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Learning is a Community Experience	7
Adele Goldberg	

This column presents a story about how we might experience learning in the near future, and the role of computers in that experience—not as computer-assisted instruction, but as communications-assisted learning.

Cyber Databases

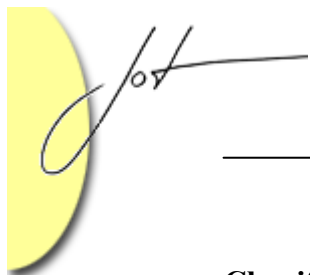
The Chamois Reconfigurable Data-Mining Architecture	21
Won Kim*, Ki-Joon Chae, Dong-Sub Cho, Byoungju Choi, Anmo Jeong, Myung Kim, KiHo Lee, Meejeong Lee, Minsoo Lee, Sang-Ho Lee, Seung-Soo Park, Hwan-Seung Yong, Ho-Sook Kim, Jung-Won Lee, Wol-Young Lee	

In this column, the Chamois component-based framework is proposed as a research vehicle for studying feasibility of building an “end-to-end KDD tool suite” that makes it possible to easily substitute software tools in each of the three stages of a KDD process as appropriate for different KDD requirements.

Objects and Agents

Agents and Complex Systems	35
James Odell	

This column explores agents and complex systems. A trend in many systems now is to design objects that react to events in their environment, as well as be proactive. In UML 2.0, these are known as active objects; in the agent community, they are known as agents. Whether they are called active objects or agents, this new direction is going to radically change how we design systems.



Classification Theory

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The Theory of Classification, Part 2: The Scratch-Built Typechecker

47

Anthony J.H. Simons

What is the difference between a type and a class? What do we mean by plug-in compatibility? What is the difference between sub-typing and sub-classing? Can we explain inheritance, method combination and template instantiation? In this second column, Simons presents a typechecker that can determine the exact syntactic type of expressions involving objects encoded as simple records.

Business Objects

Objects are for Wimps: Real Developers need S.O.S.

55

Mahesh H. Dodani

The shift from business-to-consumer (B2C) applications to business-to-business (B2B) integration applications has posed new requirements on software development. To address these requirements many new development paradigms have emerged. This article discusses these new requirements, and provides real developers guidance on making Specifications, Objects and Services part of their skill repertoire.

Educator's Corner

An OO Application that introduces Heuristic Algorithm Design

63

Richard Wiener

From the educator's corner, an efficient heuristic algorithm is presented for solving the Master Mind game. A Java implementation, developed using OS X on a Macintosh, is presented. A simulation is presented that demonstrates the efficiency of the heuristic algorithm.

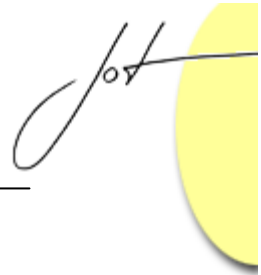
On Languages

Easing the Transition from C++ to Java (Part 1)

79

Timothy R. Culp

This column discusses the challenges of easing the transition from C++ to Java. A simple transport layer that is based on the Model-View-Controller (MVC) architecture is presented.



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Eiffel	
The Start of an Eiffel Standard Bertrand Meyer	95

REFEREED ARTICLES 101

Debugging UML Designs with Model Checking María del Mar Gallardo, Pedro Merino, Ernesto Pimentel	101
<p>This paper presents rules to integrate model checking into UML-based designs, showing its usefulness from a practical point of view, and giving some guidelines to exploit the benefits of the integration.</p>	

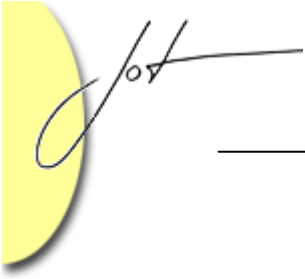
Java Distributed Separate Objects Miguel Katrib, Iskander Sierra, Mario del Valle and Thaizel Fuentes	119
<p>This paper presents an object-oriented approach for concurrent and distributed programming using the notion of separate objects.</p>	

Representing Design Patterns and Frameworks in UML - Towards a Comprehensive Approach Yasunobu Sanada and Rolf Adams	143
<p>A comprehensive approach for representing design patterns is presented in this paper.</p>	

Thread Specific Singletons: Handling Singleton Pattern Errors in Multi-Threaded Applications and their Variations Yagna Pant and Kazuhiro Ondo	155
<p>This paper discusses the implementation of the Singleton Pattern from an error recovery perspective.</p>	

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