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Ron Koymans

Specifying Message Passing and Time-Critical Systems with Temporal Logic

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Πάντα χωρεῖ καὶ οὐδὲν μένει (Herakleitos, ±500 B.C.)

Preface

This monograph is an updated and extended version of my Ph.D. thesis [Koy 89]. It is concerned with the application of temporal logic to the areas of message passing and time-critical systems. Apart from the practical use of temporal logic for these two application domains this monograph also incorporates pure fundamental studies on temporal logic. This duality may stem from my education: after studying (mathematical) logic I went on to finish my study in computer science. This is reflected in my main research interest: putting (mathematical) theory into (computer science) practice. Some readers may not be interested in the combination of theory and practice. To those interested mainly in theoretical results I can recommend reading Chapters 3 and 4 and sections 5.1, 5.2, 5.4, 6.1, 6.2 and 6.4. Readers interested more in practical issues could read Chapters 2, 5 and 6, and the following preliminaries from Chapters 3 and 4: section 3.1, section 3.2 till Definition 3.2.24, the definitions of **until** and **since** in section 3.3, section 3.4, section 4.1, section 4.2 till after Proposition 4.2.10, and section 4.4.

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Eindhoven, May 1992 Ron Koymans

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