Whisker: A client–server high-performance multimedia research control system

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Abstract
We describe an original client–server approach to behavioral research control and the Whisker system, a specific implementation of this design. The server process controls several types of hardware, including digital input/output devices, multiple graphical monitors and touchscreens, keyboards, mice, and sound cards. It provides a way to access this hardware for client programs, communicating with them via a simple text-based network protocol based on the standard Internet protocol. Clients to implement behavioral tasks may be written in any network-capable programming language. Applications to date have been in experimental psychology and behavioral and cognitive neuroscience, using rodents, humans, nonhuman primates, dogs, pigs, and birds. This system is flexible and reliable, although there are potential disadvantages in terms of complexity. Its design, features, and performance are described.

Full Article
http://www.whiskercontrol.com/Cardinal_Aitken_2010_BRM_Whisker.pdf