

Action at a Distance: A Case Study in Composability

Sean W. O'Malley

Department of Computer Science
University of Arizona
Tucson, AZ 85721
Tel: (602) 621-6613
Email: sean@cs.arizona.edu

Abstract

We believe that the key to software reuse is the ability to arbitrarily compose a library of single purpose modules into large systems. Over the last five years we have created such a system (the x-kernel) which supports the arbitrary composition of protocols into large protocol graphs. We have designed a number of communications systems which extensively reused protocol modules and have constructed numerous small protocol modules which were designed from scratch to be reusable. This paper attempts to give some insight as to how such protocols are produced and the problems that can interfere with composition.

Keywords: module composition, reuse pragmatics, reuse experience

Workshop Goals: The integrating of reuse theory and practice.

Working Groups: domain analysis, tools and environments, reuse and object oriented methods