Pace University
DigitalCommons@Pace

Cornerstone 3 Reports : Interdisciplinary Informatics

The Thinkfinity Center for Innovative Teaching, Technology and Research

7-1-2010

Rule Based, Automated Control and Compliance Systems: The Strategic Alignment Between Accounting and Data Mining

Catherine Dwyer
Seidenberg School of CSIS

Susanner O'Callaghan
Accounting Department, Lubins School of Business

Follow this and additional works at: http://digitalcommons.pace.edu/cornerstone3

Part of the Accounting Commons, and the Technology and Innovation Commons

Recommended Citation
Dwyer, Catherine and O'Callaghan, Susanner, "Rule Based, Automated Control and Compliance Systems: The Strategic Alignment Between Accounting and Data Mining" (2010). *Cornerstone 3 Reports : Interdisciplinary Informatics.* Paper 36.
http://digitalcommons.pace.edu/cornerstone3/36

This Report is brought to you for free and open access by the The Thinkfinity Center for Innovative Teaching, Technology and Research at DigitalCommons@Pace. It has been accepted for inclusion in Cornerstone 3 Reports : Interdisciplinary Informatics by an authorized administrator of DigitalCommons@Pace. For more information, please contact rracelis@pace.edu.

PACE UNIVERSITY

Thinkfinity Grant Final Report

Grant Title: "Rule Based, Automated Control and Compliance Systems: The Strategic Alignment Between Accounting and Data Mining"

Principal Investigators:

Catherine Dwyer
Seidenberg School, Department of Information Technology
Susanne O'Callaghan
Lubin School, Accounting Department

Cornerstone III: Interdisciplinary Programs

July 15, 2010

A) Please outline your original goals.

Our intention was to develop an interdisciplinary course between Seidenberg and Lubin that addresses specific needs within our two schools. Our end goal was the creation of a graduate and undergraduate course entitled "Data Mining for Accounting Information Systems." Both courses were intended to be offered as electives for accounting majors, as well as Information Systems majors.

The first need this project addressed was a mandate from the University to pursue interdisciplinary curriculum development. Secondly, this project addressed a need in the Accounting department for elective courses that reflect the emphasis of the CPA exam on the reliance on IT within the accounting profession. Currently every student within Pace's Accounting graduate programs take the CPA exam. And finally, for the Seidenberg school, there is a mandate to develop courses that present technology embedded within a specific domain.

B) What progress have you made towards your original goals on your project to date?

An undergraduate course, "CIT396B – Advanced Information Technology for Accounding Applications," is on the course schedule for Fall 2010. It is a three credit Seidenberg elective, that can also count as a general business elective for Lubin students.

All class meetings for CIT396B will take place in the Accounting Computing Lab. The emphasis of the course will be to expose students to enterprise level accounting applications, and give them hands on experience using these applications in order to carry out accounting

tasks. In addition, the course will give students hands on experience with using an Enterprise Resource Planning system (ERP). ERP systems integrate data from all sections and departments of an organization, providing a "real time" synthesis of the current and ongoing state of the organizations transactions and activities. These types of systems are not PC based, and most students do not get exposure to ERP systems until their first job.

Students will also get hands on experience creating system diagrams and models using the Unifed Modeling Language (UML). While all new systems development is diagrammed using UML, most business students use older methods, such as flow charts or data flow diagrams in their classroom exercises. Once again, students have to learn UML on the job. By combining hands on experience with automated accounting applications, ERP systems, and UML diagrams, business students will have a more robust set of practical skills they can bring to their first job.

The graduate level version of this course is still in the planning stages, and will not be offered in the immediate future. While there certainly is the need for a course like this on the graduate level, there is very little room for it in the current program.

C) What activities have been completed to contribute to meeting/progressing toward these goals?

The first step accomplished for this project was to determine the types of technologies that are used on a regular basis for accounting and auditing tasks, and are not currently covered in the general business curriculum. This was accomplished by meeting with accounting professionals, examining the types of products in use at major corporations, and looking at what was being covered in the current Accounting Information Systems class, as well as the scope of topics from Information Technology covered in the CPA exam.

Through this process we identified the following areas:
- experience with a computer based audit program, such as ACL or IDEA
- exposure to ERP systems and their role in accounting tasks, compliance, and control
- practice with modern system diagramming and documentation using UML

We then conducted a search of other institutions, to see if any other school offered similar courses or topics. We found no other school offering any course at all like the one we envision. We did see some classes offering in depth exercises in a sub-set of these topics.

We then put together a syllabus for a course offering, CIT396B. It was presented to the Seidenberg Information Technology curriculum committee, and the Lubin undergraduate curriculum committee, and approved to run for Fall 2010.

D) What activities have not been completed? Please indicate why they have not been completed.

A graduate version of this class has not been developed or scheduled. This has to do with scheduling constraints in the Accounting graduate program. We are hoping the undergraduate version will be successful, and will lead to a graduate version of this class.

E) Please outline the outcomes you have received as a result.

- defined a body of knowledge in the intersection of accounting and information technology that is of great value to students, but is currently not part of the curriculum.
- designed a course, CIT396B, that will emphasize hands on experience in the accounting information technology areas described above
- steered the course through the curriculum review process of both the Lubin school and the Seidenberg school, and have scheduled the class for Fall 2010

F) Has your project impacted students? If so, how many?

Material from this project was tried out in a course offered in Spring 2010. Dr. O'Callaghan's graduate auditing class was offered a two week introduction to accounting information technology, including a hands on exercise using ACL. There were approximately 50 students who participated in this two week module. Student response to the material and the chance to learn ACL was very positive.

G) Has your project impacted other faculty members? If so, how many?

This project has been presented informally to several members of the Accounting department. The response has been positive.

H) Were there any unintended outcomes achieved?

One unintended outcome has been the opportunity to connect with accounting and IT auditing professionals. A number of accounting professionals have been very enthusiastic about this project, and have offered advice and support. This course has created an opportunity to strengthen the ties between the Seidenberg School and the Lubin School, with professionals in the accounting and IT auditing field.

I) Do your outcomes reflect the change or benefit you were hoping to receive?

This project has had many benefits. Both Dr. Dwyer and Dr. O'Callaghan have enjoyed learning about new applications. This project has also identified a set of information technology skills that we predict will improve the marketability of Pace students among employers.

How has your project furthered the Thinkfinity Cornerstone you selected?

This project was funded from Cornerstone III: Interdisciplinary Programs. This project has greatly enhanced this cornerstone because it resulted in a course that exposes students to a

strategic set of accounting information technology skills. Even though there is a clear need for this course, it probably could not have been put together without Thinkfinity funding and a mandate to explore interdisciplinary programs.

J) Describe your future plans for sustaining the program or project.

The course will be offered for the first time in Fall 2010 on the New York campus. If it is successful, we would like to see it expanded to the Pleasantville campus as well. We also plan to pursue the development of a graduate version of this class.