
Object Oriented Extensions to Forth

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ABSTRACT

The paper will describe two iterations in the evolution of a set of object oriented extensions to FORTH-79, based loosely on the syntax and semantics of Smalltalk-80. The initial inspiration for the project was a desire to create a structured data facility in FORTH, equivalent to records in Pascal (as an illustration for a book chapter on Data Structures in FORTH).

The initial idea was to use the existing CREATE.....DOES mechanism for this purpose. This end was easily achieved by writing a defining word which produces "smart" identifiers with which to address the fields of a record. Having accomplished this, the author noticed that in fact CREATE...DOES contains the seeds of a far more powerful data abstraction mechanism, namely classes as in Simula or Smalltalk. It is equivalent to a class constructor without any inheritance mechanism.

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