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ABSTRACT

The need for communication among a multiplicity of cooperating roles in user interface development translates into the need for a common set of interface design representation techniques. The important difference between design of the interaction part of the interface and design of the interface software calls for representation techniques with a behavioral view—a view that focuses on user interaction rather than on the software. The User Action Notation (UAN) is a user- and task-oriented notation that describes physical (and other) behavior of the user and interface as they perform a task together. The primary abstraction of the UAN is a *user task*.

The work reported here addresses the need to identify temporal relationships within user task descriptions and to express explicitly and precisely how designers view temporal relationships among those tasks. Drawing on simple temporal concepts such as events in time and preceding and overlapping of time intervals, we identify basic temporal relationships among tasks: sequence, waiting, repeated disjunction, order independence, interruptibility, one-way interleavability, mutual interleavability, and concurrency. The UAN temporal relations, through the notion of modal logic, offer an explicit

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