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CONTENTS

ABOUT THIS ISSUE

In our January Outlook issue, we go back in time to look forward. Larry Smarr chronicles the growing threat of global climatic disruption and the key role the ICT community can play in this looming crisis. David Lorge Parnas invokes Robert Floyd's foundational 1967 article to show how we might end a perceived impasse in formal methods. Simon Dobson and colleagues look back at IBM's 2001 call to arms and assess progress toward autonomic systems engineering over the past decade. Finally, Marco Conti and Mohan Kumar explore a computing paradigm that exploits opportunistic communication between pairs of devices and the applications executing on them.

COVER FEATURES

22 Project GreenLight: Optimizing Cyber-infrastructure for a Carbon-Constrained World

Larry Smarr

Even with a variety of aggressive energy efficiency measures, the ICT sector's carbon emissions will nearly triple from 2002 to 2020. We must develop ways to make our ICT systems more energy efficient so that we can use more of them in smart infrastructure that has great potential for reducing global greenhouse gas emissions.

28 Really Rethinking 'Formal Methods'

David Lorge Parnas

We must question the assumptions underlying the well-known current formal software development methods to see why they have not been widely adopted and what should be changed.

35 Fulfilling the Vision of Autonomic Computing

Simon Dobson, Roy Sterritt, Paddy Nixon, and Mike Hinchey

Efforts since 2001 to design self-managing systems have yielded many impressive achievements, yet the original vision of autonomic computing remains unfulfilled. Researchers must develop a comprehensive systems engineering approach to create effective solutions for next-generation enterprise and sensor systems.



42 Opportunities in Opportunistic Computing

Marco Conti and Mohan Kumar

When two devices come into contact, albeit opportunistically, it provides a great opportunity to match services to resources, exchange information, cyberforage, execute tasks remotely, and forward messages.

RESEARCH FEATURES

51 A Discrete Stock Price Prediction Engine Based on Financial News

Robert P. Schumaker and Hsinchun Chen

The Arizona Financial Text system leverages statistical learning to make trading decisions based on numeric price predictions. Research demonstrates that AZFinText outperforms the market average and performs well against existing quant funds.

58 Online Security Threats and Computer User Intentions

Thomas F. Stafford and Robin Poston

Although computer users are aware of spyware, they typically do not take protective steps against it. A recent study looks into the reasons for this apathy and suggests boosting users' confidence in installing and operating antispyware solutions as an effective remedy.

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January 2010, Volume 43, Number 1

9 The Known World

Designing the Future
David Alan Grier

12 32 & 16 Years Ago

Computer, January 1978 and 1994
Neville Holmes

NEWS

14 Technology News

Is 3D Finally Ready for the Web?
Sixto Ortiz Jr.

17 News Briefs

Linda Dailey Paulson

MEMBERSHIP NEWS

6 President's Message

65 IEEE Computer Society Connection

70 Call and Calendar

COLUMNS

77 Web Technologies

Web 3.0: The Dawn of Semantic Search
James Hendler

81 Embedded Computing

Mobile Supercomputers for the Next-
 Generation Cell Phone
**Mark Woh, Scott Mahlke, Trevor Mudge,
 and Chaitali Chakrabarti**



86 Industry Perspective

The Economic Case for Open Source Foundations
Dirk Riehle

91 Green IT

Proxying: The Next Step in Reducing
 IT Energy Use
Bruce Nordman and Ken Christensen

96 The Profession

The Varieties of Reality
Neville Holmes

DEPARTMENTS

4 Elsewhere in the CS

21 Computer Society Information

72 Career Opportunities

76 Advertiser/Product Index



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 computer
 society



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