



E. Douglas Jensen's
Real-Time for the Real World

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My personal manifesto about the widely misunderstood field of real-time computing...

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Time Constraints

Introduction

The logic of an application may include actions whose completions are time-constrained. For this discussion, we choose threads as the reference execution entities that perform actions. Any given thread may perform any combination of time-constrained ("real-time") and non-time-constrained ("non-real-time") actions, as explained on the [Time Constraint Scopes and Priorities](#) page; real-time research and practice both usually presume the special case that an execution entity (e.g., thread) is either real-time or non-real-time in its entirety.

First we consider deadlines -- the best-known case of time constraints, and yet one that is not well understood in the community of real-time computing practitioners (at least). Then we show how a deadline is a special case of a more general and expressive model of time constraints. Following that, we look at time constraints as a programming construct - their lexical scoping, and their semantics in comparison to priorities.

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