

The Colorado State University Computer Science Department presents:

## Firewall Regression Testing of GUI Systems

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### **Abstract**

The problem of regression testing of GUI systems has been identified as very difficult due to the mapping of inputs and outputs as the GUI system changes. The regression testing in this research has been adapted from the author's technique of *complete interaction sequences (CIS) for testing of GUIs, together with the notion of testing firewalls for regression testing. This approach will be described, and evaluated for the effective detection of both defects and surprises empirically using two versions of Real Player. It will be shown that defects and surprises may manifest themselves differently as failures in testing different software versions, as these will in general constitute different software environments. Also, an astonishing result is noted in observability, where 85 % of defects and surprises were missed before memory tools were utilized in the regression testing.*

### **Biography**

*Lee White is currently a Professor Emeritus of Computer Science in the EECS Department at Case Western Reserve University, which he joined in 1988. He received his BSEE in 1962 from the University of Cincinnati, and the MSc and PhD in Electrical and Computer Engineering from the University of Michigan in 1963 and 1967. He has served as chair of computing departments at the Ohio State University, at the University of Alberta, and at CWRU. He has consulted for a number of industrial firms, including IBM, General Electric Research Laboratory, Parker-Hannifin, Monsanto Research Laboratory, North American Rockwell and United States Steel. His research interests are primarily in software testing, most recently in GUI testing and regression testing.*