

AVVISO DI SEMINARIO

Supporting co-evolution of Web based Information Systems using Meta-Design Paradigm

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Abstract:

When an information system is introduced to an organisation it changes the original business environment thus changing the original requirements. This can lead to changes to processes that are supported by the information system. Also when users get familiar with the system they ask for more functionality. This gives rise to a cycle of changes known as co-evolution which is very pronounced among Web based Information Systems. One way to facilitate co-evolution is to empower end-users to make changes to the web application to accommodate the required changes while using that web application. This can be achieved through meta-design paradigm.

We have developed a framework to support meta-design paradigm by using a meta-model to model Web based Business Applications. To generate applications using this meta-model we have extended the Component Based EBusiness Application Development and Deployment Shell; CBEADS©. The meta-model we created was based on three abstraction levels: Shell, Applications and Functions. The Shell provides the functionality common to any Web based Business Application, and a set of configurable components and tools to create functions that are specific to an application. By using CBEADS© we can rapidly develop Web-based Business Applications by creating instances of the meta-model based on the Meta Design Paradigm. The key aspect that underpinned this research work was the viewpoint that “software is a medium to capture knowledge rather than a product”. The developer’s knowledge is embedded into the shell and the tools. The End-user’s knowledge is used to populate instances of the meta-model from which applications are generated within CBEADS©.

Presenters Profile

Professor Athula Ginige

Athula Ginige is the Professor of Information Technology at University of Western Sydney. He is also the Director of Advanced enterprise Information Management Systems (AeIMS) research group.

He graduated with B.Sc. first class honours from University of Moratuwa, Sri Lanka. He obtained his Ph.D. from the University of Cambridge, England. He is now a fellow of the Cambridge Commonwealth Society and a member of editorial board of the International Journal of Web Engineering. He was also a Program Co-chair of the 6th International Conference on Web Engineering.

Athula has carried out extensive research in the areas of robotics, computer vision, image coding, multimedia systems, development of large scale Web based information systems, information structures for interactive flexible learning modules, new information retrieval strategies for the Web and, eTransformation strategies and supporting technologies for small to medium size enterprises (SMEs). He has also been involved in design and development of various web based information systems and eBusiness systems that are used by various commercial organisations today.

He has over 150 Journal and Conference publications. He has given many invited talks, seminar presentations and tutorials at various local and international conferences on video coding, multimedia information systems, Web Engineering, Emerging Information Society and eBusiness. In 2001, together with a colleague he guest edited 2 special issues of IEEE Multimedia on Web Engineering. He has also served in many conference organising and program committees. In 2002 and 2003 he organised and chaired the Web Engineering workshop in conjunction with the International Conference on Software Engineering and Knowledge Engineering (SEKE). He was the national president of the Australian Pattern recognition Society (APRS) from 1994 to 1995. He has also served on the editorial board of IEEE Multimedia. At present he is leading a project group looking at ways of eTransforming small to medium size enterprises in Western Sydney region in Australia. As part of this project he has led many research groups that have developed an eTransformation Methodology for small to medium size enterprises, CBEADS; a Component Based eApplication Development Shell and an eTransformation Road map that can be used to assist in developing the eTransformation strategy.
