"Knowledge-Based Evaluation of Interaction"

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The great variety of new (Post-WIMP) interaction styles make them difficult to evaluate and compare. More difficult is the evaluation of User eXperience (UX) in these environments. We present an evaluation method for them, Knowledge-Based Usability Evaluation (KBUE), that is based on similar ideas to those that drive cognitive architectures, such as ACT-R and Soar. We propose KBUE as a way to formally specify the knowledge in the environment and in the user's head, and discuss how this specification can be used to examine whether the aforementioned set of knowledge covers the required knowledge for the performance of a task in a user interface. We believe that by using this specification, it becomes easier to evaluate and compare Reality-Based interfaces.