



Proceedings of the Third MIT Information Quality Industry Symposium

Massachusetts Institute of Technology
Cambridge, MA, USA

July 15-17, 2009

Edited by

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Lockheed Martin Corporation

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Burton Group

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FOREWORD

WELCOME to the 3rd *MIT Industry Symposium on Information Quality (MIT2009IQIS)*. *Information Quality (IQ)* is an acknowledged prerequisite to organizational success. However, organizations also face the challenge of balancing quality requirements including an increasing volume of information and the demand for faster delivery, while contending with constantly changing business environments. The *Symposium* is designed to help bridge these issues through discussions among practitioners, vendors, and academicians. In addition to presentations and workshops, the Symposium includes vendor presentations, product announcements, and consultancy methods that complement the annual *International Conference on Information Quality (ICIQ)*.

Acknowledgments are extended to all Symposium participants. We thank you for your contribution in establishing IQ as a multi-disciplinary field and industry. Members of the Symposium organizing committee worked hard; their contributions made our work on the program a pleasure.

Thanks are also due to, among others, Burton Group, DAMA Global Chapter & Mentor Graphics, DataFlux/SAS, Electronic Commerce Code Management Association (ECCMA), and Harte-Hanks Trillium Software for their sponsorship and support in promoting the Symposium.

At the MIT 2007 Information Quality Industry Symposium, Dr. Bruce Davidson (Cedars-Sinai Health System) and CDR Stanley Dobbs (U.S. Navy) were recognized for their outstanding contributions. At MIT2008IQIS, we recognized Michael Mielke and Marcus Gebauer.

We would like to express our gratitude to Fori Wang and other MIT staff for their assistance in producing the Symposium proceedings, keeping the website up and managing the various aspects of the Symposium operation. The final Symposium program and other information about the Symposium are available at <http://mitiq.mit.edu/IQIS>.

MIT2009IQIS General Symposium Co-Chairs
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MIT Information Quality Industry Symposium

Location

Massachusetts Institute of Technology
Tang Building (E51) in the MIT East Campus
70 Memorial Drive, Cambridge, MA, USA

Date

July 15, 2009 – July 17, 2009

Official Website

<http://mitiq.MIT.edu/IQIS/2009>
Contact: Dr. Richard Wang
Chief Data Quality Officer of the U.S. Army
Director of MIT Information Quality Program (on leave)

WEDNESDAY, July 15, 2009		
8:00-9:00 AM	CONTINENTAL BREAKFAST & CHECK-IN	Classroom
9:00-10:30 AM	Session T1A Tutorial Workshop: Business Intelligence Information Quality for Business Intelligence Earl Hadden Intelligence Commerce Network, LLC	E51-345
	Session T1B Tutorial Workshop: Data Governance Data Governance with a Focus on Information Quality Gwen Thomas President The Data Governance Institute	E51-361
	Session T1C Tutorial Workshop: ISO 8000 The NATO Codification System: Leading the Way to Data Quality Through ISO Standards 22745 and 8000 Steven E. Arnett Chief, U.S. National Codification Bureau Defense Logistics Agency	E51-372 pg. 1
	Session T1D Tutorial Workshop: Data Quality Ten Steps to Quality Data and Trusted Information..... Danette McGilvray President and Principal Granite Falls Consulting, Inc.	E51-376 pg. 2
10:30-11:00 AM	Coffee Break	

11 AM-12:30 PM	Session T2A Tutorial Workshop: Business Intelligence Textual ETL – Opening Up New Worlds of Opportunity William H. Inmon Inmon Consulting Services	E51-345 pg. 20
	Session T2B Tutorial Workshop: Enterprise Architecture Information Quality: What's Enterprise Architecture Got to Do with It? P. Kathie Sowell President Custom Enterprise Solutions, LLC	E51-361 pg. 34
	Session T2C Tutorial Workshop: ISO 8000 Meeting the ISO 8000 Requirements for Quality Data Peter R. Benson Executive Director and Chief Technical Officer Electronic Commerce Code Management Association	E51-372 pg. 48
	Session T2D Tutorial Workshop: Business Quality TIQM® Quality System for Total Information Quality Management: Business Excellence through Information Excellence Larry P. English Information Impact International, Inc.	E51-376 pg. 67

12:30-2:00 PM	<p>LUNCH & KEYNOTE SPEECH</p> <p>Chairs' Welcome and Opening Remarks</p> <p>Symposium Co-Chairs WooYoung Chung, Linda Kresl</p> <p>Program Co-Chairs Suzanne Acar, Willa Pickering, Joe Bugajski</p> <p>ACM-JDIQ update Stuart Madnick & Yang Lee</p> <p>UALR MSIQ/PhD Update John Talburt & Ning-Ning Wu</p> <p>QIBRAS (Brazil IQ) Introduction Guilherme Rocha & Flávio de Almeida Pires</p> <p>French Association of Excellence, Information, Quality Intro. Delphine Clement & Brigitte Laboisie</p> <p>MIT2010IQIS Planning Linda Kresl, Suzanne Acar & Peter Anlyan</p> <p>Keynote Speech</p> <p>Transforming the Army Enterprise with High IQ pg. 87</p> <p>Ron Bechtold The U.S. Army Chief Data Officer Office, Army CIO/G6</p> <p><i>Lunch is sponsored by Harte-Hank Trillium Software</i></p>	E51-345
2:00-2:30 PM	COFFEE BREAK	
2:30-4:00 PM	<p>Session 1A Network-Centric Environment</p> <p>Session Chair: Willa Pickering, Lockheed Martin Corporation</p> <p>A Maturity Model for Harnessing the Power of Networks and Information..... pg. 96</p> <p>David S. Alberts Director, Research Office of the Assistant Secretary of Defense for Networks and Information Integration and the DoD CIO</p>	E51-345

	<p>Session 1B IQ in Medical Informatics I Session Chair: Peter Anlyan, Anlyan Consulting, LLC</p> <p><i>Translating Advances in Health Information Technologies into Improved Care for Populations, Patients and Families</i></p> <p>Better Information, Better Decisions, Better Care pg. 110 John D. Halamka, MD, MS Chief Information Officer Harvard Medical School Chief Information Officer Beth Israel Deaconess Medical Center Kenneth Mandl, MD, MPH Associate Professor, Harvard Medical School Director of the Intelligent Health Laboratory Children’s Hospital Informatics Program</p>	E51-361
	<p>Session 1C Enterprise Data Management I Session Chair: Carol Chapman, American National Insurance Co.</p> <p>1. Master Data Management (MDM) Improves Information Quality to Deliver Value pg. 125 Joe Bugajski Senior Analyst, Burton Group</p> <p>2. Integrating Business and Technical Metadata to Support Better Data Quality pg. 151 Robert Schork Citi Arch and Tech Engineering, Citigroup</p>	E51-372
	<p>Session 1D Data Modeling & Data Management Session Chair: Linda Kresl, Mentor Graphics</p> <p>1. DW2.0 and Data Quality pg. 174 Linda Kresl Business Intelligence Manager Mentor Graphics</p> <p>2. Enough Already! How Data-Modeling Tools and Notations Compromise Information Quality—And What You Can Do About It. pg. 186 Joe Maguire Senior Analyst, Burton Group</p>	E51-376
4:00-4:30 PM	COFFEE BREAK	

<p>4:30-6:00 PM</p>	<p>Session 2A Ubiquitous Data in Net-Centric Environment Session Chair: Willa Pickering, Lockheed Martin Corporation</p> <p>Panel Discussion Session Ubiquitous Data in a Net-centric Environment: A Framework and Solution Approach</p> <p>Panelists: David Alberts, Office of the Secretary of Defense Frank Petroski, The MITRE Corporation Hans Polzer, Lockheed Martin Corporation</p>	<p>E51-345</p>
	<p>Session 2B IQ in Medical Informatics II Session Chair: Peter Anlyan, Anlyan Consulting, LLC</p> <p><i>Translating Advances in Health Information Technologies into Improved Care for Populations, Patients and Families</i></p> <p>Health Information Technologies – A New Blueprint for Systems Improvement pg. 211 David W. Bates, MD, MSC Professor of Medicine, Harvard Medical School Professor of Health Policy and Management Harvard School of Public Health Brigham and Women's Hospital Donald Goldmann, MD Senior Vice President Institute for Healthcare Improvement (IHI) Professor of Pediatrics, Harvard Medical School</p>	<p>E51-361</p>
	<p>Session 2C Enterprise Data Management II Session Chair: Carol Chapman, American National Insurance Co.</p> <p>A Framework for Business Intelligence Data Governance pg. 241 Cal Rosen President, ActionInfo Consulting Services</p>	<p>E51-372</p>
	<p>Session 2D Business Impact of IQ Session Chair: Linda Kresl, Mentor Graphics</p> <p>1. Data Quality for Sales and Marketing CRM pg. 242 Mark Goloboy Director of Global Data Governance Monster</p> <p>2. Product Data Quality - Ready for its Close-up? pg. 243 Martin Boyd Vice President of Marketing Silver Creek Systems</p>	<p>E51-376</p>
<p>6:00-8:00 PM Reception: 6-7 Dinner: 7 p.m.</p>	<p>SYMPOSIUM RECEPTION & DINNER AT MIT FACULTY CLUB</p> <p><i>This reception & dinner event is sponsored by Burton Group</i></p>	

THURSDAY, July 16, 2009		
8:00-9:00 AM	CONTINENTAL BREAKFAST	
9:00-10:30 AM	<p>Session 3A Army and Air Force IQ Practice Session Chair: Willa Pickering, Lockheed Martin Corporation</p> <p>1. Enterprise Data Quality Management for USAF Operations Support..... pg. 266 Christopher Sharbaugh Principal Advisor to Director US Air Force David Becker Principal Information Systems Engineer The MITRE Corporation</p> <p>2. Exposing Data as a Service in the Army Enterprise..... pg. 284 Michelle Dirner Acting Branch Chief, Message and Protocol Data Engineering Branch Army Net-Centric Data Strategy (ANCDS) Center of Excellence Laurie Kraus Data Services Team Lead Army Net-Centric Data Strategy (ANCDS) Center of Excellence</p>	E51-345
	<p>Session 3B IQ Practices in Health Systems I Session Chair: Garry Darrer Getinge USA, Inc.</p> <p>1. Data Governance and Data Quality Management In Academic Medical Centers pg. 301 Bruce Davidson Director of Resource and Outcomes Management Cedars-Sinai Health System Steve Meurer MHS / MBA, PhD Vice President, Clinical Data & Informatics University HealthSystem Consortium</p> <p>2. Establishing a Practical and Innovative Collaborative Vendor-Client Data Relationship to Improve Data Integrity..... pg. 303 Allen Juris Assistant Director, Data Services University Health Systems Consortium Michael Nix Manager, Clinical & Operations Measurement Group James M. Jeffords Institute for Quality & Operational</p>	E51-361

	<p>Session 3C IQ and Cloud Computing Session Chair: Joe Bugajski, Burton Group</p> <p>Information Quality in the Cloud, What IT Managers Need to Know Robert Grossman Founder and Managing Partner Open Data Group</p>	<p>E51-372</p> <p>pg. 321</p>
	<p>Session 3D Transforming Data into a Corporate Asset Session Chair: Carol Chapman, American National Insurance Co.</p> <p>Transforming Data into a Corporate Asset: A Roadmap for Successful Data Quality and Data Governance..... Tony Fisher President and CEO, DataFlux</p>	<p>E51-376</p> <p>pg. 350</p>
10:30-11:00 AM	COFFEE BREAK	
11 AM-12:30 PM	<p>Session 4A IQ in the Defense Industry Session Chair: Suzanne Acar, Federal Bureau of Investigation</p> <p>1. Information Quality in Defense Acquisition Projects Tor Arne Irgens Commander, Norwegian Armed Forces Atle Kvalheim DNV (Det Norske Veritas) Trine Hansen DNV (Det Norske Veritas)</p> <p>2. Using Automation to Generate Automated Software Testing – Reducing the Human Interaction for Testing of DOD Systems ... Scott Bindas Software Development Manager Innovative Defense Technologies Elfriede Dustin Innovative Defense Technologies</p>	<p>E51-345</p> <p>pg. 351</p>
	<p>Session 4B IQ Practices in Health Systems II Session Chair: Garry Darrer, Getinge USA, Inc.</p> <p>1. Assuring Data Integrity for Healthcare Public Reporting and Using Results to Evaluate Patient Care Quality Elisa Horbatuk Data Manager, Decision Support Services Stony Brook University Medical Center</p> <p>2. Case Study: Overview of IQ Practices at Cedars-Sinai Alein Chun Manager, Data Quality Management Unit Cedars-Sinai Health System</p>	<p>E51-361</p> <p>pg. 371</p>

	<p>Session 4C Business Impact of IQ Session Chair:</p> <p>1. Cost of Non Quality Data in a CRM Perspective..... pg. 410 Brigitte Laboisie Technical Director, AID Delphine Clement Hewlett-Packard</p> <p>2. Diagnosing IT's Impact on the Business pg. 411 Lyn Robison VP & Research Director, Burton Group</p>	<p>E51-372</p>
	<p>Session 4D IQ in the Mortgage Industry Session Chair: Charles McKinney, Freddie Mac</p> <p>PAPER PRESENTATION: <i>Information Quality in the Mortgage Industry: A Freddie Mac Perspective</i> pg. 435</p> <p>1. Mortgage Industry Data Standards: Introduction to MISMO Charles McKinney Business Planning and Development Director Operations Management Group, Freddie Mac</p> <p>2. Measuring Mortgage Information Quality in the United States Geni Gomez Model Application Management Director Enterprise Services, Freddie Mac</p> <p>3. Freddie Mac's Business Data Dictionary Lorraine Fellows Senior Information Architect Enterprise Services, Freddie Mac</p> <p>4. Information Management Governance and Operations Diane Schmidt Director, Shared Service Operations Enterprise Services, Freddie Mac</p> <p><u>Other Contributing Authors:</u> David Barkley, Jay Wright, Sabrina Lozano, Edward Albrigo and Richard Wang</p>	<p>E51-376</p>
<p>12:30-2:00PM</p>	<p>LUNCH & KEYNOTE SPEECH</p> <p><i>This lunch event is sponsored by SAS/DataFlux</i></p>	
<p>2:00-2:30 PM</p>	<p>COFFEE BREAK</p>	

2:30-4:00 PM	<p>Session 5A IQ Practice in Government Agencies I Session Chair: Suzanne Acar, Federal Bureau of Investigation</p> <p>Data Quality in a Policy Context: A U.S. EPA Perspective..... pg. 447</p> <p>Reggie Cheatham Director, Quality Staff Office of Environmental Information U.S. Environmental Protection Agency</p>	E51-345
	<p>Session 5B Health Information Exchange Session Chair: Garry Darrer, Getinge USA, Inc.</p> <p>Using Clinical Integration and Health Information Exchanges to Improve Quality and Replace Managed Care pg. 466</p> <p>Eric Nielsen Chief Medical Officer The Greater Rochester Independent Practice Association Christi Braun Senior Associate, Ober Kaler</p>	E51-361
	<p>Session 5C Long-Term Data Retention Session Chair: Joe Bugajski, Burton Group</p> <p>Data Quality Considerations for Long Term Data Retention pg. 487</p> <p>Jack Olson</p>	E51-372
	<p>Session 5D DQ Scorecards and IQ Value Session Chair: Steve Sarsfield, Harte-Hanks Trillium Software</p> <p>Using Data Quality Scorecards to Sell IQ Value Nelson Ruiz Harte-Hanks Trillium Software</p>	E51-376
4:00-4:30 PM	COFFEE BREAK	
4:30-6:00 PM	<p>Session 6A IQ Practice in Government Agencies I Session Chair: Suzanne Acar, Federal Bureau of Investigation</p> <p>1. New Initiatives in HUD's Data Quality Improvement Program (DQIP): Enabling Field Effectiveness..... pg. 506</p> <p>Shula Markland Senior Data Architect US Department of Housing and Urban Development Mark Amspoker Citizant, Inc</p> <p>2. The Reality of Information Governance Deployment at the National Institute of Health pg. 518</p> <p>Helen Schmitz Acting Chief Information Technology (IT) Architect National Institute of Health</p>	E51-345

	<p>Session 6B Data Quality Management in Healthcare Session Chair: Bruce Davidson, Cedars-Sinai Health System</p> <p>1. Challenges of Data Quality in Medical Informatics Data Warehouses Neera Bhansali Manager of Data Quality & Curation Moffitt Cancer Center</p> <p>2. Additive Theory of Error Generation and Correction Derived from & Applied to Clinical Research Data Management..... Meredith Nahm Associate Director for Biomedical Informatics Duke Translational Medicine Institute Leonard White Senior Electrical Engineer, Stanford White, Inc. Constance Johnson Assistant Professor Duke University School of Nursing Todd Johnson Associate Dean for Academic Affairs University of Texas at Houston</p>	<p>E51-361</p> <p>pg. 531</p> <p>pg. 545</p>
	<p>Session 6C IQ in the Media Industry Session Chair: Joe Bugajski, Burton Group</p> <p>1. Data Quality Contributing to Improve Revenue and Relationship in the Media Industry Murillo Feitosa Boccia Director of Database and Relationship Marketing Grupo Abril Flávio de Almeida Pires President and CEO, Assesso Mario Fernando Cervi Director, CRM and Data Quality Projects, Assesso</p> <p>2. Data Quality Challenges and Solution Approaches in YAHOO!'s Massive Data Environment Dan Defend Yahoo! Aparna Vani Yahoo!</p>	<p>E51-372</p> <p>pg. 562</p> <p>pg. 589</p>
<p>6:00-7:30 PM</p>	<p>SYMPOSIUM RECEPTION AND SOCIAL AT MIT FACULTY CLUB</p> <p><i>This reception is sponsored by Mentor Graphics and DAMA Global Chapter.</i></p>	

FRIDAY, July 17, 2009

8:00-9:00 AM	CONTINENTAL BREAKFAST	
9:00-10:30 AM	<p>Session 7A IQ in Law Enforcement Session Chair: Willa Pickering, Lockheed Martin Corporation</p> <p>1. Overcoming Information Sharing Barriers via Information Flow Modeling: Applications in Homeland Security David Kamien CEO, Mind-Alliance Systems, LLC Jean-Francois Cloutier CTO, Mind-Alliance Systems, LLC</p> <p>2. Quick Assess: Software Tool for Assessing the Quality of Law Enforcement Data Sets Valerie Sessions Assistant Professor of Computer and Information Science Charleston Southern University Dominic LaMar Computer Scientist, Engineer, and Project Manager Space and Naval Warfare Systems Center Atlantic</p>	<p>E51-345</p> <p>pg. 598</p> <p>pg. 606</p>
	<p>Session 7B Future of IQ in Healthcare Industry Session Chair: Peter Anlyan, Anlyan Consulting, LLC</p> <p>You Got What You Paid for – Data Quality in Integrated Health Records Ken Orr Chief Scientist, The Ken Orr Institute</p> <p>This session is delivered via WebEx (donated by WebEx)</p>	<p>E51-361</p>
	<p>Session 7C Data Portability and Information Quality Session Chair: Joe Bugajski, Burton Group</p> <p>Data Portability: It is about the Data—the Quality of the Data.... Peter R. Benson Executive Director and Chief Technical Officer Electronic Commerce Code Management Association</p>	<p>E51-372</p> <p>pg. 614</p>
	<p>Session 7D Working with Data Session Chair: Linda Kresl, Mentor Graphics</p> <p>1. Not All Data Are Created Equal - Taxonomic Data and Data Governance Kimmo Kontra Manager, Accenture (Helsinki Office)</p> <p>2. New Generation IQ-Tool: The ASPC - Statistical Process Control Charting Software Marilou Haines President, Alamo Software Inc.</p>	<p>E51-376</p> <p>pg. 619</p> <p>pg. 633</p>
10:30-11:00 AM	COFFEE BREAK	

11:00-12:00 PM	<p>CLOSING PLENARY SESSION</p> <p>Roundtable Discussion</p> <p>Where Do We Go from Here? Charting the Uncharted Future of Information Quality</p> <p>Closing Remarks</p> <p>Stuart Madnick, Richard Wang, and All Participants</p>	E51-345
	END OF THE SYMPOSIUM	