Evaluating software architectures for usability[1] (abstract)

By Len Bass and Bonnie E. John

Carnegie Mellon University
Pittsburgh, Pa 15213
ljb@sei.cmu.edu, bej@cs.cmu.edu

For the last twenty years, techniques to design software architectures for interactive systems that support usability have been a concern of both researchers and practitioners. Recently, in the context of performing architecture evaluations, we were reminded that the techniques developed thus far are of limited utility when evaluating the usability of a system based on its architecture. Techniques for supporting usability have historically focussed on selecting the correct overall system structure. Proponents of these techniques argue that their structure retains the modifiability needed during an iterative design process while still providing the required support for performance and other functionality.

We are taking a different approach. We are preparing a collection of connections between specific aspects of usability (such as the ability for a user to "undo" or "cancel") and their implications for software architecture. Our vision sees designers using this collection both to generate solutions to those aspects of usability they have chosen to include and to evaluate their system designs for specific aspects of usability. Our contribution is a specific coupling between aspects of usability and their corresponding architecture. We do not attempt to designate one software architecture to satisfy all aspects of usability. Details can be found in [1].

References

1. Bass, L., John, B. E. and Kates, J. Achieving Usability Through Software Architectural Means, CMU/SEI-2001-TR-005, April 2001, Carnegie Mellon University, Pittsburgh, Pa.

---

[1] This work supported by the U.S. Department of Defense