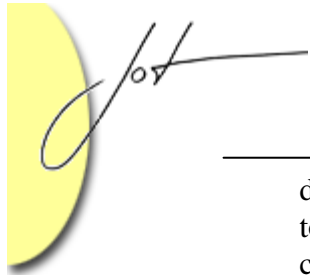


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An Increase In Value	7
<i>By John McGregor</i>	
<p>Value may accrue by accident but not often. Professionals must intentionally seek to create value. Its easy for this pursuit to get lost in the day-to-day effort to meet deadlines and resolve issues. It is not an attribute that jumps out at you during development. It isn't usually visible of its own accord until the product is completed and the absence of value becomes all too apparent and all too difficult to to fix.</p>	
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<i>By Douglas Lyon</i>	
<p>The Mac OS X clipboard is infamous for changing the format of bit-mapped images that are pasted to it. These images are typically encoded using a QuickTime Tiff compressor that renders them unreadable on other platforms (e.g. Windows and Linux). This means that Mac users who create screen-shot based Word or PowerPoint documents are not able to view the images in those documents on non-Mac platforms.</p>	
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<i>By Rex Cason II, Erik Larson, Jonathan Robertson, Jonathan Frisch, George Trice III and Dr. Lakshmi Prayaga</i>	
<p>3D game development is an exciting activity for many students. But getting a handle on 3D game development for novices may be a</p>	



daunting task. We take this opportunity to present a quick introduction to 3D game development through a few tutorials. For the next few columns a set of tutorials for a 3D first person shooter game developed by graduate and undergraduate students under the guidance of a faculty member from the University of West Florida will be presented.

Educator's Corner

- Arithmetic Function Interpreter in C# 3.0 Using Lambda Expression Trees** 41
By Richard Wiener

Lambda expressions and expression trees are among several important new features in the recently released C# 3.0/.NET 3.5 framework. An arithmetic function interpreter is implemented in C# 3.0 using lambda expression trees.

Cyber Databases

- On Web Search: Some Activities and Challenges** 49
By Won Kim, Ok-ran Jeong, Hyungsuk Ji, and Sangwon Lee

Internet search engines have become an indispensable part of everyday living and business today. Although the capabilities of Internet search engines are incrementally improving steadily, it may be time for us to explore a few new directions that can take the search engines to the next level.

REFEREED ARTICLES

- Detecting Performance Antipatterns in Component Based Enterprise Systems** 55
By Trevor Parsons and John Murphy

An approach for automatic detection of performance antipatterns is presented. The approach is based on a number of advanced monitoring and analysis techniques. The advanced analysis is used to identify relationships and patterns in the monitored data. This information is subsequently used to reconstruct a design model of the underlying system, which is loaded into a rule engine in order to identify predefined antipatterns.



Concepts and Concept-Oriented Programming 91
By Alexandr Savinov

A new programming language construct called Concept is defined as a pair of two classes: one reference class and one object class. Instances of the reference class are passed-by-value and are intended to indirectly represent objects. Instances of the object class are passed-by-reference. Each concept has a parent concept specified by means of the concept inclusion relation.

A change propagating model transformation Language 107
By Laurence Tratt

Model transformations are a key component in Model Driven Development, but most approaches only allow ‘one shot’ transformations to be expressed. Change propagating model transformations are those which can make suitable updates to models after an initial transformation

Context-oriented Programming 125
By Robert Hirschfeld, Pascal Costanza, and Oscar Nierstrasz

Contextual information is playing an increasingly important role for applications and services ranging from those that are location-based to those that are situationdependent or even deeply personalized. While context-awareness is already an integral part of regular business applications, it is becoming even more critical for mobile and ubiquitous computing, where devices must adapt their behavior to the services available in their current environment.

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