SECS and IS: Exploring the Common Ground

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ABSTRACT

This poster presentation aims to explore the common ground for software engineering, computer science and information systems. Computer science is defined as a discipline that involves the understanding and design of computers and computational processes. In its most general form it is concerned with the understanding of information transfer and transformation. The discipline ranges from theoretical studies of algorithms to practical problems of implementation in terms of computational hardware and software. In computer science there is an inherent intermingling of the theoretical concepts of computability and algorithmic efficiency with the modern practical advancements in electronics that continue to stimulate advances in the discipline. It is this close interaction of the theoretical and design aspects of the field that binds them together into a single discipline. Software engineering is defined as the application of a systematic, disciplined, quantifiable approach to the development, operation, and maintenance of software; that is, the application of engineering to software. Information Systems is defined as the application of information to organisational needs. Information systems is the study of information production, flows and use within organisations. Whilst information systems makes extensive use of information technology it also encompasses systems in their entirety, including manual activities, the interface between manual and automated components of systems, design aspects of Information technology and economic, legal, organisational, behavioural and social aspects of systems. It can be seen from the above definitions that the three disciplines overlap. For instance, Information systems overlap with both computer science and software engineering in database management. Some aspects of application software development overlap with computer science, and systems analysis and organisational behaviour overlap with the business-related disciplines.

Participants will be asked to position themselves in these overlapping areas on the poster as well as filling out an anonymous questionnaire. This survey should allow us to discover where New Zealand institutions position themselves with their computing degrees, where individual academics view their particular professional discipline area and where the common ground is both institutionally and individually. Questions will be asked about which department the three disciplines are situated, what disciplines does each academic teach, and in what faculty the bachelor's degree in computing is taught. Participants will be asked to identify both common and differentiating factors across the three discipline areas, and common and differentiating factors from the other two professionals. Participants will also be asked to identify the main aim in their professional field, core curriculum in their discipline area, and a relative ranking for each area. Results from this survey should inform the academic computing community an alignment from individual academics to departments, faculties, political factions and industry.

Keywords: Core Computing Curriculum, Software Engineering, Computer Science, Information Systems