



Rodney B. Wallace

IBM

The Challenges of Cross-Training in IT Service Systems: A Global Simulation Study

rodney.wallace@us.ibm.com

The IT Service industry today operates in a very competitive landscape. Service providers are under continuous pressure to reduce costs while improving the quality of their services. IBM has successfully developed and deployed simulation models to optimize staffing levels across its global IT service support teams. IBM maintains pools of collocated resources to support specific customers and their different service requests. Within each pool, it is usually not possible or cost effective to train every resource to be able to support every customer or handle every service request type. We demonstrate that a minimal flexibility can provide great benefits in cross-training. We show that by allowing each technician to have only two skills, in appropriate combinations, the performance is almost as good as when each technician has all skills. We developed an algorithm for selecting these two skills. Simulation experiments show that this overall procedure can be remarkably effective: The required staff with limited-cross-training can be nearly the same as if all the technicians had all the skills.

Biography

Rodney B. Wallace was born and raised in Savannah, Georgia. He obtained a B.S. and M.S. in mathematics from the University of Georgia and Southern University. Rodney completed his Doctor of Science (D.Sc.) in Operations Research at The George Washington University. Currently as a senior program manager, he leads a diverse group of IBMers and industry consultants in the design, development and deployment of a large global simulation project. He has held positions as a member of the technical staff at AT&T Bell Labs, as a senior consultant at NCR, and as an adjunct faculty member at Southern and Howard Universities. His research interests include performance analysis and capacity engineering, applied probability modeling, simulation and queueing theory.