

Tutorial : Web-based Information Systems Development

Problems, Prospects and the Web Engineering Approach

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SYNOPSIS

Web-based information systems (WebIS) have become central to many applications in diverse areas. As our reliance on WebIS continues to increase and as their complexity and demands placed on them escalates, there is concern about the manner in which they are created and their quality, maintainability and scalability. There have been many failures of WebIS causing major problems and embarrassment. The way we address the problems facing development of WebIS is critical to realising their full potential.

Although the development of WebIS may seem simple and easy, it is more complex and challenging than most of us think. In many ways, it is also different and more complex than traditional IS/software development or Web page design. But the development of most

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WebIS has generally been ad hoc, resulting in poor quality and maintainability.

Web engineering is a holistic and systematic approach to successful development and deployment of Web-based systems. It was first proposed and introduced in 1998 and since then received substantial contributions and made major progress. Interest in Web engineering is growing as Web-based systems and applications assume strategic importance in a variety of applications.

This tutorial will discuss the issues and challenges facing Web-based information systems (development and how we could meet those challenges). It will provide a comprehensive overview on the Web Engineering approach to successful development, operation and maintenance of large Web-based information systems. It would address the issues of scalability, maintainability, usability, configuration management, project management and other non-technical aspects.

PRESENTER'S BIOGRAPHY

San Murugesan is Professor of Information Technology in the School of Multimedia and Information Technology at the Southern Cross University in Australia. Earlier, he was at the University of Western Sydney, where he was also the associate director of AeIMS (Advanced enterprise Information Management Systems) Research Centre.

Professor Murugesan is a co-promoter of Web engineering and has been the founding co-program chair of the workshop series on Web Engineering held in association with the World Wide Web conferences (1998-2001) and International Conference on Software Engineering (1999, 2000 and 2002). He is a co-editor of the book *Web Engineering: Managing Complexity and Diversity of Web Application Development* (Springer Verlag, 2001) and special issue on Web Engineering (IEEE Multimedia, Part 1 and 2, Jan-March and April-June, 2001).