Specification and Proof in Real Time CSP - Jim Davies - 9780521450553 - 180 pages - Cambridge University Press, 1993 - 1993

In Part III, time is introduced into the CSP language. Chapter 9 presents new language constructs to describe timeouts, delays, and timed interrupts, and provides a timed operational semantics for the enhanced language which describes how processes are to be executed with respect to the explicit passage of time. Chapter 10 considers in greater depth the nature and character of the timed labelled transition systems used to provide CSP with a timed operational semantics. Â It also provides a compositional proof system for verification of time-sensitive systems with respect to such specifications. Â Real time concurrency: The third and fourth parts of the book comprise a one-semester course on real time CSP, or the basis for a course on design of real-time systems. @inproceedings{Davies1993SpecificationAP, title={Specification and Proof in Real-Time CSP: Broadcast communication}, author={J. Davies}, year={1993} }. J. Davies. Published 1993. Computer Science. View via Publisher. Save to Library. Create Alert. Â How to Design Deadlock-free Networks Using Csp and Veriication Tools { a Tutorial Introduction. J. Martin, S. Jassim. 1997. 7. Save. Alert. Research Feed. Timed CSP[permanent dead link], which incorporates timing information for reasoning about real-time systems. Receptive Process Theory, a specialization of CSP that assumes an asynchronous (i.e. nonblocking) send operation. CSPP. HCSP. TCOZ, an integration of Timed CSP and Object Z. Â CSP message-passing fundamentally involves a rendezvous between the processes involved in sending and receiving the message, i.e. the sender cannot transmit a message until the receiver is ready to accept it. In contrast, message-passing in actor systems is fundamentally asynchronous, i.e. message transmission and reception do not have to happen at the same time, and senders may transmit messages before receivers are ready to accept them. The language of timed CSP and the denotational timed failures model are reviewed, and the underlying... Â Part of the Workshops in Computing book series (WORKSHOPS COMP.) Abstract. This paper provides an introduction to the use of timed CSP in reasoning about real-time systems. The language of timed CSP and the denotational timed failures model are reviewed, and the underlying theory is discussed. The algebraic style of specification is discussed, followed by the behavioural requirement specification approach. Â J.W. Davies, Specification and proof in real-time CSP, Cambridge University Press (1993).Google Scholar. [10]. M. Hennessy and A.J.R.G. Milner, Algebraic laws for nondeterminism and concurrency, Journal of ACM (1985).Google Scholar. Start by marking â€œSpecification and Proof in Real Time CSPâ€ as Want to Read: Want to Read savingâ€¦ Want to Read. Â This thesis uses the theory of Communicating Sequential Processes to show how a real-time system (a system that maintains a continuous interaction with its environment) may be specified. Included is a case study in which a local area network protocol is described at two levels of abstraction, and a general method for structuring CSP descriptions of layered protocols is given. The research contained here represents the very latest work on the specification and verification of real-time systems. ...more. Get A Copy. Amazon.