From the Editor in Chief

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Passing the Torch

M. Satyanarayanan

This issue marks the end of my second two-year term as editor in chief. I am delighted to introduce my successor, Roy Want of Intel Research, who will begin his term on 1 January 2006. I will continue to serve as active editor in chief until that time and will work closely with Roy to ensure a smooth and efficient transition. My involvement with this publication will continue even after I step down, as I will remain on the editorial board.

IN GOOD HANDS

Roy received his PhD from Cambridge University in 1988, under the supervision of Roger Needham. His dissertation was titled, "Managing Voice in a Distributed System." From 1988–1991, he worked at the Olivetti Research Lab in the UK, directed by Andy Hopper. At Olivetti, Roy was a co-inventor of the Active Badge Location System, widely recognized today as a pioneering effort in location tracking. He then joined the Palo Alto Research Center, where he worked closely with Mark Weiser in helping to translate Mark's vision of ubiquitous computing into reality. At PARC, Roy was a key member of the team that created Parctab, the first implementation of a ubiquitous computing system.

In 2001, Roy was one of the first researchers to join Intel Research, a new organization created by David Tennenhouse. At Intel, Roy has led the Personal Server project to explore the concept of a highly portable information appliance that transforms nearby displays and input devices into a transient personal-computing environment. Roy has published extensively over his research career and has over 50 patents to his credit.

It is hard to imagine a person more qualified than Roy to be the next editor in chief of *IEEE Pervasive Computing*. In 2001, he was part of the founding editorial board that created this publication and defined its mission and scope. Since then, he has served as a founding associate editor in chief and has worked hard in helping the publication achieve visibility and editorial excellence. Roy brings drive and passion to his work and demands very high standards of himself and others. At the same time, he is a wonderful colleague and a great team player who is always willing to take on additional responsibilities for the collective good and deliver on them. On a personal note, it has been a pleasure getting to know him as a friend and colleague.

It is hard to imagine a person more qualified than Roy Want to be the next editor in chief of *IEEE Pervasive Computing*.

LOOKING BACK, LOOKING FORWARD

In August 2001, 10 years after the publication of Mark Weiser's seminal paper introducing the concept of ubiquitous computing,[1] I summarized the field's progress and reflected on the challenges ahead in a paper entitled "Pervasive Computing: Vision and Challenges."[2] Looking back, it is gratifying to see how much progress has occurred in just four short years.

Many forces have converged to make this progress possible, one of which was substantial industry investment in product development relevant to mobile and pervasive computing. PDAs, wristwatch computers, smart cell phones, and converged devices of various kinds are commonplace today. Wi-Fi communication is widespread, with WiMax emergent.

Another force was significant government and industry investment in pervasive computing research. Much government-funded research has occurred at universities in the US (for example, at the University of Illinois, Georgia Tech, and Carnegie Mellon) and Europe (for example, at the Universities of Lancaster, Nottingham, Strathclyde, Grenoble, Darmstadt, and Göteborg). Industry research has been most visible at IBM, Hewlett-Packard, and Intel, with an entire Intel lab in Seattle focusing on ubiquitous computing.

A third force was the emergence of many conference, workshops, and pub-

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Published by the IEEE CS and IEEE ComSoc ■ 1536-1268/05/$20.00 © 2005 IEEE

lications devoted to pervasive computing. These have raised the field's profile and stimulated new research on relevant topics. *IEEE Pervasive Computing* has, of course, been one of these publications (see the sidebar for other related conferences, workshops, and publications).

This convergence has been decisive in moving pervasive computing forward, but can this momentum be sustained well into the future? Clearly, industry development of new products in this space must continue, which seems likely. However, government funding in the US is at risk. As Thad Starner and others noted in a recent issue, pervasive computing research in the US faces difficult times.[3] David Patterson recently sounded the same concern from a broader computer science perspective.[4] Fortunately, the situation is better in Europe, where sustained government support is available.

Another requirement for sustained progress is the development of pervasive computing metrics and benchmarks (see my previous EIC message, "Metrics and Benchmarks in Pervasive Computing," July–Sept. 2005). Only then can a proper scientific area emerge.

Although we cannot predict pervasive computing's precise trajectory, there is little doubt that it will continue to engage our attention for many years to come. To quote from the 2001 paper I mentioned earlier: "The early decades of the 21st century will be a period of excitement and ferment, as new hardware technologies converge with research progress [on] many fundamental problems. … Like the Frontier of the American West in the early 19th century, pervasive computing offers new beginnings for the adventurous and the restless—a rich open space where the rules have yet to be written and the borders yet to be drawn."[2]

IEEE Pervasive Computing, with a new editor in chief, will be there to report on these exciting events!

CONFERENCES, WORKSHOPS, AND PUBLICATIONS

Conferences and workshops related to pervasive computing include

- ACM International Conference on Mobile Computing and Networking (MobiCom): www.sigmobile.org/mobicom/2005
- IEEE International Conference on Pervasive Computing and Communication (PerCom): www.percom.org
- IEEE International Symposium on Wearable Computers: www.cc.gatech.edu/ccg/iswc05
- IEEE International Workshop on Pervasive Computing and Communication Security (PerSec): http://www-lce.eng.cam.ac.uk/~fms27/persec-2006
- IEEE Workshop on Mobile Computing Systems and Applications (WMCSA): http://research.ihost.com/wmcsa2006
- International Conference on Mobile Systems, Applications, and Services (MobiSys): www.sigmobile.org/mobisys/2006
- International Conference on Mobile and Ubiquitous Systems: Networking and Services (Mobiquitous): www.mobiquitous.org
- International Conference on Pervasive Computing: www.pervasive2006.org
- International Conference on Ubiquitous Computing (UbiComp): www.ubicomp.org/ubicomp2006
- International Workshop on Pervasive Information Management (PIM): www.i-u.de/schools/hopfner/edbtpim
- International Workshop on Sensor Networks and Systems for Pervasive Computing (PerSeNS): http://www2.ing.unipi.it/persens2006
- Workshop on Context Modeling and Reasoning (CoMoRea): http://nexus.informatik.uni-stuttgart.de/COMOREA/2006
- Workshop on Middleware Support for Pervasive Computing (PerWare): http://perware.cs.uiuc.edu

Related publications include *IEEE Transactions on Mobile Computing*, Springer's *Journal of Personal and Ubiquitous Computing*, and Elsevier's *Pervasive and Mobile Computing Journal*.

In addition, some overlap exists between *IEEE Pervasive Computing* and well-established conferences and transactions in computer systems, networking, and human-computer interaction.

NEW ASSOCIATE EDITOR IN CHIEF

Gregory Abowd will be stepping down from his role as AEIC effective 1 November 2005. As founding AEIC, Gregory has played a vital role in shaping *IEEE Pervasive Computing*. I thank him for his many contributions and look forward to his continued involvement as a member of the editorial board.

James Landay will be taking over for Gregory. James is an associate professor in the Computer Science and Engineering Department at the University of Washington and is the laboratory director of Intel Research Seattle. He is also one of the guest editors for this special issue on rapid prototyping. I welcome James to the AEIC role!

REFERENCES

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