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The Center for Business Innovation
Presents

The Inaugural
Medical Device Connectivity
Conference & Exhibition

Connecting Medical Devices to People, Workflow & Information Systems

September 10-11, 2009

Joseph B. Martin Conference Center
at Harvard Medical School
Boston, MA

SUPPORTING ORGANIZATIONS

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MASS TECHNOLOGY LEADERSHIP COUNCIL
AAMI Association for the Advancement of Medical Instrumentation
MDG Medical Development Group The Industry's Professional Network
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KEYNOTE SPEAKERS

Tim Gee, Connectologist & Principal, ***Medical Connectivity Consulting***

Julian M. Goldman, MD, Medical Director of Biomedical Engineering, ***Partners HealthCare System,*** Director, ***CIMIT Program on Interoperability and Medical Device Plug-and-Play Interoperability Program, Massachusetts General Hospital***

Stephen L. Grimes, FACCE, FHIMSS, FAIMBE, Vice President, ***Technology in Medicine, Inc.*** & Immediate Past President, ***American College of Clinical Engineering (ACCE)***

William A. Hyman, ScD, PE, Professor, Department of Biomedical Engineering, ***Texas A&M University*** & President, ***ACCE Healthcare Technology Foundation***

Steve Merritt, Infrastructure Engineer, ***Baystate Health*** & Co-Chair, ***IHE PCD Planning*** Committee

Bridget Moorman, CCE, President, ***BMoorman Consulting, LLC***

Steven R. Rakitin, President, ***Software Quality Consulting & AAMI member***

WHO SHOULD ATTEND

- *Executives and clinicians at hospitals, healthcare systems, physician groups and health plans, including biomedical engineering, clinical engineering and IT staff*
- *Medical device and IT company executives, including marketing/sales and engineering staff*
- *Management consultants, government officials, academics and the financial community*

ABOUT THE CONFERENCE ORGANIZER

The Center for Business Innovation (TCBI) organizes conferences and exhibitions for the U.S. and international markets. TCBI is an independent company that is well-positioned to provide objective, balanced information and analysis on a wide range of topics. TCBI currently focuses on organizing programs that offer detailed and practical instruction on clinical, technological, financial, strategic and regulatory aspects of healthcare. These programs are carefully designed to meet the information needs of executives, clinicians and IT staff from hospitals, managed care organizations, physician groups, long-term care facilities, postacute care providers, pharmaceutical/biotechnology companies, medical device companies, information technology vendors and other players in the rapidly evolving healthcare industry. For additional information, please visit **www.tcbi.org**.

Photos on the front cover courtesy of the Greater Boston Convention & Visitors Bureau.

A WELCOME FROM THE PROGRAM CHAIRPERSON, TIM GEE

This is the first ever conference devoted to the topic of medical device connectivity, a surprising fact for a market that emerged in the 1980s with diagnostic and critical care applications. Continued pressure to improve patient safety and outcomes, and the adoption of EMRs, are the principal drivers for connectivity today. Connectivity recently became more closely tied to EMR adoption as a requirement of Meaningful Use. In addition to the general scope of connectivity, this conference zeros in on the point of care, whether in the hospital, the patient's home, or anywhere in between.

This groundbreaking meeting, as described in this Advance Program, features an outstanding agenda with recognized experts from academia, provider organizations, manufacturers and elsewhere. These are the experts drafting and implementing standards, leading the response to new regulations, and developing and implementing today's connectivity solutions.

The first day's keynotes and panel discussions frame the conference's focus on connectivity and tackle two of the biggest issues facing health care: industry standards and regulatory issues. Program tracks on the second day provide a survey of connectivity applications, clinical capabilities and outcomes, and explore the gap between regulated vendor-managed systems and the customer-managed and controlled environments in which these systems are used. An innovation of this conference is a track that enables attendees to schedule one-on-one meetings with sponsors for in depth product demonstrations and discussions. Two post-conference workshops are also offered, providing in depth analysis and insight on IEC 80001 and distributed antenna systems.

A heartfelt thanks to all the conference speakers for their participation and support of the advancement of connectivity, in this conference and beyond. Both their expertise and efforts to provide new insights into the issues facing the continued development and implementation of connectivity will create an exceptional conference experience for all attendees.

I hope that you will attend this exciting conference and tell your colleagues about this first ever opportunity to learn and interact with some of the industry's leading minds in medical device connectivity. This inaugural conference will explore and frame the issues that will help shape the future of connectivity and next year's Medical Device Connectivity Conference.

All the best,

Tim Gee, Program Chair

Principal, Medical Connectivity Consulting

MEDICAL DEVICE CONNECTIVITY CONFERENCE & EXHIBITION AGENDA

DAY ONE: THURSDAY SEPTEMBER 10, 2009

7:00 *REGISTRATION / SPONSOR / EXHIBITOR SHOWCASE*
CONTINENTAL BREAKFAST SPONSORED BY capsule

8:00 **CHAIRPERSON'S OPENING REMARKS & GREETING**
Tim Gee, Connectologist & Principal, Medical Connectivity Consulting

8:15 **KEYNOTE ADDRESS: MEDICAL DEVICE CONNECTIVITY IN HEALTH CARE: WHERE ARE WE, WHERE ARE WE GOING, AND HOW DO WE GET THERE?**
This opening keynote defines and frames medical device connectivity. A model for segmenting the market will be presented, along with key applications, technologies and market barriers. The influence of the ARRA stimulus package and HITECH act are discussed, along with the current definition of "meaningful use." The keynote closes by introducing the concept of market platforms, how they are being applied to connectivity, and discussing potential outcomes in the market.
Tim Gee is Principal and founder of Medical Connectivity Consulting, specializing in workflow automation through the integration of medical devices with information systems, and enabling technologies. Tim has 25 years of experience with expertise in wireless medical devices, converged medical device/enterprise networks, requirements elicitation, regulatory strategy, connectivity, interoperability, diagnostic and point of care workflows, and patient flow optimization. Tim has served providers and vendors, including: Abbott Point of Care, Ascom, Awarepoint, Baxter Healthcare, Biotronik, Capsule, Cardinal Health, Ekahau, Emergin, GE Healthcare, Hill-Rom, Intel Digital Health, Providence Health, Robert Wood Johnson University Hospital, Spectrum Health, Welch Allyn and others. He is currently an advisor to two startups. Tim speaks frequently at industry conferences and corporate events, national sales meetings and user group meetings. He is on the editorial advisory board of a number of magazines, and publishes the blog Medical Connectivity (www.medicalconnectivity.com), and also participates in industry initiatives.
Tim Gee, Connectologist & Principal, Medical Connectivity Consulting

9:00 **KEYNOTE ADDRESS: CONNECTING OPERATIONAL AND STRATEGIC PERSPECTIVES**
Medical device connectivity is a broad ranging topic; this presentation will frame connectivity across four variables or subject areas: standards, technology, reevaluating clinical need, and gaining clinical acceptance. What do standards really mean? Various standards will provide examples in how they are developed and adopted. Topics discussed will include standards development, the need for reference implementations, and the role of test and certification for cross vendor interoperability. Technology development is not holding back connectivity or interoperability; in fact, technologies like wireless communications and networking have created problems like "systems of systems" and coexistence issues that impact patient safety. As technology has advanced, efforts like IEC 80001 have become needed to ensure safe and effective patient care. The variety of connectivity enabled solutions available today necessitates the reevaluation of clinical needs, especially at the point of care where many devices and systems center on the individual patient. And without clinical acceptance, connectivity enabled solutions will not deliver on their promise of better patient outcomes and improved care delivery productivity. Gaining clinical acceptance has become an important new hurdle for connectivity, tied more to system design and workflow automation than any specific technology or manufacturer.
Julian M. Goldman, MD, is Medical Director of Biomedical Engineering for Partners HealthCare System, where he is responsible for developing strategies, identifying technology trends and guiding Partners to stay on the leading edge of infrastructure and patient-care technologies to ensure safety, effectiveness and efficiency. Dr. Goldman is also Director of the Program on Interoperability at CIMIT (Center for Integration of Medicine and Innovative Technology), a principal anesthesiologist in the Massachusetts General Hospital "Operating Room of the Future", and founder of the Medical Device "Plug-and-Play" (MD PnP) Interoperability Program. He has led the MD PnP program from an initial convening of 85 interested stakeholders in 2004 to a global network of over 700 participants from clinical environments, government agencies, medical device vendors, biomedical and clinical

engineering, computer science engineering, and standards organizations. The MD PnP program was recognized with the CIMIT 2007 Edward M. Kennedy award for Healthcare Innovation. Dr. Goldman is the recipient of a number of honors, most recently the 2009 American College of Clinical Engineering Professional Achievement in Technology Award and the Association for the Advancement of Medical Instrumentation (AAMI) Foundation/Institute for Technology in Health Care 2009 Clinical Application Award.

Julian M. Goldman, MD, Medical Director of Biomedical Engineering, Partners HealthCare System, Director, CIMIT Program on Interoperability and Medical Device Plug-and-Play Interoperability Program, Massachusetts General Hospital

9:45 *SPONSOR / EXHIBITOR SHOWCASE & REFRESHMENTS SPONSORED BY* capsula

10:15 **KEYNOTE ADDRESS: INDUSTRY STANDARDS (FORMAL AND DE FACTO) IN CONNECTIVITY**

No meeting on medical device connectivity would be complete without a discussion of standards. Industry standards have been broadly adopted, and quite successful, in diagnostic imaging (DICOM) and in the clinical lab (ASTM/LIS). In fact, these two markets have been transformed by the standards they have adopted. Medical devices used at the point of care have so far resisted the adoption of any meaningful connectivity standards. This presentation will compare and contrast connectivity at the point of care with diagnostic imaging and the clinical lab, including efforts in the IHE PCD and Continua Health Alliance. Closing thoughts will cover some of the shortcomings of existing standards, and explore when and how plug and play connectivity might come to pass.

Steve Merritt works for Baystate Health, an integrated delivery network based in Western Massachusetts. He has held several positions at Baystate Health including Clinical Engineer, Digital Imaging Architect, and his current position as Infrastructure Engineer within the Information Services division. His focus has been in the interoperability of clinical devices with a focus on workflow, safety, efficiency, and security. He currently serves as the Co-Chair of the Integrating the Healthcare Enterprise (IHE) Patient Care Devices (PCD) Planning committee. Steve holds a Masters of Science in Biomedical Engineering from the University of Connecticut.

Steve Merritt, Infrastructure Engineer, Baystate Health & Co-Chair, IHE PCD Planning Committee

10:45 **PANEL DISCUSSION: INDUSTRY STANDARDS – WHICH STANDARDS WILL BE ADOPTED AND WHY?**

There are almost as many opinions about standards as there are standards and this very knowledgeable panel is guaranteed to be opinionated on the topic of standards. The panel will debate the gaps between the promise and reality of many of today's standards. Test and certification groups, like Continua and the IHE PCD, will also fall under the panel's scrutiny. A search for reasons for the anemic adoption of standards in medical device connectivity will be undertaken, along with speculation as to what may ultimately break the logjam holding back standards adoption.

Moderator:

Steve Merritt, Infrastructure Engineer, Baystate Health & Co-Chair, IHE PCD Planning Committee

Panelists:

Julian M. Goldman, MD, Medical Director of Biomedical Engineering, Partners HealthCare System, Director, CIMIT Program on Interoperability and Medical Device Plug-and-Play Interoperability Program, Massachusetts General Hospital
John Harrington, Vice President Research and Development, Hill-Rom IT Solutions
Sudheer Matta, Product Manager, Wireless Networking Business Unit, Cisco
Dick Moberg, President, Moberg Research, Inc.
Bridget Moorman, CCE, President, BMoorman Consulting, LLC
Robert Rinck, Manager, Clinical Engineering, Spectrum Health
Vaughan Zakian, Founder & CTO, Nuvon, Inc.

11:45 *SPONSOR / EXHIBITOR SHOWCASE & LUNCHEON*

1:00 **KEYNOTE ADDRESS: IMPACT OF PROPOSED FDA RULE ON MEDICAL DEVICE DATA SYSTEMS**

On February 8, 2008, the FDA issued a proposed rule to reclassify Medical Device Data Systems (MDDS) from a presumptive Class III (premarket approval) to class I (general controls). The proposed rule further identified some systems that use MDDS data, such as alarm notification systems and those that provide remote surveillance. Both alarm notification and surveillance systems will also be defined and placed within the regulatory context outlined in the proposed rule. Thus there are broad implications of this action which include (1) defining MDDS, (2) asserting FDA regulatory control over such systems, and (3) the discussion of other data processing systems that would fall outside of the MDDS definition and therefore be subject to separate classification. The FDA's position on data driven systems of all kinds as medical devices will play a significant role in future medical device connectivity.

William A. Hyman, ScD, PE, is a Professor of Biomedical Engineering at Texas A&M University (College Station) and is the President of the Healthcare Technology Foundation. His primary areas of professional activity are in clinical engineering, medical device design, system safety and human factors. He is an editor of the Journal of Clinical Engineering and has served as a consultant for the FDA, the National Science Foundation, the National Institutes of Health, NASA and medical device companies. Dr. Hyman is also a member of the American College of Clinical Engineering and recent recipient of their Lifetime Achievement Award. He is also a member of the Dallas District FDA/Industry Coalition and is a registered professional engineer in Texas.

William A. Hyman, ScD, PE, Professor, Department

of Biomedical Engineering, Texas A&M University & President, ACCE Healthcare Technology Foundation

1:45 **KEYNOTE ADDRESS: IEC 80001 AND PATIENT SAFETY**

IEC 80001 is a voluntary end user standard for the application of risk management to IT networks incorporating medical devices. Unlike most standards that are applied to manufacturers, this standard is focused primarily on healthcare providers. This presentation will describe the patient safety concerns, and some of the history, that lead to the creation of the workgroup developing this standard. Examples of specific risks that the standard is intended to mitigate will be discussed. And a general description of the standard, and the requirements imposed on both healthcare providers, network infrastructure vendors and medical device manufacturers will be provided.

Stephen Grimes is a Vice President with Technology in Medicine, Inc., a Boston area based healthcare technology consulting, management and service organization meeting the needs of over 200 clients throughout the U.S. There he specializes in technology management, medical and information technology convergence and integration related matters. Mr. Grimes has nearly 35 years experience with hospitals, shared service organizations, and healthcare consulting firms. He is a nationally recognized authority on topics ranging from future challenges facing clinical engineering to healthcare technology integration, medical device security and risk management issues. He is also the immediate past president of the American College of Clinical Engineering (ACCE).

Stephen L. Grimes, FACCE, FHIMSS, FAIMBE, Vice President, Technology in Medicine, Inc. & Immediate Past President, American College of Clinical Engineering (ACCE)

2:30 **PANEL DISCUSSION: HOW WILL MDDS AND IEC 80001 IMPACT THE MARKET?**

The panel will discuss the potential impacts to industry, both manufacturers and health care providers, resulting from the imposition of the MDDS rule and IEC 80001. The panel will consider specific market segments and manufacturers who might be impacted by MDDS. The impact of system architecture relative to conformance with the proposed MDDS rule will also be explored. Time frames for compliance will be discussed, looking at the scope of effort to implement the Quality System regulation and to rehabilitate existing products. The group will also speculate on the kinds of verification and validation test data the FDA may require of the various categories of products called out in the proposed rule. Discussion of IEC 80001 will focus on how it may impact healthcare providers and their manufacturers. The group will discuss the framework for the Responsibility Agreement, compare it to similar agreements like the Business Associates agreement under HIPAA, and discuss issues that might arise between manufacturers and their customers regarding requested data to support risk analysis. Potential organizational structures, consulting engagements and outsourcing agreements for achieving IEC 80001 conformance will be explored.

Moderator:

William A. Hyman, ScD, PE, Professor, Department of Biomedical Engineering, Texas A&M University & President, ACCE Healthcare Technology Foundation

Panelists:

Stephen L. Grimes, FACCE, FHIMSS, FAIMBE, Vice President, Technology in Medicine, Inc.

Rick Hampton, Corporate Manager Wireless Communications, Partners HealthCare System

Peter Kelley, Director Quality Assurance/Regulatory Affairs, Capsule

Randy Lantz, Vice President, DeviceWorks Engineering, Cerner Corporation

Steven R. Rakitin, President, Software Quality Consulting & AAMI member

3:15 *SPONSOR / EXHIBITOR SHOWCASE & REFRESHMENTS SPONSORED BY* capsule

3:45 **KEYNOTE ADDRESS: HOW CLINICIANS AND DEVICE MANUFACTURERS CAN COLLABORATE TO REDUCE RISK**

Designing, deploying and maintaining medical devices that are safe and connected to ever-changing networks creates safety challenges for clinicians and device manufacturers. Reducing risk requires a collaborative effort with specific expertise in clinical requirements gathering, system validation, and analysis tools to ensure patient safety. Clinicians and device manufactures need a common language for describing how medical device systems should behave when connected to networks. Examples of techniques for expressing clinical requirements will be discussed. Every hospital network is different and while device manufacturers do a reasonable job of system validation, they often can't create or simulate the actual network environment that exists at every hospital. This means some level of system validation needs to be done at each hospital to minimize risk. Clinical engineers often can't get essential technical information from device manufacturers to do this validation and some may need training in device validation best practices. This presentation provides recommendations for on-going system validation. Safety cases are an effective tool that can provide evidence that devices are safe. Device manufacturers should use safety cases to support claims that their devices are safe. Clinical engineers should use safety cases to ensure that a device is safe when used in their unique environment. As networks evolve, clinical engineers can review these safety cases and take additional steps to ensure that devices will continue to work safely. The presentation describes how safety cases can be used by device manufacturers pre-release and clinical engineers post-deployment.

Steven R. Rakitin has over 35 years experience as a software engineer and software quality manager. He has written extensively on the subject of software quality and published a book titled Software Verification & Validation for Practitioners and Managers. He helped write the

first IEEE Software Engineering Standard (for Software Quality Assurance Plans) and is currently serving on two IEEE Software Engineering Standard working groups and is a member of the AAMI HIMSS CE-IT Collaboration. He received a BSEE from Northeastern University and an MSCS from Rensselaer Polytechnic Institute. He has earned certifications from the American Society for Quality (ASQ) as a Software Quality Engineer (CSQE) and Quality Auditor (CQA). He is a member of the IEEE Computer Society, ASQ Software Division, ASQ Biomedical Division, and Association for the Advancement of Medical Instrumentation (AAMI). He is on the Editorial Review Board for the ASQ Journal Software Quality Professional. He has presented invited papers and tutorials at conferences worldwide for the HIMA, AAMI, ASQ, and IEEE. As president of Software Quality Consulting Inc. (www.swqual.com), he helps medical device manufacturers comply with regulations and standards for software.

Steven R. Rakitin, President, Software Quality Consulting & AAMI member

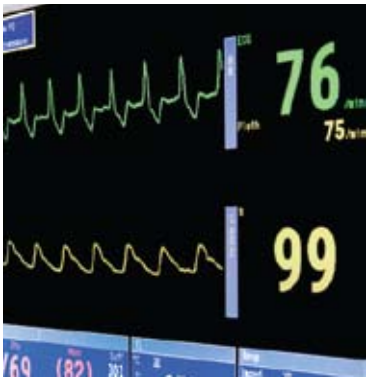
4:30 **KEYNOTE ADDRESS: THE BASIC COSTS OF CONNECTIVITY**

You've decided to connect your medical devices to your EMR/EHR/CIS - but what will it truly cost? This presentation will go over all of the infrastructure, personnel and equipment costs necessary to provide connectivity. At the same time, while outlining the different costs necessary to provide interconnectivity, an outline of the tasks necessary will also be presented. The costs and tasks are based on an actual implementation experience. Bridget Moorman implemented Kaiser Permanente's connectivity solution to their enterprise-wide EMR.

Bridget Moorman has 19 years experience in the clinical engineering field to include working for Kaiser Permanente doing strategic technology management for cardiovascular services, patient monitoring, OB/GYN data management and the biomedical device interface to Kaiser's HealthConnect initiative. In addition to her clinical engineering experience, she has done biomechanical research, power-line relay and metering design, and space system acquisition/launch/ground systems/telecommunications. Concurrently, Bridget is a Lieutenant Colonel in the United State Air Force Reserve, with assignments that have included squadron command for an aerial port, political-military analysis, and defense acquisition in support of medical informatics, aerospace systems, and acquisition reform.

Bridget Moorman, CCE, President, BMoorman Consulting, LLC

5:15 *DAY ONE CONCLUDES; SPONSOR/EXHIBITOR SHOWCASE & NETWORKING RECEPTION*



MEDICAL DEVICE CONNECTIVITY CONFERENCE & EXHIBITION AGENDA

DAY TWO: FRIDAY SEPTEMBER 11, 2009

7:30 *SPONSOR / EXHIBITOR SHOWCASE & CONTINENTAL BREAKFAST SPONSORED BY* CARDIOPULMONARY CORP.

8:00 **CHAIRPERSON'S OPENING REMARKS**

Choose from Track A, B, C or D

TRACK A - INFRASTRUCTURE

8:30A **CONVERGED MEDICAL DEVICE AND ENTERPRISE NETWORKS: CHALLENGES AND BEST PRACTICES**

Networked medical device systems have traditionally deployed on private networks designed, installed and supported by medical device manufacturers. Over the past several years, private medical device networks have given way to the deployment of networked medical devices on enterprise networks. This presentation will describe the factors driving networked medical devices off of private networks and on to the enterprise network. In addition, guidelines will be presented to follow the industry best of practices for modeling, design, deployment and monitoring.

David Hoglund, Principal & Founder, Integra Systems

9:15A **OPTIMIZING SUPPORT FOR POINT OF CARE AUTOMATION**

Hospitals implementing medical device connectivity, especially for EMR documentation, quickly run into issues regarding how best to manage system maintenance and support. Common questions on who users should call for what problems, and how best to coordinate specialists supporting networks, computers on wheels and medical devices will eventually face every provider. Both the remote help desk and service resolution of IT, and the hands-on by biomedical and clinical engineers at the point of care have their strengths and weaknesses. This presentation describes the evolution of service and support pre-connectivity to today – and provides one hospital system's answer to the challenges of how best to deliver IT and biomedical/clinical engineering.

Robert Rinck, Manager, Clinical Engineering, Spectrum Health

10:00 *SPONSOR / EXHIBITOR SHOWCASE & REFRESHMENTS SPONSORED BY* CARDIOPULMONARY CORP.

10:30A **DISTRIBUTED ANTENNA SYSTEMS: REALITY VERSUS HYPE**

With the continued proliferation of portable computing devices and smart phones, hospitals are under increasing pressure to provide adequate in-building coverage for public access to the Internet and improved reception for mobile phones. In response to 9/11, many jurisdictions have added requirements to provide in-building coverage for public safety departments to ensure optimal communications in emergency situations. A common solution often mentioned to improve in-building coverage are Distributed Antenna Systems or DAS. This presentation will start with an introduction to DAS technologies and common applications. Specific requirements in hospitals will be discussed, along with costs and implementation issues. The final half of this presentation is a case study from Partners HealthCare, describing their experience deploying DAS.

Rick Hampton, Corporate Manager Wireless Communications, Partners HealthCare System
Steve Olsen, Vice President Wireless Solutions, Interface Communications

11:15A **WIRELESS SENSORS: PERFORMANCE, COEXISTENCE & INTEROPERABILITY**

Wireless sensor based medical devices are slowly coming to market, and manufacturers have more products in development. Wireless sensors offer the promise of lower cost, greater patient comfort, and the ability to realize new clinical applications. Wireless sensors also represent new challenges in usability, workflow, patient safety and radio frequency management. This presentation will explore some of these challenges and suggest best practice solutions revealed through research and product development.

Tim Gee, Connectologist & Principal, Medical Connectivity Consulting

12:00 **CLOSING PLENARY PANEL DISCUSSION**

This panel wraps up issues raised during the conference and looks into the future at the consequences of regulatory changes, the possible results of increasing pressure for standards adoption, and the evolution of clinical applications that rely on medical device connectivity.

Moderator:
Tapan Mehta, Senior Manager, Global Healthcare Solutions, Cisco
Panelists:
Tim Gee, Connectologist & Principal, Medical Connectivity Consulting
David Hoglund, Principal & Founder, Integra Systems
Cynthia D. Nichols, PhD, FAASM, CBSM, Principal Investigator, Continuous Monitoring Project, Munson Medical Center, Traverse City, Michigan
Kristen O'Shea, Vice President of Patient Care Services, Gettysburg Hospital, WellSpan Health
John R. Zaleski, PhD, CPHIMS, Sr. Director & Research Department Head, Biomedical Informatics Department, Philips Research North America

1:00 *CONFERENCE CONCLUDES; Luncheon for Attendees of Optional Post-Conference Workshops*

TRACK B – CONNECTIVITY SOLUTIONS

8:30B **INFUSION PUMP CONNECTIVITY FOR EMR DOCUMENTATION**

When hospitals look at medical device connectivity for EMR documentation, one of the first medical devices they want integrated are infusion pumps. Despite this demand, very few connectivity installations support infusion pumps. This presentation explores the requirements and challenges around infusion pump documentation and describes the current state of market capabilities. Early examples of infusion pump documentation are profiled. Recommendations are presented regarding requirements for medical device connectivity vendors, infusion pump manufacturers, EMR software vendors, and hospital IT departments looking to implement this capability.

Fred Ehrhardt, Consultant to Capsule and Infusion Pump Industry Expert

9:15B **ENABLING POINT OF CARE APPLICATIONS WITH DEVICE CONNECTIVITY**

This session presents how the convergence of clinical and information technologies can enhance outcomes and improve efficiency, with a focus on innovative strategies for automating patient to device association, simplifying device connectivity, and leveraging device connectivity as a foundation for building new patient safety applications. This session introduces the first wireless solution for automatically associating real-time medical device data with the patient at the point of care. Patient safety innovation will also be discussed, with the first application to connect smart beds to patient safety protocol templates with intelligent alerting to measurably reduce falls rates, and other hospital acquired conditions.

Michael Gallup, Vice President & General Manager, Hill-Rom IT Solutions

10:00 *SPONSOR / EXHIBITOR SHOWCASE & REFRESHMENTS SPONSORED BY* CARDIOPULMONARY CORP.

10:30B **POSITIVE PATIENT ASSOCIATIONS IN CONNECTIVITY**

Workflow, the dreaded word that can only mean additional steps being added to an already long list of daily tasks a nurse must perform. And workflow can make or break a connectivity solution. What if a patient was positively associated to all of their medical devices? What if that patient's data was automatically flowing from wired and wireless devices into the nursing documentation module of the EMR? Hear how wireless and mobile medical devices are changing how device integration is implemented and how connectivity can improve patient care.

Brian McAlpine, Director, Strategic Products, Capsule

11:15B **OPERATING ROOM INTEGRATION: THE INFORMATION CROSSROADS IN SURGERY**

Routing critical video and other vital information to and from the surgical team often requires installing costly and complicated operating room (OR) integration systems. How can you determine whether you need an integrated OR? What equipment will you need to achieve the configuration best for your hospital? How can you maximize your investment? This presentation will offer recommendations on how to implement an integrated OR through optimal planning, equipment selection, and system configuration. Attendees will also explore some of the potential roadblocks to successful acquisition and implementation of OR integration systems.

Jay Ticer, CMRP, Senior Associate, Applied Solutions Group, ECRI Institute

12:00 **CLOSING PLENARY PANEL DISCUSSION**

This panel wraps up issues raised during the conference and looks into the future at the consequences of regulatory changes, the possible results of increasing pressure for standards adoption, and the evolution of clinical applications that rely on medical device connectivity.

Moderator:
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Kristen O'Shea, Vice President of Patient Care Services, Gettysburg Hospital, WellSpan Health
John R. Zaleski, PhD, CPHIMS, Sr. Director & Research Department Head, Biomedical Informatics Department, Philips Research North America

1:00 *CONFERENCE CONCLUDES; Luncheon for Attendees of Optional Post-Conference Workshops*

TRACK C – CLINICAL & WORKFLOW IMPACTS

8:30C **POST SURGICAL PATIENT-CENTRIC CENTRAL SURVEILLANCE: PREDICTORS OF CARDIORESPIRATORY MORBIDITY**

The study was designed to determine predictors of cardiopulmonary mortality or morbidity during the first 48 hours after surgery. A software surveillance system with alarm notification was implemented to receive from infusion pumps and respiratory monitoring devices. Abnormal respiratory values trigger alarms to facilitate critical interventions to reduce adverse events and associated costs of complications. The goal of the medical device connectivity is effective alarm management and automation of clinical tasks. Patient safety is the primary concern.

Cynthia D. Nichols, PhD, FAASM, CBSM, Principal Investigator, Continuous Monitoring Project, Munson Medical Center, Traverse City, Michigan

9:15C **THE LINK BETWEEN MEDICAL DEVICE CONNECTIVITY AND CLINICAL DECISION SUPPORT FOR INTERVENTIONAL GUIDANCE**

The HIMSS HIT Policy Committee identifies clinical decision support at the point of care as a key 2013 objective. Real-time clinical decision making involves communicating reminders, alerts, and interventional information that is essential to patient survival. Much of this information is critical in acute care environments. As access to timely and accurate medical information on acutely ill patients oftentimes means the difference between life and death, medical device connectivity is an essential enabler for clinical decision making at the point of care. A survey, examples, and discussion of the types of data collected from medical devices in acute care environments are presented to illustrate and motivate its need to support real-time interventional guidance in critically ill patients. Insights into the use of these data, the manner of their collection and clinical use are also presented.

John R. Zaleski, PhD, CPHIMS, Sr. Director & Research Department Head, Biomedical Informatics Department, Philips Research North America

10:00 *SPONSOR / EXHIBITOR SHOWCASE & REFRESHMENTS SPONSORED BY* CARDIOPULMONARY CORP.

10:30C **WORKFLOW AUTOMATION, THE MOST IMPORTANT PART OF CONNECTIVITY**

While most think of the actual connection between devices and information systems -- the serial port, network connection, and protocol -- the most important part of connectivity is the workflow that is automated through integrating medical devices and information systems. Important workflows in medical device connectivity include establishing and managing patient context, configuring the data stream and the process of getting the data into the electronic record. Examples of some of the challenges facing clinicians and manufactures in capturing workflow are discussed. The presentation will identify the various actors in workflow automation and describe some specific methodologies used to capture and implement workflow automation. Recommendations will be made to enable healthcare providers to more effectively document their own workflows and evaluate various manufacturer's workflows.

Tom Herzog, Vice President, IT and Medical Device Solutions, Cerner Corporation

11:15C **CREATING A CONNECTIVITY STRATEGY FOR HEALTHCARE**

Today, more than ever, it is important for healthcare organizations to have a sound strategy to connect the devices and systems. There are many drivers behind the need including improving workflow, returning nurses to the bedside, and ensuring patient safety. This session will focus on the drivers for connectivity and how healthcare organizations – along with their device and EMR system partners – can implement a connectivity strategy. Considerations for a strategy include players/decision makers, workflow considerations and awareness of emerging markets. Each will be discussed using real-life experience and lessons learned. Creating a roadmap that focuses on the future will also be discussed.

Kristen O'Shea, Vice President of Patient Care Services, Gettysburg Hospital, WellSpan Health

12:00 **CLOSING PLENARY PANEL DISCUSSION**

This panel wraps up issues raised during the conference and looks into the future at the consequences of regulatory changes, the possible results of increasing pressure for standards adoption, and the evolution of clinical applications that rely on medical device connectivity.

Moderator:

Tapan Mehta, Senior Manager, Global Healthcare Solutions, Cisco

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John R. Zaleski, PhD, CPHIMS, Sr. Director & Research Department Head, Biomedical Informatics Department, Philips Research North America

1:00 *CONFERENCE CONCLUDES; Luncheon for Attendees of Optional Post-Conference Workshops*

TRACK D – SCHEDULED VENDOR MEETINGS

Meetings to be scheduled with Sponsors at the conference.

Conference attendees will have the option to schedule meetings with sponsors for in-depth solution

demonstrations or consultative discussions about their unique needs and situation.

8:30D **AVAILABLE MEETING TIME**

10:00 *SPONSOR / EXHIBITOR SHOWCASE & REFRESHMENTS SPONSORED BY* CARDIOPULMONARY CORP.

10:30D **AVAILABLE MEETING TIME**

12:00 **CLOSING PLENARY PANEL DISCUSSION**

This panel wraps up issues raised during the conference and looks into the future at the consequences of regulatory changes, the possible results of increasing pressure for standards adoption, and the evolution of clinical applications that rely on medical device connectivity.

Moderator:

Tapan Mehta, Senior Manager, Global Healthcare Solutions, Cisco

Panelists:

Tim Gee, Connectologist & Principal, Medical Connectivity Consulting
David Hoglund, Principal & Founder, Integra Systems
Cynthia D. Nichols, PhD, FAASM, CBSM, Principal Investigator, Continuous Monitoring Project, Munson Medical Center, Traverse City, Michigan
Kristen O'Shea, Vice President of Patient Care Services, Gettysburg Hospital, WellSpan Health
John R. Zaleski, PhD, CPHIMS, Sr. Director & Research Department Head, Biomedical Informatics Department, Philips Research North America

1:00 *CONFERENCE CONCLUDES; Luncheon for Attendees of Optional Post-Conference Workshops*

OPTIONAL POST-CONFERENCE WORKSHOP ONE
DISTRIBUTED ANTENNA SYSTEMS IN HOSPITALS: BEST PRACTICES
Workshop Hours: 2:00-6:00 pm

Just like the explosion of wireless LANs in hospitals, a similar trend has occurred with mobile phones, broadband adapters for laptops, and Blackberries. A new era has arrived whereby physicians, patients, and their families will demand to use these devices. Since the events of September 11th, the need for in-building public safety communication coverage has become a critical requirement as many jurisdictions adopt coverage requirements, including those referenced in the National Fire Prevention Act (NFPA 2009) code.

This workshop will focus on why in-building broadband coverage is required, review potential policies and procedures for the use of mobile devices, and finally an overview of the different designs of distributed antenna systems (DAS).

While there has been concern about the use of broadband devices in the presence of medical devices, it has been shown that there is little or no EMI concern. The fact remains that the implementation of a DAS will greatly reduce this potential.

A variety of business models will be described for wireless carrier coverage. This includes a single carrier model as well as a multi-carrier model. Additionally, the requirement of mandated public safety coverage will be also covered. In light of this, a variety of ways to finance the DAS infrastructure, from either carrier funding or self-funding, will be discussed.

The different underlying technologies used in DAS will be described to include the needed design and propagation modeling requirements. A review will be made of the underlying solutions to include passive designs and fiber fed active based designs. This will additionally include the past and current use model of 802.11a/b/g, 802.11n, voice over IP and WMTS with the technical and financial caveats.

While the initial marketing of these combined services may sound attractive, at the end of the day, technical requirements like the link budget will determine practicality. Consideration will also be given to the design requirements of the leading wireless LAN manufactures when combining a wireless LAN onto a DAS.

What does the future hold for DAS in healthcare and what are some of the prevailing solutions on the horizon? The session will end with this and your questions and comments.

Workshop Instructor:

David H. Hoglund is the principal and founder of Integra Systems, Inc. (www.integrasystems.org), a twelve year old wireless and medical device connectivity consultancy. The described experience spans wireless medical device solution deployment over converged networks, strategic competitive positioning for these solutions, and the ability to drive these

solutions from testing, validation, and through the FDA 510KPMA and IS09001 process. Design experience extends from the integrated WLAN, broadband DAS, and BAS. Technical integration experience comes from all phases of 802.11a/b/g/n, WMTS, RFID, RFLS, PAN, MAN, DAS, and FMC. Mr. Hoglund has published many white papers with corporations as well as IEEE, AAMI, and HIMSS.

David Hoglund, Principal, Integra Systems

OPTIONAL POST-CONFERENCE WORKSHOP TWO
IEC 80001-1: APPLICATION OF RISK MANAGEMENT FOR IT NETWORKS INCORPORATING MEDICAL DEVICES

Workshop Hours: 2:00-6:00 pm

The number of networked medical device systems is rapidly proliferating and our dependence on these systems is likewise increasing. This dependence can have major implications on our ability to deliver patient care and on our business operations if the security (i.e., integrity, availability & confidentiality) of the clinical data transmitted or stored by these systems is compromised. And such security compromises are likely to occur with dire consequences … particularly if healthcare organizations don't take adequate steps to identify and mitigate these security risks.

As with many other technology impacted industries, the evolution of standards and regulations has lagged behind developments in healthcare technology. IEC 80001-1, application of risk management for IT networks incorporating medical devices, grew from the industry's recognition that traditional technology management paradigms were inadequate to address an influx of increasingly complex and sophisticated systems.

This workshop will include:

- **A review of critical elements in the current draft version of 80001-1 … including major processes**
- **A description of the implications the finalized standard is likely to have for manufacturers, providers and vendors … and why it is important to begin moving toward compliance today**
- **A description of the nature of collaboration likely required between manufacturers, providers and vendors**
- **A description of the key roles in 80001-1 compliance and how those roles may be filled (e.g., outsource vs. in-source)**
- **Examples of how 80001-1 processes may be applied to specific systems … and how organizations with varying levels of resources can scale their compliance efforts appropriately**

Workshop Instructor:

Stephen Grimes is a Vice President with Technology in Medicine, Inc., a Boston area based healthcare technology consulting, management and service organization meeting the needs of over 200 clients throughout the U.S. There he specializes in technology management, medical and information technology convergence and integration related matters. Mr. Grimes has nearly 35 years experience with hospitals, shared service organizations, and healthcare consulting firms. He is a nationally recognized authority on topics ranging from future challenges facing clinical engineering to healthcare technology integration, medical device security and risk management issues. He is also the immediate past president of the American College of Clinical Engineering (ACCE).

Stephen L. Grimes, FACCE, FHIMSS, FAIMBE, Vice President, Technology in Medicine, Inc. & Immediate Past President, American College of Clinical Engineering (ACCE)

The Center for Business Innovation would like to thank the following sponsors for their generous support of the Inaugural Medical Device Connectivity Conference & Exhibition

GOLD SPONSORS

For more than 10 years, Capsule has been the world's leading, award-winning provider of solutions for medical device connectivity. The company has established market leadership through its 510(k) cleared software and medical grade hardware products, its unique expertise in device protocols and firmware, and through its strong partnerships with major medical device manufacturers and HIS companies. Capsule's solutions are proven, with over 350 installations at leading healthcare facilities worldwide and its technology is secure, with the largest device driver library available in the industry - over 400 and growing. Furthermore, Capsule is continually recognized as the leader in the industry receiving the 2008 Frost & Sullivan Global Technology Leadership Award as well as the Deloitte Technology Fast 50 and Fast 500 EMEA Awards.

The Capsule Neuron is Capsule's Next Generation Bedside Platform for managing device connectivity. It is a touch screen device equipped with its own docking station that provides a universal view and status of connectivity for all devices connected to a patient, including devices that are connected locally to a Capsule Neuron docking station and devices that are networked via the hospitals' wired or wireless LAN. And the Capsule Neuron provides the basis for an expanding set of solutions to enable improved bedside workflow and enhanced patient safety. For more information, please visit Capsule's website at www.capsuletech.com.

Contact information:
Shane Welker, Regional Vice President
Tel: (513) 722-2868 Email: shanew@capsuletech.com

CARDIOPULMONARY CORP.

Cardiopulmonary Corp. is a leader in enterprise level medical software providing real-time centralized patient safety surveillance, as well as device alert management and delivery. CPC's flagship product, Bernoulli® Enterprise is a complete mission critical device connectivity solution. Designed as an open platform, Bernoulli is able to integrate patient data from multiple vendors and medical and non-medical device types.

The solution allows simultaneous device monitoring, and immediate remote alarm notification to pagers or IP phones. The transmitted data includes patient information such as name and room number, the patient's measurement values, and the same specific alarm messages as displayed on a myriad of bedside medical devices. Alarms are configurable by patient or unit, with escalation of high priority alarms going to designated personnel. Alarm filtering strategies mitigate nuisance alarms.

The Bernoulli® Reporting Suite provides comprehensive trend, flowsheet, snapshot, alarm and event data for each patient being monitored and completes Bernoulli's solution resulting in improved patient safety.

Bernoulli is deployable using existing IT infrastructure for networks and communications in wired or wireless configurations. It offers seamless integration with existing ADT/EMR systems to populate electronic flowsheets via HL7. It is scalable from a single unit to an entire hospital, or multi-facility installation. Bernoulli has FDA 510(k) clearance as a Class II medical device.

For more information, please visit Cardiopulmonary Corp.'s website at www.cardiopulmonarycorp.com.

Contact information:
Debra Ford, Director, Product Marketing
Tel: (203) 301-6215 Email: dford@cardiopulmonarycorp.com

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Enhancing Outcomes for Patients and Their Caregivers.™

Cerner

As a proven leader in healthcare innovation with more than a quarter century of HCIT experience, Cerner created the CareAware™ device connectivity architecture to make healthcare safer and more efficient. CareAware goes beyond simple device connectivity by connecting devices to the clinical record to enhance workflow and improve care. This connectivity architecture places the EMR at the center of all information created and stored on the patient to create a single source of truth™.

Interoperability promotes communication between devices and systems. Cerner partners with healthcare organizations, device manufacturers, and industry organizations to support interoperability efforts. With a strong history of community and a flexible architecture Cerner, our partners, and our clients, are taking healthcare to the next level. Connecting devices is the first step to truly optimize workflow that positively impacts clinicians, patients and their families. Our goal is to develop healthcare strategies and leading-edge innovations that improve the quality of patient care through better utilization of the EMR and the workflow of devices.

For more information on Cerner, the CareAware architecture and our partners and clients, visit www.cerner.com/CareAware.

Hill-Rom IT Solutions

Hill-Rom's vision is a real-time, integrated healthcare environment that delivers actionable information to the right people at the right time. Only Hill-Rom can connect its portfolio of nurse communications, patient safety, wireless, and patient flow solutions to its smart beds, therapy surface products, and 3rd party medical devices.

Hill-Rom is leading the industry with new innovations in device connectivity that automatically associate point-of-care medical devices with the correct patient and wirelessly send device information to the patient's electronic medical record (EMR). This helps enhance patient safety and care efficiency by improving the flow of communication and enabling the effective use of information. By streamlining care processes and providing real-time accurate information, Hill-Rom® solutions help provide caregivers more time for direct patient care and will save the nurse steps in the care process and assure that accurate and timely information is transferred to the patient record.

For more information, please visit Hill-Rom's website at www.hill-rom.com

Contact information:
Tyler Johnson, Director, Product Marketing
Tel: (919) 854-3309 Email: tyler.johnson@hill-rom.com

BRONZE SPONSORS

Cisco Systems, Inc. is the worldwide leader in networking for the Internet. Today, networks are an essential part of business, education, government and home communications, and Cisco Internet Protocol-based (IP) networking solutions are the foundation of these networks. Cisco hardware, software, and service offerings are used to create Internet solutions that allow individuals, companies, and countries to increase productivity, improve customer satisfaction and strengthen competitive advantage. The Cisco name has become synonymous with the Internet, as well as with the productivity improvements that Internet business solutions provide. At Cisco, our vision is to change the way people work, live, play and learn.

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Website: www.cisco.com/go/healthcare

Fluke Networks provides innovative solutions for the testing, monitoring and analysis of enterprise and telecommunications networks and the installation and certification of the fiber and copper forming the foundation for those networks. The company's line of Network SuperVision(tm) solutions provide network installers, owners, and maintainers with superior vision, combining speed, accuracy and ease of use to ensure maximum network performance and the fast resolution of problems.

Contact Information:
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Tel: (425) 446-5260 Email: mark.mullins@flukenetworks.com

Medical Connectivity Consulting serves medical device and health care IT manufacturers, and health care provider organizations. Founded in 2004, the company provides insight, strategy development, planning and execution targeting workflow automation through the integration of medical devices and information systems, and enabling technologies. Principal Tim Gee delivers most services, supplemented by a network of industry experts. Engagements typically entail top of mind knowledge and experience, analysis and problem solving skills honed over many years, and the provision of additional resources for specific projects or tasks. Services for manufacturers span management, product development, sales, marketing and operations. Provider services include technology management and planning, process reengineering, and traditional vendor selection. Medical Connectivity Consulting consistently delivers high value services, saving clients both time and money.

Contact information:
Tim Gee, Connectologist & Principal
Tel: (503) 481-2370 Email: tim@medicalconnectivity.com
Website: www.medicalconnectivity.com

Nuvon's goal is to simplify the use and management of healthcare technology so that healthcare providers can focus solely on the care and safety of their patients, delivering quality patient care.

Nuvon's VEGA system for device connectivity makes it truly possible to plug, play, and manage multiple devices at the point of care without the complexity of other solutions. Nuvon's interoperable solution takes the guesswork out of data collection by integrating the whole spectrum of medical devices and clinical medical systems, seamlessly integrating devices into your current IT infrastructure to provide a comprehensive connectivity solution. Nuvon is an active participant in standards and interoperability committees and is a member of IHE.

Contact information:
Mark Hallman, Director, Corporate Partnerships & Medical Sales
Tel: (408) 722 0228 Fax: (650) 239 3675 Email: mhallman@nuvon.com
Website: www.nuvon.com

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FierceEMR gives hospital administrators, IT executives, and practice managers the must-know news and insights about modernizing patient information systems. Get updated on EMR system choice and implementation, requirements for EMR adoption, new government incentives, evolution of HIEs and RHIOs, interoperability and data security, rise of PHRs, and more. www.FierceEMR.com

FierceMobileHealthcare gives IT executives, program managers, and project leaders the must-know news, market trends, and insights about implementing wireless solutions in the healthcare industry. Get updated on mobile health records, remote monitoring, tablet and phone devices, wireless network security, HIPAA compliance, telemedicine and more. www.FierceMobileHealthcare.com

Healthcare Informatics is the only publication focused solely on servicing the acute-care C-suite IT leaders. It covers best practices for system selection, contract negotiation, implementation and integration, as well as strategic management issues, such as governance, staffing, budgeting and change management. To ensure consistent coverage of important issues, Healthcare Informatics and its Web site are divided into six areas of content - clinical, financial, administrative,wireless, imaging, and policy. www.healthcare-informatics.com

Ranked #1 by hospital CIOs three years in a row in the FOCUS Healthcare Management Study (PERQ/HCI 2005, 2006 and 2007), Healthcare IT News (www.HealthcareITNews.com) offers healthcare IT executives timely, relevant news on new technologies, IT strategies and tactics, statutory and regulatory issues, and news about their colleagues and competitors. Healthcare IT News, published in partnership with HIMSS, is the news source for healthcare information technology for more than 54,000 readers which include IT professionals, C-suite and general management, and clinical executives at hospitals and IDNs, group practices, ambulatory care facilities, home healthcare organizations, as well as healthcare payers, consultants and vendors. Healthcare IT News publishes a monthly newspaper in print as well as a digital edition. E-newsletter publications include Healthcare IT NewsWeek, Healthcare IT NewsDay and the monthly e-newsletter, Get Smart.

HMT is written for senior executives in hospitals, healthcare organizations, integrated delivery networks, managed care organizations and health plans, and physician practices and IPAs. Our readers are CEOs, CIOs, CFOs, CMOs, CTOs, IT directors and managers, and other decision makers working in information technology in healthcare settings. Website: www.healthmgttech.com

SUPPORTING PUBLICATIONS

MassDevice.com: We tell the stories behind the devices that save lives.

MassDevice is the online journal of record for the medical device industry. Its audience includes the influential decision-makers and thought leaders driving this multi-billion-dollar industry, people who depend on comprehensive, in-depth coverage of this powerful sector through our aggressive reporting and original, in-depth stories, blogs and industry reports. The medical device industry does more than save lives. It moves markets, creates jobs and is an invaluable economic engine. MassDevice provides day-to-day coverage of the devices that save lives, the people behind them, and the burgeoning trends and developments within the industry.

Medical Device & Diagnostic Industry (MD&DI) is a monthly publication with significant digital and online products designed exclusively for original equipment manufacturers of medical devices and in vitro diagnostic products. As the industry authority, the goal of MD&DI is to help professionals develop, design, and manufacture medical products that comply with complex and demanding regulations and market requirements. MD&DI has served the industry as the leading source of in-depth news and information for 30 years. MD&DI's feature articles offer authoritative perspectives and provide a valuable reference on the full range of device industry issues including specific technology issues and overviews of key business, industry, and regulatory topics.
Website: www.devicelink.com/mddi

Mobihealthnews chronicles the healthcare sector's adoption of mobile technology, which is helping to shape the future of how healthcare is delivered to the patient on-the-go, at home and at their place of care. Mobihealthnews tracks innovations and helps to define sustainable business models for this emerging wireless health industry both on its daily news portal and through its free, weekly newsletter, which goes out Thursday mornings. Join us on October 8th for Mobihealthnews Presents: Everywhere Healthcare (www.mobihealthnews.com/everywherehealthcare), co-located with CTIA Wireless I.T. and Entertainment at the San Diego Convention Center.
Website: www.mobihealthnews.com

MX: Business Strategies for Medical Technology Executives (MX) offers an editorial package designed exclusively for top-level med-tech executives via its monthly e-newsletter MX: Issues Update, its online-exclusive material, and its Executive Webcast Series. Articles are devoted to market analyses for medical technologies and essential strategies for business planning to meet the needs of the global marketplace. Areas of coverage include: executive interviews, market analysis, finance, business planning and development, regulations and legal affairs, and more. MX's digital portfolio of topical news and industry leading Webcast events make it the perfect source for the industry's C-level executives. From executive recruitment to distribution, only MX addresses the issues associated with running a medical technology business.
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Patient Safety & Quality Healthcare (PSQH) is a respected source of research, news, and practical tools for improving the safety and quality of healthcare. Readers of PSQH include clinical practitioners and directors, hospital executives, patient safety officers, risk managers, quality directors, IT professionals, engineers, business leaders, policy makers, and educators, among others. This diverse community of professionals also supplies the feature articles, research, case studies, and opinions published in PSQH, which is sponsored by ABQAURP, ASQ Healthcare Division, Consumers Advancing Patient Safety, the National Patient Safety Foundation, and Partnership for Patient Safety. PSQH offers a print and digital bi-monthly magazine, a monthly eNewsletter, and an audioconference series. For more information, visit www.psqh.com.

SUPPORTING ORGANIZATIONS

The American College of Clinical Engineering (ACCE) was founded in 1991 with the commitment to enhance the profession of clinical engineering. With members in the United States and abroad, the ACCE is the internationally recognized professional society for clinical engineers with a mission to:

- Establish a standard of competence and to promote excellence in clinical engineering practice.
- Promote safe and effective application of science and technology in patient care.
- Define the body of knowledge on which the profession is based.
- Represent the professional interests of clinical engineers.

Visit www.accenet.org for more information.

The ACCE Healthcare Technology Foundation is a non-profit IRS 501(c)(3) charitable organization. Its mission is improving healthcare delivery by promoting the development, application and support of safe and effective healthcare technologies, and through the global advancement of clinical engineering research, education, practice and related activities. Major initiatives include clinical alarm safety, the development of patient oriented technology safety brochures, the promotion of clinical engineering excellence through training and recognition programs, and the support of clinical engineering certification through the Healthcare Technology Certification Commission. The Foundation is also a registered Patient Safety Organization.
Website: www.acce-htf.org

The Association for the Advancement of Medical Instrumentation (AAMI) is a unique alliance of more than 6,000 medical technology professionals from around the world who are united by one mission — to improve patient safety through the increased understanding and beneficial use of medical technology. Founded in 1967, AAMI develops and publishes standards, technical documents, and publications; and coordinates educational programs for manufacturers, clinicians, academics, clinical engineers, and biomedical equipment technicians. AAMI helps its members contain costs, keep informed of new technology and policy developments, add value in healthcare organizations, and improve professional skills and enhance patient care. For more information about AAMI, visit www.aami.org.

The Mass Technology Leadership Council, Inc. is the only association that addresses the critical leadership issues of innovative software and technology-enabled companies. Formed by the combination of Massachusetts Software Council and New England Business and Technology Association, Inc., the organization is dedicated to fostering entrepreneurship and promoting the success of companies that develop and deploy technology across industry sectors. The Mass Technology Leadership Council conducts educational programs, hosts industry events, facilitates networking, sponsors research, advocates in favor of technology policies that promote innovation, entrepreneurship and competition, and recognizes industry-leading companies and people.
Website: www.masstlc.org

Medical Development Group www.meddevgroup.org, headquartered in Massachusetts and serving the entire New England region, is a community of individuals professionally committed to the Medical Device and other Medical Technology industry segments united by the belief that innovation and advances in technology lead to substantial improvements in health care.

SUPPORTING ORGANIZATIONS

The RFID in Healthcare Consortium advocates the safe and effective use of wireless based technologies in healthcare, assisted living, and nursing homing facilities. Our members are concerned with issues and solutions that pertain to the successful use of RFID, RTLS, and wireless technologies for patient care and safety. Consortium efforts include: delivering educational programs, support for standards, development of benchmark specifications, best practices, and sponsorship of educational events for all interested parties in the healthcare sector. Please join us. www.rfdinhealthcare.org.

You may register by:

Mail: TCBI, 944 Indian Peak Rd., Suite 120, Rolling Hills Estates, CA 90274
Phone: (310) 265-0621 Fax: (310) 265-2963 Email: info@tcbi.org

To register, please use the registration form on the back cover of this brochure (next page). For optimal service, TCBI recommends that you register by phone or fax. If you plan to mail a check, please register in advance by phone or fax, then mail the check with a copy of the registration form. Phone Registration Hours: 9 am to 4 pm Pacific Time

For information on registration fees, please see the next page (back cover of brochure)

SUPPORTING ORGANIZATION DISCOUNT

TCBI is offering a $100 discount on the applicable registration fee for members of the American College of Clinical Engineering (ACCE), Association for the Advancement of Medical Instrumentation (AAMI), Mass Technology Leadership Council, Medical Development Group and RFID in Healthcare Consortium. TCBI is also offering a $100 discount to board members of the ACCE Healthcare Technology Foundation. Please note that supporting organization discounts cannot be combined with each other; however, the supporting organization discount may be combined with the earlybird discount.

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You must register and pay by August 24, 2009 to receive the $100 earlybird discount on registration fees.

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Organizations sending three or more registrants to the conference may qualify for an additional group discount. Please note, however, that category two registrants already receiving $200 in other discounts do not qualify for the additional group discount unless there are four or more registrants from the same organization. Whether a registrant receives a group discount will depend on other discounts already received, the number of individuals from the registrant's organization that are attending the conference, and the category of registration. Please contact TCBI for details. Ph: 310-265-0621 Email: info@tcbi.org

PAYMENTS

Payments must be made in U.S. dollars by Visa, MasterCard, Discover, American Express, company check (drawn on a US bank), or by wire transfer. Please make checks payable to The Center for Business Innovation and send to: TCBI, 944 Indian Peak Rd., Suite 120, Rolling Hills Estates, CA 90274. In the memo area of the check, please write the name of the registrant and the conference code **C119**. For information about wire transfers, please contact TCBI: Tel: (310) 265-0621, Email: info@tcbi.org.

CONFERENCE LOCATION

Joseph B. Martin Conference Center at Harvard Medical School, 77 Avenue Louis Pasteur, Boston, MA 02115
Tel: (617) 432-8990 or Toll Free at (866) 790-7000 For additional information, including directions and parking, please visit www.theconfcenter.hms.harvard.edu

HOTEL INFORMATION

Best Western Boston - The Inn at Longwood Medical, 342 Longwood Avenue, Boston, MA 02115. To make hotel reservations, please call (617) 731-4700 and mention "TCBI" to receive our preferred group rate of $179 plus tax for single/double. Cancellations must be made by 4:00 pm on the day of arrival to avoid penalty. Please note that is the hotel closest to the Joseph B. Martin Conference Center at Harvard Medical School, where the conference is being held. The hotel is a five minute walk from the Conference Center. Rooms are limited so if you need hotel accommodations we encourage you to make your reservation as soon as possible. Our preferred hotel room rate may not be available after August 20, 2009.

CANCELLATION POLICY

For cancellations received in writing:

Four weeks or more prior to the event	Full Refund or Credit Voucher
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Two weeks or less prior to the event	No Refund; Full Credit Voucher Will Be Issued

Credit vouchers may be applied toward any future TCBI event within one calendar year.
If TCBI decides to cancel any portion of this event, the organizers are not responsible for covering airfare, hotel or any other costs. Speakers, networking events and the agenda are subject to change without notice. This cancellation policy applies only to delegate registrations, not sponsorships.

SUBSTITUTIONS

Registrant substitutions may be made up to the day of the event.

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To find out if you qualify for a free press pass, which is usually offered to full-time journalists, please email info@tcbi.org or call (310) 265-0621.

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To be added to our mailing list, please email info@tcbi.org

Inaugural Medical Device Connectivity Conference & Exhibition, Sept. 10-11, 2009, Boston, MA

Registration Options:	PRICE
❑ **Category One Registration (Conference Only)**	$1295
❑ **Category One Registration (Conference Plus Post-Conference Workshop**-choose a workshop below**)**	$1695
❑ Workshop One: Distributed Antenna Systems in Hospitals: Best Practices	
❑ Workshop Two: IEC 80001-1: Application of Risk Management for IT Networks Incorporating Medical Devices	

Category one registration fee applies to IT vendors, consulting firms, medical device companies and members of the financial community.

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❑ Workshop One: Distributed Antenna Systems in Hospitals: Best Practices	
❑ Workshop Two: IEC 80001-1: Application of Risk Management for IT Networks Incorporating Medical Devices	

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❑ I am a member of ACCE, AAMI, Mass Technology Leadership Council, Medical Development Group and/or RFID in Healthcare Consortium and qualify for a $100 discount on the applicable registration fee above.
Please underline the organization through which you are receiving the discount.

❑ I am a board member of the ACCE Healthcare Technology Foundation and qualify for a $100 discount on the applicable registration fee above.

Supporting organization discounts cannot be combined with each other; however, the supporting organization discount can be combined with the earlybird discount. Please refer to the previous page of this brochure for a list of supporting organizations receiving discounts.

Total: _____

The Center for Business Innovation

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