

eBML: A Formal Language for Behavior Modeling and Application Development in Robotic Collectives

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ABSTRACT

The new trend of miniaturizing the electronic devices leads to the necessity of small, relatively independent entities which can interact with each other and with other entities forming collective, associative environments. This paper describes the formal specification of the eBML modeling language and its use in programming intelligent terminals like robots or intelligent sensor nodes which compose such collaborative robotic environments.

INDEX TERMS

- **INSPEC**

- **Controlled Indexing**

- formal languages , formal specification , intelligent robots , intelligent sensors , multi-robot systems

- **Non Controlled Indexing**

- application development , collaborative robotic environment , electronic devices , emergent behavioral modeling language , formal language , formal specification , intelligent sensor

- **Author Keywords**

- behavioral modeling , collaborative environments , embedded programming , real-time operating systems , robotic environments