

Seminar

4.00 pm, Tuesday 3 November in P523
(Tea at 3.30 pm in the Computer Science Staff Common Room)

Software Development using Definitive Scripts: Experiments and Observations

Meurig Beynon and Simon Yung
Department of Computer Science

Abstract

A definitive script is a set of definitions that describes the dependencies between the values of procedural variables. In typical use, a script represents relationships between observations of a physical object whose state can be transformed by experiment.

This talk will describe how the study of definitive scripts has led us to look at software development in a new light. The main themes of the talk, to be illustrated by examples of software developed using our approach, are: foundations for programming in observation and experiment; programming as modelling; what is a program? design vs simulation; from agents and privileges to protocols; synchronous propagation of state-change; new abstractions for state.

The aim of the talk is to assess the prospects for future development of our concepts and techniques as a new basis for software construction.



Department of Computer Science
University of Warwick

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This talk will describe how the study of definitive scripts has led us to look at software development in a new light. The main themes of the talk, to be illustrated by examples of software developed using our approach, are:

- * foundations for programming in observation and experiment
- * programming as modelling
- * what is a program?
- * design vs simulation
- * from agents and privileges to protocols
- * synchronous propagation of state-change
- * new abstractions for state.

The software experiments on which our observations are based include:

- Expts in design and modelling of objects
- Expts in concurrent systems simulation
- Expts in reactive systems specification
- Expts in translating definitive models into procedural programs
- Expts in abstract development of functional programs

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