My Article

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Today

Blablabla said Nobody [2]. Maar kees zei [1]

Definition 1 (Timed Automata)**.** *An extended timed automaton is a 7-tuple* $A = < L, C, Act, s_0, \rightarrow, I_c >$ *where*

- L *is a finite set of locations, typically denoted by* l
- C *is ia finite set of clocks, typically denoted by* c
- Act *is a finite set of actions*
- $s_0 \in L$ *is the initial location*
- $\rightarrow \subseteq L \times G(C) \times Act \times 2^C \times L$ *is the (non-deterministic) transition relation. We noramlly write* $l \xrightarrow{g,a,r} l'$ *for a transition., where* l *is the source location,* g *is the guard over the clocks,* a *is the action, and* r *is the set of clocks reset.*
- $I_C : L \rightarrow G(C)$ *is a function mapping locations to downwards closed clock invariants.*

Definition 2 (Network of timed automata)**.** *Let* $Act = \{ch!, ch?|ch \in Chan\} \cup \{\tau\}$ *be a finite set of actions, and let* C *be a finite set of clocks. Then the parallel composition of extended timed automata* $A_i = (L_i, C, Act, S_0^i, \rightarrow_i, I_C^i)$ *for all* $1 \leq i \leq n$*, where* $n \in \mathbb{N}$*, is a network of timed automata, denoted* $A = A_1||A_2||..||A_n$*.*

References

[1] S. C. C. Blom, J. C. van de Pol, and M. Weber. Ltsmin: Distributed and symbolic reachability. In T. Touili, B. Cook, and P. Jackson, editors, *Computer Aided Verification, Edinburgh*, volume 6174 of *Lecture Notes in Computer Science*, pages 354–359, Berlin, July 2010. Springer Verlag.

[2] A. E. Dalsgaard, A. W. Laarman, K. G. Larsen, M. C. Olesen, and J. C. van de Pol. Multi-core reachability for timed automata. In M. Jurdzinski and D. Nickovic, editors, *10th International Conference on Formal Modeling and Analysis of Timed Systems, FORMATS 2012, London, UK*, volume 7595 of *Lecture Notes in Computer Science*, pages 91–106, London, September 2012. Springer Verlag.