

Preface

This book describes the development and validation of the CONET Cooperating Objects Integrated Testbed. The domain of Cooperating Objects is a cross-section between networked robots, ubiquitous computing, and (wireless) sensor networks. Existing tools that have been developed for these individual fields cannot be used to research in a domain that largely surpasses beyond these fields frontiers. New testbeds are required to support the experimental assessment and evaluation of Cooperating Objects techniques and algorithms.

Interoperability between elements from different technological fields and (broadly understood) heterogeneity are central topics in Cooperating Objects. Both have been the main concepts in the development of the testbed described in this book. The CONET Cooperating Objects Integrated Testbed has been designed to allow full equanimity and interoperability between heterogeneous elements from different technological fields giving the possibility to cover an unprecedented range of experiments involving cooperation among mobile robots and sensor networks.

The presented testbed has been developed within the Cooperating Objects Network of Excellence (CONET) (<http://www.cooperating-objects.eu>) co-funded by the European Commission with the aim to identify and promote work on the main research topics in Cooperating Objects in the short, medium and long terms. The main objective of the CONET Integrated Testbed is to become a benchmark to facilitate comparison and assessment of Cooperating Objects techniques and algorithms from academic and industrial communities.

We hope that this book may spark new improvements and innovative ideas among the growing community of testbed users and designers.

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