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Panel: A New Global Process for Revising and Maintaining the Undergraduate IS Model Curriculum

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**A New Global Process for Revising and Maintaining the Undergraduate IS
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A NEW GLOBAL PROCESS FOR REVISING AND MAINTAINING THE UNDERGRADUATE IS MODEL CURRICULUM

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Abstract

The panel will provide an overview and an analysis of the ongoing joint ACM/AIS IS undergraduate model curriculum revision project, which is proposing significant changes to both curriculum content and structure and the process that is used to develop and maintain IS model curricula. The panel members represent universities in Europe, Africa, and the Americas, and thus, the panel creates an excellent opportunity for an in-depth discussion regarding the regional differences in perspectives to curriculum development and the feasibility of a truly global IS model curriculum. The panel is structured to encourage active audience participation, and one of its purposes is to solicit feedback that will be used to guide the curriculum development effort.

Keywords: undergraduate model curriculum, IS education, computing education, curriculum development

1 SUMMARY OF THE PANEL TOPIC

In North America, ACM, AIS, and AITP have a long history of developing curriculum recommendations for the Information Systems discipline both at the undergraduate and graduate levels. The latest undergraduate recommendation is IS2002 (Gorgone & al, 2002), which was a relatively minor revision of a thoroughly revised IS'97, a result of a comprehensive multi-year effort. The curriculum recommendations have served an important purpose in guiding institutional curricula and shaping our joint understanding of Information Systems as a field. Even though the model curricula have been developed for the North American educational system and have been constrained by some of the specific characteristics of North American business schools, anecdotal evidence suggests that they have been used also globally (for example, a quick web search reveals that a copy of IS2002 has been made available electronically in more than 10 countries).

In late 2006, ACM and AIS together identified the need to launch a process to revise the undergraduate model curriculum. There are many reasons why the curriculum has to be revised: 1) the technology environment and core architectures have changed dramatically since 1990s when most of the work for IS2002 was done; 2) the structures and mechanisms for IS systems and service delivery have changed very significantly, particularly because of global distribution of the supply chain, the rapid proliferation of various enterprise systems, and the emergence of the Web as the dominant technology platform; 3) the nature of the jobs Information Systems graduates typically take after graduation is very different; 4) the global problems related to declining enrollments in Information Systems suggest that we need to evaluate the role of the curriculum in addressing the crisis. Also, there is a need to evaluate the ways in which the curriculum could be made truly more international; this was one of the strong priorities particularly for the AIS Council. In early 2007, a joint ACM/AIS task force was launched to lead the effort to revise the model curriculum.

The task force soon recognized that the changes that are needed are more substantial than those that could be achieved by changing the content or the focus of the existing courses. It became clear that before we can change the curriculum, we need to rethink the way we do curriculum development. Specifically, the task force identified the creation of a web-based, globally available collaboration environment as one of the major priorities for the project, supported by governance structures that allow the community to both capture the input from as many members of the IS community as possible but at the same time maintain the necessary cohesiveness of the project. In 2007, the task force created a wiki-based collaboration platform and introduced it to the community; it is available at <http://blogsandwikis.bentley.edu/iscurriculum>.

The task force has also identified the need to explicitly address the needs of multiple regional and national educational systems and the local needs within countries. The idea of one curriculum that would fit the needs of all institutions appears to be obsolete, and therefore, the task force is proposing a revised structural model in which the curriculum consists of core topics (not courses) that have to be included in any IS curriculum (but not always with the same emphasis) and elective topics. Together, the integration of core and elective topics into courses form Career Tracks, which can vary from a traditional Systems/Business Analyst to a technical Database Administrator or a strongly domain oriented Domain Analyst (e.g., Business Process Analyst). In addition, the task force proposes that the curriculum should be released from the constraints created by the close association of the curriculum with North American business schools; the current proposal acknowledges that beyond business, the domains that information systems serve can include health care, biology, law, government, etc.

The purpose of the proposed ECIS panel is threefold:

- The panel will provide an overview of the proposed IS undergraduate curriculum changes and the current status of the project to the ECIS audience, thus expanding the global awareness of the project (the panel presentations so far have been given at AMCIS and AIS SIG-ED/IAIM

conference, both in North America), offering also an opportunity for the audience to engage in a dialogue regarding the proposed changes and provide feedback to the task force.

- The panel will include members representing universities in Europe, Africa, and the Americas, thus creating an opportunity for an interesting comparison between various regional viewpoints regarding undergraduate IS curricula and an analysis of the regional needs. This will, in turn, create an opportunity for the audience to provide additional feedback, which will be very helpful for the task force's work moving forward.
- The panel will engage in a discussion regarding the mechanisms that need to be in place to allow a genuinely global curriculum development process to take place and evaluate the feasibility of the idea of a global curriculum and global curriculum development process, taken into account the regional and national differences. Also, addressed will be issues related to motivating and rewarding participation in curriculum development processes. Again, the audience will get an opportunity to participate and provide valuable feedback regarding this important topic.

2 ENGAGING THE AUDIENCE AND CONTRIBUTING TO THE CONFERENCE AND ITS THEME

We propose to use the same structure that the ACM/AIS task force has successfully used in earlier panels related to this curriculum effort. In this approach, the panel is divided into main topics (in this case, the three specified above). For each topic at a time, the panel facilitator (typically the main panel organizer) provides a brief background description of the topic to the audience and then presents questions related to the topic to the panelists, who provide brief answers addressing the key points of the issue. After that, the discussion is opened for the audience; both questions and comments from the audience are strongly encouraged. At the end of each topic, the panel facilitator provides a brief summary of the discussion. Once all topics have been covered, the panelists provide final comments and the panel facilitator summarizes the results of the panel. Experience from AMCIS 2007 and AIS SIG-ED 2007 suggests that this format enables and encourages active audience participation and discussion among panelists.

The panel contributes to the conference in a significant way because it is designed to increase the participants' awareness of a very important IS education initiative and make it easy for the participants to contribute to this process that has the potential to have a strong impact on how education in our field is organized. Even more importantly, this panel would be a very important element in the efforts by the information systems community to make the curriculum development processes more global and enable broadest possible participation. Strong education in Information Systems is an absolutely necessary foundation for enabling an "Innovative Knowledge-based Society" in any national or cultural context and therefore, the topic has an excellent fit with the conference theme.

3 PANEL PARTICIPANTS

Dr. Heikki Topi (panel organizer) is Associate Dean of Business (Graduate and Executive Programs) and Associate Professor of Computer Information Systems at Bentley College. His research has been published in journals such as *European Journal of Information Systems*, *JASIST*, *Information Processing & Management*, *International Journal of Human-Computer Studies*, *Journal of Database Management*, *Small Group Research*, and others. He has been actively involved in national computing curriculum development and evaluation efforts (including IS2002 and CC2005 Overview Report).

Currently, he is a member of the ACM Education Board and co-chair of the IS curriculum revision project.

Dr. Brian Donnellan is a faculty member at the Cairnes Postgraduate School of Business and Public Policy at the National University of Ireland, Galway. His research interests lie primarily in the area of innovation systems, a broad area that encompasses knowledge management, new product development, and technology management. Prior to joining NUIG faculty in 2004, he spent 20 years working in the high-tech industry.

Dr. Roy D. Johnson is a Fulbright Scholar and Extraordinary Professor in the Informatics Department at the University of Pretoria, South Africa. Prior to this position, he worked in the Computer Information Systems Department since 1999 at Georgia State University, Atlanta, Georgia. He received his PhD from the University of Oregon in Anatomy, Art and Dance after which he completed post-doc study at the University of Minnesota and Indiana University in MIS. Dr. Johnson founded of the International Academy for Information Systems (IAIM) in 1988, which is now the Association of Information Systems (AIS) Special Interest Group for Education (SIGED). He holds the position of AIS Vice President for Education and reviews international IS programs for ABET.

Dr. Markus Helfert is a lecturer in Information Systems and the program chair of the European M.Sc. in Business Informatics at Dublin City University. His research interests include information quality, data warehousing, information system architectures and business informatics education and curriculum development. He has authored academic articles and book contributions and has presented his work at international conferences including the MIT International Conference on Information Quality (MIT-ICIQ). Markus Helfert has served as member of program committees and co-chaired international conferences. He was involved in several teaching and research related projects, including two European Projects on Business Informatics Curriculum Development and Information System Education.

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