

COMPUTER SCIENCE
SEMINAR

Reality-Based Interaction and Next Generation User Interfaces

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Abstract: I will describe the notion of Reality-Based Interaction (RBI) as a unifying concept that ties together a large subset of the emerging generation of new, non-WIMP user interfaces. It attempts to connect current paths of research in HCI and to provide a framework that can be used to understand, compare, and relate these new developments. Viewing them through the lens of RBI can provide insights for designers and allow us to find gaps or opportunities for future development. I will then discuss work in my research group on a variety of next generation interfaces, such as brain-computer interfaces, tangible interfaces, and eye movement-based interaction techniques, along with some of the software issues they raise and our work on developing new software models and abstractions for non-WIMP interfaces. Robert Jacob is a Professor of Computer Science at Tufts University, where his research interests are new interaction media and techniques and user interface software. He was also a visiting professor at the Universite Paris-Sud and at the MIT Media Laboratory, in the Tangible Media Group. Before coming to Tufts, he was in the Human-Computer Interaction Lab at the Naval Research Laboratory. He received his Ph.D. from Johns Hopkins University, and he is a member of the editorial board of Human-Computer Interaction and the ACM Transactions on Computer-Human Interaction. He was Papers Co-Chair of the CHI 2001 conference, Co-Chair of UIST 2007, and Vice-President of ACM SIGCHI. He was elected to the ACM CHI Academy in 2007, an honorary group of people who have made extensive contributions to the study of HCI and have shaped the field.

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