

An NNF circuit is a directed acyclic graph (DAG), where each leaf is labelled with either *true/false* or a literal, and each inner node represents either a conjunction (\wedge) or a disjunction (\vee). A decomposable NNF (DNNF) is an NNF satisfying the decomposability property for each conjunction node. The C-BDMC language generalizes the DNNF language. In a C-BDMC, the leaves can contain CNF formulae from a given base class C . In this paper, we focus only on renamable Horn formulae. We experimentally compare the sizes of d-BDMC and d-DNNF representations. We describe a new compilation language, called cara DNNF (c-DNNF), that generalizes the DNNF language. A c-DNNF circuit can be considered as a compressed representation of a DNNF circuit. We present a new experimental knowledge compiler, called CaraCompiler, for converting a CNF formula into a d-BDMC or a (c)d-DNNF circuit. CaraCompiler is based on the state-of-the-art compiler D4. Also, we mention some extensions for the compiler D4, such as caching hypergraph cuts that can reduce the compilation times.