



Special Issue on eHealth System Interoperability

Information System Frontiers

Guest editors:

Dr. Jens Weber-Jahnke, University of Victoria, BC, Canada

Dr. Liam Peyton, University of Ottawa, ON, Canada

Dr. Thodoros Topaloglou, Rouge Valley Health Systems, ON, Canada

<http://www.som.buffalo.edu/isinterface/ISFrontiers/>

Overview

Health care systems around the world are in rapid transition, moving from traditional, paper-based office practice to computer-based information management and service delivery. The term *eHealth* has been used to refer to modern information systems in support of health care. Healthcare is one of the fastest growing economic sectors and eHealth initiatives are receiving significant funding. The US government intends to spend \$36.3 billion over the next several years on implementing electronic health record software and systems, while in Europe last year's eHealth market of EUR 17.4 billion is expected to climb to EUR 20.9 billion by 2012. While organizations are busy deploying eHealth information systems to better manage quality health care services, from scheduling, billing, and health care records to the control of life-critical devices and process-guided procedures, there are increasing concerns about the lack of interoperability of such systems. Current eHealth solutions are often built as "silos" that lack the ability to interact effectively - a fact that impedes the objective of establishing a "continuum of care". Achieving eHealth interoperability is difficult because of the inherent information complexity of the health care domain. Challenges include technical issues as well as socio-political and legal problems.

The objective of this special issue is to promote eHealth system interoperability as an important current frontier in information system research and practice and to discuss a range of open challenges, potential solutions and experiences with current approaches to achieving interoperability among eHealth information systems. The special issue will not be limited to a single interoperability dimension (technical or scientific), but instead will strive to promote a holistic picture of the eHealth interoperability frontier, including medical informatics, engineering, management, education as well as legal aspects and economics.

The Call for Papers (CfP) for this issue will be widely advertised to researchers and practitioners in the field. Moreover, it will draw submissions from interdisciplinary members of the eHealth Interoperability Group (<http://simbioses.ca/ehealth/>), which has been organizing a series of workshops on this topic and related aspects.

Target audience & relevance

The special issue targets researchers and practitioners in the domain of health care information systems, including academics in health information science, computer science, software engineering, management and technology policy, as well as rapidly growing group of IT workers and managers in the health care industry.

The topic of eHealth interoperability is highly relevant and timely for *Information Systems Frontiers*, as eHealth is one of the fastest growing economic sectors and solutions to eHealth interoperability problems require a multidisciplinary approach, combining computer science, engineering, medical informatics, economics and management.

Topics

Topics of interest include but are not limited to

- Methods, standards and tools to achieve eHealth interoperability
- Experience reports with interoperability methods, standards and tools
- Management and economics of interoperable eHealth systems
- Engineering aspects of interoperable eHealth systems, including requirements analysis, design, construction, maintenance, and decommissioning
- Interoperability standards
- Human aspects and education
- multi-jurisdictional policy development
- legal aspects
- health informatics related to interoperability

Different types of papers are welcome, including research papers, state-of-the-art surveys, tutorials and case analyses of theoretical value and practical significance.

Schedule

We plan two submission review cycles in order to assure maximum paper quality.

- Call for Papers posted: Feb. 15, 2010
- Abstract submission (recommended): authors are asked to submit title and abstract ahead of time to probe fit with the objective of the special issue: May 1, 2010
- Submission due date: July 1, 2010
- First round review completed: October 1, 2010
- Submission due date of revised papers: December 1, 2010
- Second round review completed: February 1, 2011

- Submission of final version of the paper: one month after notification of acceptance

Submission & Review

The special issue will contain approximately eight articles of 7,000-8,000 words plus a guest editorial. Papers, which have appeared previously in proceedings of conferences, may be submitted to this special issue if they are substantially revised, extended or improved from their earlier versions, due to copyright issues.

Each submission will be reviewed by at least three qualified experts in a double-blind review process.

Submission method : Submissions must be directly uploaded to Springer's Editorial Manager system, which is as follows.

<http://www.editorialmanager.com/isfi/>

Paper submissions must conform to the layout and format guidelines of *Information Systems Frontiers*. Instructions for Contributors are available at

<http://www.springer.com/business/business+information+systems/journal/10796>

Criteria and Evaluation for acceptance of paper:

- Significance to the journal's audience
- Relevance to this special issue
- Quality of the paper including originality, technical depth, significance of results, adequacy of priori works referenced, overall organization, clarity and readability, satisfactory English writing, sufficient support for assertions and conclusion, appropriate title, abstract adequately summarizes the paper, introduction provides proper orientation, clear tables and figures.
- Overall recommendation on the paper
- Optional confidential comments to the Editorial Committee

Guest Editorial Board

- Dr. Jens Weber-Jahnke, University of Victoria, Victoria, BC, Canada.
Email: jens@uvic.ca
- Dr. Liam Peyton, University of Ottawa, Ottawa, ON, Canada.
Email: lpeyton@site.uottawa.ca
- Dr. Thodoros Topaloglou, Deputy CIO, Rouge Valley Health Systems, Toronto, ON, Canada
Email: ttopaloglou@gmail.com

About the guest editors:

Dr. Weber-Jahnke is an Associate Professor in the Department of Computer Science and an Adjunct Associate Professor in the School of Health Information Science, at UVic. He is also the Director of the Software Engineering program. He was a Visiting Associate Professor in the Faculty of Medicine at the University of

British Columbia in 2005/2006. He is the co-director of the Simbioses (**S**oftware and **I**Maging in **B**IOmedical **S**ystems applying **E**ngineering **S**olutions) laboratory. His research interest are in information interoperability, electronic health records, consumer health informatics, and data security.

Dr. Peyton is an Associate Professor in the School of Information Technology and Engineering at UofO. He is a principal investigator for the Intelligent Data Warehouse laboratory where his current research involves active collaboration with the Champlain Local Health Integration Network, The Ottawa Hospital, the Children's Hospital of Eastern Ontario, the Ottawa Heart Institute, and the McGill University Health Centre. He is a member of the Hospital Data Warehouse Association and the E-Health Interoperability Group.

Dr. Thodoros Topaloglou is the Deputy Chief Information Officer and Chief Privacy Officer at Rouge Valley Health System, a two site acute care hospital serving the east Toronto and west Durham regions. His role is to implement and integrate information systems and processes that enable clinicians and hospital staff to provide safe and high quality healthcare to patients. He is also an Adjunct Professor of Computer Science and Information Engineering at the University of Toronto. Prior to his current appointment, he spent spent 12 years creating and managing technology helping biomedical and drug research organizations to utilize their data to make scientific discoveries. He also served as Associate Professor in the Faculty of Engineering at the University of Toronto in 2005-08.