Invited Talk:
Virtual Coaches in Health Care

Daniel P. Siewiorek
Buhl University Professor of Electrical and Computer Engineering and Computer Science
Quality of life Technology Center
Human-Computer Interaction Institute
Carnegie Mellon University
Newell-Simon Hall 4515, 5000 Forbes Avenue
Pittsburgh, PA 15213-3890 USA
dps@cs.cmu.edu

ABSTRACT

With health care costs raising astronomically and the number of aging increasing, there are not enough economic or human resources in the way of care givers to meet society's needs. A confluence of technologies including miniature electronics, digital communications, human-computer interaction, robotics, and machine learning makes possible the creation of intelligent assistants that monitor and communicate with users, understand their needs and goals, and compensate for diminished capabilities as we age or suffer a disability. This talk will highlight some of the results from the Quality of Life Technology Center (a NSF Engineering Research Center) in creating virtual coaches that monitor user activities providing reminders and advice to reach personal and caregiver goals.

BIO

Dan Siewiorek is the Buhl University Professor of Electrical and Computer Engineering and Computer Science at Carnegie Mellon University. He has been involved with the design of nine multiprocessor systems and a key contributor to the dependability design of over two dozen commercial computing systems. Dr. Siewiorek leads an interdisciplinary team that has designed and constructed over 20 generations of mobile computing systems. He has written nine textbooks in addition to over 475 papers. He is acting director of the Quality of Life Technology NSF Engineering Research Center and has been the recipient of the AAEE Terman Award, the IEEE/ACM Eckert-Mauchly Award, and the ACM SIGMOBILE Outstanding Contributions Award. A Fellow of IEEE, ACM, and AAAS, he is a member of the National Academy of Engineering.

He received the B.S. in Electrical Engineering from the University of Michigan, and the M.S. and Ph.D. in Electrical Engineering from Stanford University.

978-1-4673-2266-9/12/$31.00 ©2012 IEEE