

Report on a Self-applicable Online Partial Evaluator for a Recursive Flowchart Language

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We describe the design and implementation of a self-applicable online partial evaluator for a flowchart language with recursive calls. Self-application of the online partial evaluator converts interpreters into compilers and produces an online compiler generator, all of which are as efficient as those known from the offline partial evaluation literature. This result is remarkable because it is assumed that online techniques unavoidably lead to inefficient and overgeneralized program generators. The online partial evaluator does not require partial evaluation techniques that are stronger than those already known. Instead it requires a reorganization of the algorithm.