Software Design, Modelling and Analysis in UML

Errata for the Course Slides

February 15, 2017

Contents

Lecture 10: Modelling Behaviour

Slide 22, 'From UML to Core State Machines: By Example'

The initial state component of a core state machine is not a set, so the 'maps to' notes at the bottom of the slide should read:

$$M(\mathcal{SM}) = (\{s_1, s_2\}, s_1, \{(s_1, ev, gd, act, s_2)\})$$

Lecture 13: Core State Machines III

Slide 5, 'Discarding an Event'

Checking whether any transition is enabled should also use $\tilde{\sigma}$ as defined on Slide 6 (which sets up the corresponding, transient 'param' link). A transition may in particular *not* be enabled because the parameters of an event do not satisfy the transition's guard.

Lecture 14: Hierarchical State Machines I

Slide 11, 'Create Transformer Example'

The annotations of the transition arrows should read

$$\xrightarrow[u]{(\emptyset,\{(*,2_C)\})}$$

etc. (First component on top is *cons* ('consumed set'), second component is *Snd* ('sent set', which includes creation and destruction), and below is the object which does this step.)

Lecture 15: Hierarchical State Machines II

Slide 19, 'Scope'

The scope of transition t is the union of the transitive and reflexive children of the states in the least common region of $source(t) \cup target(t)$ (not just the least common region).

Otherwise, some transitions in Exercise Sheet 6.A would unintentionally become consistent.

Lecture 16: Hierarchical State Machines III

Slide 12, 'Initial Pseudostate'

The description of the principle is maybe a bit too much 'natural-languagy'. A more precise description may be:

- when taking a transition (with multiple target states),
- consider the least common ancestor of the target states and
- for each region of the lca for which the transition *does not* have a basic state target,
- use the region's initial state as indicated by a transition from an initial pseudo-state.
- Continue to choose initial states of all child states of the considered region.

Lecture 18: Live Sequence Charts II (NEW)

Slide 43, 'Words over Signature'

The language of a UML model is a *set of words* over the signature named on the slide (not just one word).

Tutorial 5: State Machines

Slide 5, ‘Exercise 4.(i)’

Somebody proposed the step from Line 0 to Line 1 as an example for a run-to-completion (RTC) step. Sticking to our definition, this is wrong: an RTC-step needs to begin with a ‘dispatch’ (in this case an event is only discarded).