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CICA; Chair, UWCISA

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Assistant Professor of Information Systems
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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 Accountancy, 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 are 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 2006, our ninth year of operation.

During the year we continued our thought leadership role through service on the CICA’s CAATs study group, the Information Technology Advisory Committee and XBRL Assurance Working Groups of XBRL International and the AICPA. We also continued our research activities related to online privacy, fraud detection techniques, 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 CaseWare IDEA Inc. in updating its IDEA workbook as well as updating an article on CAATs in the classroom. We co-sponsored a very successful case writing workshop for southern Ontario academics with the help of ISACA’s Toronto chapter and the CICA. We are already planning our 2007 Symposium, and we invite participants and presenters to join us. The theme will be Integrating Information Integrity into Business Information Systems.

Of particular note in connection with the education aspects of our mandate is our assistance to UW’s School of Accountancy in launching its IT Diploma program in 2006. We also completed the third and final phase of our IT Audit Education Project in partnership with PricewaterhouseCoopers on behalf of the National Accounting Institute of China in Beijing in May 2006.

During the year, we continued our work on projects in progress on presentation methods to support business risk assessments and documenting business processes 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 for SOX, online privacy, XBRL, information integrity, and data level assurance. We are also working on the next update of Computer Control & Audit Guide (14th edition, 2007).

Starting this year we benefitted from the sponsorship of CaseWare IDEA Inc. which has become a sustaining sponsor of our Centre. We continue to welcome new partners to share in our mission.

I thank the Centre’s Board Members and sustaining sponsors for their continued support. I look forward to working closely with all of you in the future.

Respectfully,

J.E. Boritz, PhD, FCA, CA•CISA, CA•IT

Director
Operations and Activities 2006

HOSTING THE CENTRE’S ISA PORTAL

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, 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 several new pages as summarized below.

FUNDING AND SUPPORTING CURRENT AND FUTURE ACTIVITIES

UWCISA’s funding comes from operating grants provided by our generous sponsors, research grants from various agencies and publication revenues. UWCISA is exploring new fundraising options to help the Centre establish a full-time staff to conduct its research, education and outreach activities on a long term, sustainable basis.

Effective January 1, 2006 CaseWare IDEA Inc. became a sustaining sponsor of the Centre.

We welcome new partners to help us achieve the Centre’s mission.

THOUGHT LEADERSHIP ON ISA

The Centre provided thought leadership in several areas during 2006.

Computer-Assisted Auditing Techniques

The Director was a member of CICA CAATs audit techniques study advisory group. The project has now been completed by primary author Eckhardt Kriel of Ernst & Young and has been published by the CICA.

Fraud Detection

Research team of Efrim Boritz, Dominic Covvey and Fletcher Lu have published the following paper:


Information Technology Advisory Committee

The Director was invited to become a member of CICA’s ITAC (Information Technology Advisory Committee) effective September 2006. This membership strengthens the relationship between ITAC and UWCISA and opens new opportunities for future collaboration.

Online Privacy

Research team is Efrim Boritz, Won No and R. P. Sundarraj. The following working paper was completed by the team during 2006:

- “Privacy Policy Disclosures of Companies: An Exploratory Study of Country Level and Industry Level Differences “

A copy is available on the UWCISA’s website.

XBRL/XARL

The Director was invited to become a member of the AICPA’s XBRL Assurance Task Force and continued serving on XBRL International’s Assurance Working Group.

Data Level Assurance

This is a joint project with Eric Cohen of PricewaterhouseCoopers.
SPONSORING RESEARCH SYMPOSIA, CONFERENCES, WORKSHOPS

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**XBRL**

On March 28, 2006 the Centre delivered an XBRL presentation at the IT Governance, Security and Audit Conference organized by the CICA, IIA and ISACA.

The Director participated in the XBRL International AWG (Assurance Working Group) May 1, 2006.

Efrim Boritz and Won No delivered a day-long XBRL presentation for the Korean Accounting Association partly by web and partly in person on June 14, 2006.

The Director delivered an XBRL presentation at a conference at Brock University co-sponsored by the CAAA (Canadian Academic Accounting Association) Sept 29, 2006.

**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.

**ISA Symposium**

The theme for the 2007 symposium is *Information Integrity and Business Systems*.

A case competition will be held to encourage the development of ISA cases.

DOCUMENTING BEST PRACTICES

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**Presentation Methods To Support Business Risk Assessments**

The purpose of this project is:

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

Funding for this project is provided by the KPMG/University of Illinois Business Measurement Program.

**Documenting Business Processes**

Objectives: 1) To summarize approaches to documenting business processes; 2) create illustrative case based on practice; 3) interview audit team members about their views on alternative presentation.

The research team is Efrim Boritz and Carla Carnaghan with support from Gary Baker of Deloitte.

Funding for this project is provided by the CAAA/Deloitte Research fund.

A paper summarizing various approaches to documenting business processes was published in the June 2006 issue of the *International Journal of Accounting Information Systems*.
DEVELOPING COURSES, CASES, AND OTHER TEACHING MATERIAL

Cases

A case writing workshop was held on Saturday, November 25, 2006 in collaboration with ISACA’s Toronto chapter and representatives from universities in southern Ontario. CICA provided facilities. UWCISA’s Jee-Hae Lim and ISACA’s Margaret Lee organized this event. A photography gallery of the event is posted on the UWCISA web site at: http://uwcisa.uwaterloo.ca/case/gallery.asp

Efrim Boritz and Theophanis Stratopoulos created a case on business risk assessment for a software development company. Classroom testing was performed in early November 2006.

Efrim Boritz, Jee-Hae Lim and Theophanis Stratopoulos 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 prepared an update of CaseWare IDEA Inc.’s Workbook for IDEA v. 7 as well as a paper on CAATs in the Classroom which was presented at the AAA IS Section mid-year meeting in Savannah, Georgia in January 2007. (Available on UWCISA’s website.)

SHARING MATERIAL WITH OTHER EDUCATORS

The UWCISA shares its materials with educators. In 2006 the Centre sold 250 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.

IT Diploma Program Structure

The IT Diploma program was launched in the fall of 2006. The table below outlines the courses for the two options.

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<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tbody>
<tr>
<td>Pre-Requisites</td>
<td>Common Core Courses</td>
<td>Additional Courses for Diploma in Information Systems Assurance</td>
<td>Additional Courses for Diploma in Business Information Technology</td>
<td></td>
</tr>
<tr>
<td>IT User Skills (CS101 or equivalent)</td>
<td>ACC 620 Enterprise IT Architecture &amp; Management</td>
<td>ACC 624 IT Security</td>
<td>ACC 625 IT Strategic Planning</td>
<td></td>
</tr>
<tr>
<td>Intro to Business Systems (ACC 241 or equivalent)</td>
<td>ACC 621 System Reliability Principles and Controls</td>
<td>ACC 626 a IT Assurance Services (1/2 course)</td>
<td>ACC 627 a Business Process Enablement (1/2 course)</td>
<td></td>
</tr>
<tr>
<td>System Acquisition, Development, Implementation and Maintenance (ACC 442 or equivalent)</td>
<td>ACC 622 E-Business</td>
<td>ACC 626 b Computer-Assisted Audit Techniques (1/2 course)</td>
<td>ACC 627 b Project Management (1/2 course)</td>
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</table>

- **Column A** – lists the pre-requisite courses that students would be expected to have prior to admission to the IT Diploma programs. Students could apply for conditional admission to enable them to obtain missing pre-requisites at UW.
- **Column B** – lists the core requirements that are common to both Diplomas.
- **Column C** – lists the additional courses for the Diploma in Information Systems Assurance.
- **Column D** – lists the additional courses for the Diploma in Business Information Technology.
IT AUDIT COURSE FOR NATIONAL ACCOUNTING INSTITUTE OF BEIJING

An IT Audit course was developed for the National Accounting Institute of Beijing in partnership with PricewaterhouseCoopers and funded by the World Bank. The final phase of the project was completed in May 2006.

“Thou shalt not cook the books!”

Hands-on workshop on computer-assisted audit techniques.

Philip Yang of PWC Beijing instructing.

Question and answer session.

Class of 2006 with instructors.

Gan Bei! A toast to successful completion of project.
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

UWCISA plans to continue to improve the site in 2007. 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 complete or begin the following projects during 2007:

• Gerald Trites will create and manage an ISA blog on behalf of the UWCISA.
• Data Level Assurance paper will be completed with Eric Cohen of PricewaterhouseCoopers.
• IT Governance. Impact of Top Management’s IT Knowledge and IT Governance Mechanisms.
• IT Control Weaknesses, IT Governance and Firm Performance.
• The Effect of Involvement and Privacy Policy Disclosure on Individuals’ Privacy Behaviour.
  To be presented at the CAAA Conference in Halifax June 1, 2007.

SPONSORING RESEARCH SYMPOSIA, CONFERENCES, WORKSHOPS

UWCISA will organize and promote its fifth bi-annual Research Symposium and Education Conference, slated for Toronto in October 2007. The theme of the Research Symposium will be Integrating Information Integrity into Business Information Systems.

Part of the Symposium will focus on instructional resources, including a case competition.

The Centre will post program details on the website as they become available.

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 2007:

- Alternative ways of representing business models and business processes for use by auditors in risk and control assessments.
- Case study of the United Technologies XBRL filing and the auditing issues involved in providing assurance on such a filing. Presentation on United Technologies at University of Kansas Conference on XBRL, May 11-12, 2007.
- A project on Information Integrity Control Guidelines will begin in the summer of 2007.
- Co-sponsor the Excellence in Information Integrity Awards by Information Integrity Coalition in Chicago September 10, 2007.

FUNDING SPECIFIC RESEARCH AND EDUCATION PROJECTS

Research Proposals
For Research Proposal Guidelines, visit www.arts.uwaterloo.ca/ACCT/uwcisa.

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 plans to develop and offer PD Workshops on XBRL.

Computer Control and Audit Guide
This publication will be updated in the third quarter of 2007.

OPERATING THE LEARNING CENTRE

UWCISA will continue developing its suite of online courses, focusing on IT Diploma courses as well as 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.
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THE LAST WORD

We welcome inquiries, suggestions and comments!

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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

Univeristy of Waterloo

School of Accountancy

Canadian Institute of Chartered Accountants (CICA)

Information Systems Audit and Control Association (ISACA)

CaseWare IDEA Inc.