2007

Centre for Information Systems Assurance

UW CISA

Celebrating 10 years

UNIVERSITY OF Waterloo
2007

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- Documenting best practices
- Sponsoring research symposia, conferences and workshops
- Developing courses, cases and other teaching material
- Operating the learning centre
- Sharing material with other educators

10 FUTURE PLANS

- Hosting the Centre’s ISA Portal and IS Assurance Weblog
- Funding and supporting current and future activities
- “Thought Leadership” on ISA
- Sponsoring research symposia, conferences and workshops
- Documenting best practices
- Funding specific research and education projects
- Developing courses, cases and other teaching material
- Operating the learning centre
- Sharing material with other educators

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WE WELCOME INQUIRIES, SUGGESTIONS AND COMMENTS!

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Mission Statement

The University of Waterloo Centre for Information Systems Assurance (UWCISA) seeks to identify, create and deliver research addressing information systems governance, control and assurance issues; to support and promote the delivery of educational activities and materials related to such issues; to communicate and promote information systems governance, control and assurance issues that are important to professionals working in these areas; and to support and promote interaction on those issues among practitioners, educators and students.

Background

UWCISA is an administrative sub-unit within the Centre for Accounting Education and Research (CARE) at the University of Waterloo. UWCISA was established in 1998 by three founding sponsors: the UW School of Accounting & Finance, the Canadian Institute of Chartered Accountants, and the Information Systems Audit and Control Association. CaseWare IDEA Inc. joined the sponsor group on January 1, 2006. The sponsors’ objectives were to improve the quality of education; to increase dialogue between practitioners and academics; to improve use in practice; to expand research in information systems assurance, governance and control; and to foster a continuing, close working relationship among the sponsors and other partners with an interest in information systems assurance, governance and control. The Centre invites and welcomes new partners to share in its mission.
To the Board of Directors:

I am pleased to present this report on the operations and activities of the University of Waterloo Centre for Information Systems Assurance (UWCISA) during 2007, our tenth year of operation.

During the year we continued our thought leadership role through service on the CICA’s Information Technology Advisory Committee and XBRL Assurance Working Groups of XBRL International and the AICPA. We also continued our research activities related to information integrity, IT governance, online privacy, XBRL and data level assurance as detailed in the report.

We participated in several workshops on XBRL and continued to sponsor workshops on Computer-Assisted Audit Techniques. We assisted McGraw-Hill in adapting exercises from CaseWare IDEA Inc.’s IDEA workbook to a leading auditing textbook.

The highlight of the year was our very successful Fifth Biennial Research Symposium on Information System Assurance. The theme for 2007 was Integrating Information Integrity into Business Information Systems. The program is detailed in the report.

During the year, we continued our work on projects in progress on presentation methods to support business risk assessments and saw a number of publications result from these efforts as detailed in this report. Our work in progress includes projects addressing IT governance, IT controls, online privacy, XBRL, information integrity, and data level assurance. We are also working on the next update of Computer Control & Audit Guide (14th edition, 2008).

We continue to welcome new partners to share in our mission. I thank the Centre’s Board Members and founding sponsors for their continued support. I look forward to working closely with all of you in the future.

J.E. Boritz, PhD, FCA, CA•CISA, CA•IT
Director
Operations and Activities for 2007

HOSTING THE CENTRE’S ISA PORTAL AND IS ASSURANCE WEBLOG

UWCISA’s website, www.arts.uwaterloo.ca/ACCT/uwcisa, serves as the Centre’s ISA Portal. It includes calls for papers and research proposals, a chat room, a resources section, a number of links and downloadable files, and order forms. UWCISA’s Annual Reports are posted to the website and summarize the Centre’s year-by-year activities. As is the custom, these reports are disseminated both electronically and in hardcopy formats.

During the year, we added a weblog on IS Assurance that is being managed by Gerald Trites.

http://uwcsa.uwaterloo.ca/blog/ISAssurance/

“THOUGHT LEADERSHIP” ON ISA

The Centre provided thought leadership in several areas during 2007.

INFORMATION TECHNOLOGY ADVISORY COMMITTEE

The Director is a member of CICA’s ITAC (Information Technology Advisory Committee). This membership strengthens the relationship between ITAC and UWCISA and opens opportunities for future collaboration.

INFORMATION INTEGRITY

- Co-sponsor the Excellence in Information Integrity Awards by Information Integrity Coalition/Infogix (formerly Unitech Systems Inc.) in Chicago, September 10, 2007.
- Information Integrity Scorecard. Objective: To create an information Integrity Scorecard. Research team is Efrim Boritz and Leslie Berger. Funded by SAP/CAAA grant. Work in progress.
- Information Integrity Control Guidelines. Project team is Efrim Boritz and Malik Datardina. Funding being provided by CICA. Work in progress.

IT GOVERNANCE

Research team is Jee-Hae Lim and Efrim Boritz.
- IT Control Weaknesses, IT Governance and Firm Performance. Accepted for presentation at the AAA IS section mid-year conference, Redondo Beach, CA January, 2008.
ONLINE PRIVACY
Research team is Won No, Efrim Boritz and R.P. Sundarraj. The following working papers were completed by the team during 2007:
• Internet Privacy: Framework, Review and Opportunities for Future Research. Accepted for presentation at HCIS, Hawaii, January, 2008.
• An Exploratory Study of Country Level and Industry Level Differences in Privacy Policies. Accepted for presentation at the AAA IS section mid-year conference, Redondo Beach, CA, January, 2008.
• Do Companies’ Privacy Policies Match Customers’ Needs?
Copies are available on the UWCISA’s website.

XBRL/XARL
The Director is a member of the AICPA’s XBRL Assurance Task Force and continued serving on XBRL International’s Assurance Working Group.


Participated in XBRL-Canada sponsored session on CSA Voluntary Filing Program on May 16, 2007.

DATA LEVEL ASSURANCE
This is a joint project with Eric Cohen of PricewaterhouseCoopers. This project addresses the provision of assurance on individual data items or subsets of data items from financial statements or other company disclosures, particularly when those items are extracted from their original context and transmitted over the Internet for use by decision makers.

COMPUTER-ASSISTED AUDITING TECHNIQUES
A team led by alumnus Scott Shannon, a partner in Grant Thornton’s Hamilton, Ontario office, conducted a workshop on CaseWare’s IDEA software for University of Waterloo students.

DOCUMENTING BEST PRACTICES
PRESENTATION METHODS TO SUPPORT BUSINESS RISK ASSESSMENTS
The purposes of this project are:
1) To summarize approaches to representing entity business models using diagrams for enhanced business risk analysis.
2) To interview partners of major firms about how such diagrams could be used for risk assessment.
3) To create hypotheses for testing findings in an experimental setting and submit for additional funding consideration to support such testing.

Research team is Paulo Alencar (Computer Systems Group, UW), Carla Carnaghan (University of Lethbridge) and Efrim Boritz, with support from Gary Baker of Deloitte.

Funding for this project is provided by the KPMG/University of Illinois Business Measurement Program.
SPONSORING RESEARCH SYMPOSIA, CONFERENCES, WORKSHOPS

ISA SYMPOSIUM

The theme for the 2007 Symposium was *Information Integrity and Information Systems Assurance*. Program provided below.

Program

**OCTOBER 11-13, 2007**

Marriott Hotel, 475 Yonge Street, Toronto, Canada

Sponsored by the University of Waterloo, the Canadian Institute of Chartered Accountants, ISACA, CaseWare IDEA Inc., Infogix Inc. and the *International Journal of Accounting Information Systems*.

**Thursday, October 11, 2007**

Opening Reception, Marriott Hotel

**Friday, October 12, 2007**

OPENING REMARKS

David Pollard, VP Knowledge Development, CICA and Chair, UWCISA

Steve Sutton, Editor, *International Journal of Accounting Information Systems*

Information Integrity and Information Systems Assurance Research Track

**Information Integrity**

*Presenter: Madhavan Nayar, Infogix Inc.*

*Discussant: Efrim Boritz, University of Waterloo*

**Data Diagnostics Using Second Order Tests of Benford’s Law**

*Presenter: Mark Nigrini, St. Michael’s College*

*Discussant: Eckhardt Kriel, Ernst & Young*

**Panel on Segregation of Duties**

Towards a Framework for Achieving Effective Segregation of Duties

*Presenter: Akhilesh Chandra, University of Akron*

**X-Raying Segregation of Duties: Support to Illuminate an Enterprise’s Immunity to Solo-Fraud**

*Presenter: Philip I. Elsas, ComputationalAuditing.com*

*Discussants: Ram Sriram, Georgia State University; Keith Matcham, Ernst & Young*

**SYMPOSIUM PHOTO GALLERY**

1 Roger Debreceny
2 Glen Mazur and Bill Swirsky
3 Steve Sutton and Jim Hunton
4 Madhavan Nayar
5 Arturo Lopez
The Importance of the COBIT Framework IT Processes for Effective Internal Control over Reliability of Financial Reporting: An International Survey  
**Presenter:** Uday Murthy, University of South Florida  
**Discussants:** Brad Tuttle, University of South Carolina; Arturo Lopez, PricewaterhouseCoopers

The Effect of Involvement and Privacy Policy Disclosure on Individuals’ Privacy Behaviour  
**Presenter:** Won No, University of Waterloo  
**Discussants:** Jim Hunton, Bentley College; Robert Parker, R.G. Parker Consulting Inc.

An Examination of Contextual Factors and Individual Characteristics Affecting Technology Implementation Decisions in Auditing  
**Presenter:** Mary B. Curtis, University of North Texas  
**Discussants:** Carlin Dowling, University of Melbourne; Robert Rowe, KPMG

Auditing XBRL Instance Documents: The Case of United Technologies Inc.  
**Presenter:** Efrim Boritz, University of Waterloo  
**Discussants:** Skip White, University of Delaware; David Sharpe, PricewaterhouseCoopers

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**Saturday, October 13, 2007**

**IT Innovation Persistence**  
**Presenter:** Theophanis Stratopoulos, University of Waterloo  
**Discussants:** Vern Richardson, University of Arkansas and Doug Peebles, SAP

**Data Mining of Emails To Support Periodic and Continuous Assurance**  
**Presenters:** Glen Gray, California State University at Northridge and Roger Debreceny, University of Hawaii  
**Discussants:** Alex Kogan, Rutgers University; Bob Cuthbertson, CaseWare IDEA, Inc.

**IT Control Weaknesses, IT Governance and Firm Performance**  
**Presenter:** Jee-Hae Lim, University of Waterloo  
**Discussants:** Elaine Mauldin, University of Missouri; Gary Baker, Deloitte
DEVELOPING COURSES, CASES, AND OTHER TEACHING MATERIAL

CASES

Efrim Boritz and Theophanis Stratopoulos created a case on business risk assessment for a software development company. Classroom testing was performed in 2006 and 2007. The case was presented at the UWCISA Symposium on October 13, 2007 and has been submitted for review at a leading educational journal.

Jee-Hae Lim, Theophanis Stratopoulos and Efrim Boritz developed a research seminar on IT Governance covering the ways in which IT Governance can be or has been studied, and identifying research opportunities for the future. The course outline is available upon request.

Malik Datardina and Efrim Boritz assisted McGraw-Hill in adapting exercises from CaseWare IDEA Inc.’s IDEA workbook to a leading auditing textbook.

A paper on CAATS in the Classroom is available on UWCISA’s website.

XBRL

The Centre has developed and offered PD Workshops on XBRL.

OPERATING THE LEARNING CENTRE

UWCISA plans to develop short “self-serve” professional development courses for practitioners.

SHARING MATERIAL WITH OTHER EDUCATORS

The UWCISA website contains the latest text, case materials and other items for various Centre-supported courses. In 2007 the Centre sold 150 copies of the 13th edition of its long-running publication, Computer Control and Audit Guide (CCAG) to universities throughout Ontario. A CCAG order form is posted on the UWCISA website.

Information Integrity and Information Systems Assurance Education Track

IT in the Accounting Curriculum

Presenter: Gerald Trites, Fellow, UWCISA
Discussants: Miklos Vasserhelyi, Rutgers University; Tim Forristal, CICA

Auditing System Development: Constructing the Meaning of “Systematic and Rational” in the Context of Legacy Code Migration for Vendor Incentives

Presenter: A. Faye Borthick, Georgia State University
Discussants: David Bateman, St. Mary’s University; Chris Anderson, Grant Thornton

e-Vision: Risk Assessment in the Software Business with Decision Aids

Presenter: Theophanis Stratopoulos, University of Waterloo
Discussants: Ed O’Donnell, University of Kansas; Glen Mazur, BDO

Selected research papers will be published in the June 2008 issue of the International Journal of Accounting Information Systems.

SYMPOSIUM PHOTO GALLERY (cont’d)

6 Robert Rowe
7 Eckhardt Kriel
8 Chris Anderson
9 Gary Baker
10 Mary Curtis, Louise Hayes and Uday Murthy
11 Jee-Hae Lim
12 Banquet
13 Ed O’Donnell
Future Plans

In the next twelve months, UWCISA will maintain its current activities in research, education and communication, and will undertake new initiatives as well. Plans for each key category are outlined below.

HOSTING THE CENTRE’S ISA PORTAL AND IS ASSURANCE WEBLOG

UWCISA plans to continue to improve the site in 2008. Your comments are welcome.

FUNDING AND SUPPORTING CURRENT AND FUTURE ACTIVITIES

UWCISA’s fundraising committee will continue seeking ways to expand the funding base for the Centre. We invite partners to join us in our mission to improve the quality and reliability of information systems and the processes used to create, implement, operate, maintain and change them.

“THOUGHT LEADERSHIP” ON ISA

UWCISA will continue working to create an international network for research in privacy, security and trust. Areas of focus will be health care, the financial sector and e-business.

In particular, UWCISA will complete or begin the following projects during 2008:

• Gerald Trites will continue to manage the IS Assurance blog on behalf of the UWCISA
• IT Governance. Two papers on this topic will be presented at various conferences and groomed for publication.
• Online Privacy. Four papers on this topic will be presented at various conferences and groomed for publication.
• XBRL. Two papers on this topic will be presented at various conferences and groomed for publication.
• Data Level Assurance paper will be completed with Eric Cohen of PricewaterhouseCoopers.

SPONSORING RESEARCH SYMPOSIAS, CONFERENCES, WORKSHOPS

UWCISA will organize a workshop on computer-assisted auditing techniques for XBRL.

UWCISA will co-sponsor the Excellence in Information Integrity Awards by Information Integrity Coalition, October 20, 2008.

UWCISA will launch an initiative to engage with the data governance community to identify areas of common interest.

Visit www.arts.uwaterloo.ca/ACCT/uwcisa.

DOCUMENTING BEST PRACTICES

UWCISA will complete the projects in progress as previously described. In particular, UWCISA will complete or begin the following research projects during 2008:

• Alternative ways of representing business models and business processes for use by auditors in risk and control assessments.
• A project on Information Integrity Control Guidelines.
FUNDING SPECIFIC RESEARCH AND EDUCATION PROJECTS

RESEARCH PROPOSALS
For Research Proposal Guidelines, visit www.arts.uwaterloo.ca/ACCT/uwcia.

FELLOWSHIPS AND SCHOLARSHIPS
UWCISA will make funds available for Visiting Fellows and doctoral students. For details, contact the Director.

DEVELOPING COURSES, CASES AND OTHER TEACHING MATERIAL

XBRL
The Centre has developed a PD Workshop on XBRL for preparers. During 2008 a PD workshop for auditors will be developed.

COMPUTER CONTROL AND AUDIT GUIDE
This publication will be updated in the second quarter of 2008.

OPERATING THE LEARNING CENTRE
UWCISA will continue developing its suite of online courses, focusing on short “self-serve” professional development courses for practitioners.

SHARING MATERIAL WITH OTHER EDUCATORS
The Centre will continue to share its material with educators around the world. For information, please visit our website or contact the Director.
The University of Waterloo Centre for Information Systems Assurance gratefully acknowledges the generous support of our founding partners and sponsors.

www.arts.uwaterloo.ca/ACCT/uwcisa

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