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# Extension of the hierarchy for k-OBDDs of small width

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## Abstract

In this paper we explore the well-known k-OBDD model of branching programs. We develop a method of representation of the k-OBDD computation process as an "automata-communication protocol" computation process. Our method allows us to extend the hierarchy proved by Bolling-Sauerhoff-Sieling-Wegener in 1996 for k-OBDDs. Moreover, using the PJM function (a modification of well-known PJ and ISA functions), we prove a new hierarchy. © 2013 Allerton Press, Inc.

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## Keywords

binary decision diagrams, communication complexity, communication protocol, k-OBDD,
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