the Federal Reserve Bank of Kansas City and a member of the Federal Open Market Committee, which has authority over U.S. monetary policy. Before being appointed president on Oct. 1, 2011, she had been the Bank's first vice president and chief operating officer since August 2009, responsible for directing the Bank's operations throughout the Tenth Federal Reserve District. Additionally, she recently served as the acting director of the Federal Reserve's Division of Banking Supervision and Regulation at the Board of Governors of the Federal Reserve System in Washington, D.C.

In January 2009, Ms. George was named executive vice president in charge of the Bank's Division of Supervision and Risk Management, a division she led as senior vice president since 2001. She is a former chair of the Federal Reserve System's Community Banking Organizations Management Group. Beyond the Tenth Federal Reserve District, Ms. George's experience in international central banking issues includes presentations at the Bank for International Settlement's Financial Stability Institute programs in Lima, Peru and Abu Dhabi, U.A.E. She has also served as the Tenth District's lead officer for international partnership programs involving the central banks of Morocco and Iraq. Additionally, she participates in the Federal Reserve Bank of Kansas City's annual economic policy symposium that is attended by central bankers from around the globe.

### Gerard B. J. Hartsink, Chairman,

European Payments Council

Mr. Hartsink is chairman of the European Payments Council, CLS Group Holdings, CLS Bank International, SWIFT's Dutch National Member Group and ISO Registration Management Group 20022 XML. He is co-chairman of

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Coordination Group European Payments Strategy, the European Central Bank's group that addresses issues and developments in the field of payment systems and services that are relevant for the euro area banking industry and for the Eurosystem. He is a board member of LCH.Clearnet and SWIFT. He is a member of Forum Standaardisatie, Coordination Group European Securities Infrastructure and ECB Target2 Securities Advisory Group.

Mr. Hartsink is also senior adviser to the managing board of ABN AMRO Bank. During his career as senior executive vice president of ABN AMRO, he has had managerial roles in sales, product development, information management and operations in several business units. He is currently responsible for the relationship with market infrastructures and industry standards bodies in the securities, payments, forex and cards industries.

### Sarah Jane Hughes, University Scholar and Fellow in Commercial Law, Indiana University Maurer School of Law

Ms. Hughes is a university scholar and fellow in commercial law at the Indiana University Maurer School of Law. She is a nationally recognized expert on payment systems (domestic, international, Internet banking, smart cards, wire transfers, checks, embezzlement and credit cards); public and private methods to deter, detect and prosecute domestic and international money laundering; and consumer protection and financial privacy.

She received the Maurer School of Law's Leon Wallace Teaching Award in 1993 and the graduating class' Gavel Award in 1996, 1997 and 2000. Her courses include Sales, Negotiable Instruments, Secured Transactions, Regulated Industries—Banking Law, and White Collar Crime.

Ms. Hughes is a member of the American Bar Association's (ABA) Cyberspace Law Committee, where she co-chairs the Working Group in Electronic Payment Services, and the Business Law, Antitrust and International Law Sections. In the ABA Business Law Section, she focuses on the areas of electronic commerce, payments systems and the uniform commercial code.

## Michael L. Katz, Professor of Economics,

University of California, Berkeley

Mr. Katz serves as the Sarin Chair in Strategy and Leadership at the University of California, Berkeley's Haas School of Business, where he is director of the Institute for Business Innovation. Mr. Katz also has an appointment as professor in the Department of Economics. He is a four-time finalist for the Earl F. Cheit Award for outstanding teaching and has won it twice.

Mr. Katz served as deputy assistant attorney general for economic analysis in the Antitrust Division of the U.S. Department of Justice from September 2001 through January 2003. In his work there, he oversaw the analysis of economic issues arising in both merger and non-merger enforcement. He served as chief economist of the Federal Communications Commission from January 1994 through

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January 1996. There he participated in the formulation and analysis of policies toward all industries under Commission jurisdiction, including broadcasting, cable, telephone and wireless communications. He has consulted for both governmental and private entities on issues involving strategies of, and public policies toward, payment networks.

Mr. Katz has published numerous articles on the economics of networks industries (particularly telecommunications and payment networks), intellectual property and antitrust enforcement. He is a member of the editorial boards of *Information Economics and Policy*, the *Journal of Economics & Management Strategy* and the *Journal of Industrial Economics*.

# **Don Kingsborough**, Vice President of Retail and Prepaid, PayPal

Mr. Kingsborough is the vice president of retail and prepaid products at Pay-Pal. He brings experience in consumer product development, technology, retail, point-of-sale and merchant relationships in oversight of PayPal's market expansion offline and into traditional retail stores.

Prior to joining PayPal, Mr. Kingsborough was president and chief executive officer of Blackhawk Network, a leader in third-party prepaid card products that he founded in 2001. He also founded and served as chief executive officer of toy manufacturer Worlds of Wonder Inc. Before Worlds of Wonder, he was president of the consumer products division at Atari Corporation and led the introduction of Nintendo to America.

## Bob Lee, Chief Technology Officer,

Square

Mr. Lee is the chief technology officer at Square. He leads a team of 90 engineers and oversees all of the company's technical initiatives. He engineers hardware, smartphone clients, highly available payment processing infrastructure and everything in between.

Prior to Square, Mr. Lee was a staff software engineer at Google. There he led the core library development for Google's Android mobile platform, contributed to the design of the Java Programming Language and its APIs, created the Jolt Award-winning Guice framework and led JSR-330 Dependency Injection for Java—the fastest executing Java specification in the history of the Java Community Process (JCP). Mr. Lee also represented Google on the JCP executive committee, which steers the development of Java, and helped open Google's London engineering office.

Prior to Google, Mr. Lee worked for or consulted at D'Arcy, Object Computing Inc., Ernst & Young, MasterCard and SBC (now known as AT&T). He coauthored the book, *Bitter EJB*, and wrote a program that helped defeat the Code Red Worm, which led him to an appearance on TechTV's "The Screen Savers." He is also a board member and leads the technical committee for Life Skills, a St. Louis-based nonprofit.

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### Richard Mabbott, Director, Major Projects,

Faster Payments Scheme Limited

Mr. Mabbott is the director of major projects at the Faster Payments Scheme Limited, one of the contracted payment schemes under the United Kingdom's Payments Council.

He was the program director for Faster Payments from the inception of the program in May 2005 to 2009 when the final phase of the development went live. During that time, Mr. Mabbott managed the designing, building, testing and launching of the faster payments system, the first new payment system in the United Kingdom in more than 20 years. He has in-depth experience with check clearing, ACH, CHAPS/RTGS, SWIFT and both credit and debit card systems as well as Faster Payments. Mr. Mabbott is an information and communications technology professional who has worked in payment systems for nearly 40 years. He has been with the Payments Council and its predecessor, APACS, for 18 years.

Mr. Mabbott is the chairman of the ISO standards committee responsible for card standards—SC17 Cards and Personal Identification—a position he has had for the past 16 years.

### Ricardo Medina, Director of Payment Systems,

Bank of Mexico

Mr. Medina joined the Bank of Mexico in 1989 and became the director of the Payment Systems department in 2004. His main task is promoting the sound functioning of the payments system in Mexico. Prior to his appointment as director, Mr. Medina's responsibilities related to the management of international reserves and monetary and foreign exchange policies.

He has been a lecturer on statistics, econometrics and finance at the National University of Mexico and at the Technological Institute of Mexico.

## M.J. Moltenbrey, Partner,

Dewey & LeBoeuf LLP

Ms. Moltenbrey is a partner at Dewey & LeBoeuf LLP where she represents clients through civil and criminal conduct investigations by federal and state antitrust authorities. She has defended clients in federal court cases before the Department of Justice (DOJ) and Federal Trade Commission. She also has helped guide numerous complex mergers through review by federal and state agencies, including Monsanto's acquisition of Delta and Pine Land, Xstrata's acquisition of Falconbridge Ltd. and Expro International Group's acquisition of Power Well Services.

Ms. Moltenbrey was formerly the director of civil nonmerger enforcement in the DOJ's Antitrust Division. In that position, she was the Antitrust Division's senior career officer responsible for civil conduct investigations and litigation. During her 17-year DOJ career, Ms. Moltenbrey also served as chief of the Civil Task Force and as trial attorney in the Transportation Section. Among the matters Ms. Moltenbrey was involved in at the DOJ were: *United States v. Microsoft* (monopolization); *United* 

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States v. Visa International et al. (anticompetitive agreements in joint venture); and United States v. Airline Tariff Publishing Co., et al. (price coordination).

Ms. Moltenbrey has been recognized as a leading U.S. antitrust lawyer by Chambers USA "America's Leading Business Lawyers," Global Competition Review's "International Who's Who of Business Lawyers," and "Washington Super Lawyers."

### Kevin Morrison, Senior Vice President, Prepaid,

U.S. Bank

Mr. Morrison joined U.S. Bank in September 2010 and currently serves as the senior vice president for the prepaid organization, which oversees all government, corporate and consumer based prepaid products. He began his career in the payment industry in 1994 while working at Commerce Bank of Kansas City in the credit card division. In 1996, he moved to First Data, where he spent the first four years on the credit and debit side of the business.

In 2000, Mr. Morrison migrated to the prepaid department within First Data and spent the next six years developing and implementing prepaid programs for some of the largest financial institutions in the United States. In 2006, he joined H&R Block to develop and launch the Emerald Prepaid MasterCard program as well as other prepaid products.

### Sean O'Connor, Adviser, Payments System Development Group, World Bank

Mr. O'Connor is an adviser in the Payments System Development Group at the World Bank. He was formerly a research adviser at the Bank of Canada, specializing in research and policy for financial infrastructure. He has had various positions as a monetary and financial economist in the private sector, government and the International Monetary Fund, as well as the Bank of Canada. He represented the Bank of Canada on several international and domestic committees and working groups, including the SWIFT Oversight Group and the Bank for International Settlements Committee on Payment and Settlement Systems (CPSS). He also chaired the CPSS Working Group on General Guidance for the Development of Payment Systems.

Mr. O'Connor has also participated as a payments expert in the International Monetary Fund-World Bank Financial Sector Assessment Program and as a consultant to central banks in emerging markets.

# **Neil Platt**, Senior Vice President and General Manager, Payments, Fiserv/CashEdge

Mr. Platt is vice president of sales and account manager at CashEdge, a division of Fiserv. He is responsible for providing leadership and oversight of sales, marketing, product strategy, business development and account management for the banking and payments business. He has been with CashEdge for more than 10 years and during that time has had a variety of management roles. Prior to joining CashEdge, Mr. Platt was a consultant with McKinsey & Company.

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**Louisa Quittman**, Director, Office of Financial Education, U.S. Department of the Treasury

Ms. Quittman is the director of the Office of Financial Education of the U.S. Department of the Treasury. In this role she is responsible for policy development and coordination related to promoting the financial decision making and wellbeing of Americans. She plays a lead role in coordinating the interagency Financial Literacy and Education Commission and supports the President's Advisory Council on Financial Capability. Other areas of responsibility include the mymoney. gov website and the National Financial Capability Challenge. Additionally, Ms. Quittman is the director of the U.S. Community Adjustment and Investment Program, which provides capital to small businesses that create and retain jobs in trade-impacted areas of the United States.

Previously, Ms. Quittman was the director of Community Programs of the U.S. Department of the Treasury. In this role she focused on financial access in traditionally underserved communities in order to promote Americans' financial empowerment, including the Bank On USA initiative and the Community Financial Access Pilot. She also oversaw research related to financial education, financial access, consumer lending and other related topics. In addition, Ms. Quittman was program manager at the Community Development Financial Institutions Fund (CDFI) and worked nearly nine years in various positions at the CDFI Fund.

### Rachel Schneider, Vice President, Innovation and Research,

Center for Financial Services Innovation

Ms. Schneider is the vice president of innovation and research for the Center for Financial Services Innovation. She serves as an industry expert on the underbanked, identifying innovations and documenting trends. She coordinates relationships with academic and industry research partners to ensure that the Center for Financial Services Innovation's research is timely, action-oriented and influential. In addition, Ms. Schneider collaborates with financial services companies and others regarding strategy development and product design related to the underbanked market. She began her career as an investment banker at Merrill Lynch & Company. Her interest in the underbanked dates back to her days as a VISTA Volunteer.

## Steve Streit, Chairman and Chief Executive Officer,

Green Dot Corporation

Mr. Streit is the chairman and chief executive officer of Green Dot Corporation, a company he founded in 1999. Green Dot provides a broad base of U.S. consumers with low-cost banking and payment solutions that include general purpose reloadable prepaid cards and Green Dot Financial Network, a cash transfer network. Mr. Streit recently led Green Dot through the acquisition of Bonneville Bancorp, resulting in Green Dot becoming a bank holding company.

Mr. Streit has been recognized with numerous industry awards, including the 2011 Ernst & Young National Entrepreneur of the Year Award in the Financial Services category, the 2011 Technology Leadership Award from Los Angeles

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County Technology Week, and the 2005 Ernst & Young Entrepreneur of the Year Award for Southern California.

#### Bruce J. Summers, Former Director,

Federal Reserve Information Technology

Mr. Summers was a career official with the Federal Reserve System until his retirement in 2007. He served as a Reserve Bank economist, banking supervisor and chief financial officer, then most recently as director of the national organization responsible for the Fed's Information Technology architecture and technology operations. He was also national product manager for Fedwire and ACH, and deputy director at the Board of Governors for payment system policy and oversight of the banking services and information technology activities of the 12 Federal Reserve Banks.

Mr. Summers has contributed to the international initiatives of central banks through the Bank for International Settlements, and to the work of the International Monetary Fund and the World Bank. His publications on banking and payment systems include the 1994 book, *The Payment System: Design, Management, and Supervision*, which remains in wide use; his successor book, *Payment Systems: Design, Governance and Oversight*, is scheduled for publication in 2012. He now consults on payment systems and technology management.

### Hal R. Varian, Chief Economist,

Google

Mr. Varian is the chief economist at Google. He started in May 2002 as a consultant and has been involved in many aspects of the company, including auction design, econometric analysis, finance, corporate strategy and public policy.

He is also an emeritus professor at the University of California at Berkeley in the business, economics and information management departments. He has taught at universities around the world, including the Massachusetts Institute of Technology, Stanford, Oxford and the University of Michigan.

Mr. Varian is a fellow of the Guggenheim Foundation, the Econometric Society and the American Academy of Arts and Sciences. He was co-editor of the *American Economic Review* from 1987 through 1990. He has published numerous papers on economic theory, industrial organization, financial economics, econometrics and information economics.

He is the author of two major economics textbooks that have been translated into 22 languages. He is the co-author of a best-selling book on business strategy, *Information Rules: A Strategic Guide to the Network Economy.* He also wrote a monthly column for *The New York Times* from 2000 to 2007.

## Kathy Walker, Managing Director,

OpenAir Equity Partners

Ms. Walker is managing director of OpenAir Equity Partners, a venture capital and private equity firm solely focused on the wireless, communications and

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mobile Internet sectors. She has nearly 30 years of carrier and wireless experience and is considered one of the top mobile network experts in the United States.

Prior to joining OpenAir, Ms. Walker served in the dual role of chief information officer and chief network officer of Sprint Nextel. While there, she led the overall planning, design and operations of Sprint Nextel's wireless and wireline networks, including the development and deployment of the first U.S. nationwide 3G wireless network.

In 2008, Ms. Walker was selected to the Fierce Wireless "Top Women in Wireless" list. She is a member of Missouri University of Science and Technology's Women in Science and Engineering Hall of Fame. She also serves on the Trustees' Councils of Missouri University of Science and Technology and South Dakota State University.