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Structural (cognitive task) analysis: An integrated approach to software design and programming. 
The goal of this paper is to introduce a method of (domain) analysis that has long been used in analyzing cognitive domains. Over the past few years, structural (cognitive task) analysis has been refined, extended and successfully applied in software design and programming. Structural analysis (referred to as Cognitive Object Oriented (COO) design to avoid confusion with structured analysis) makes it possible: (a) to model ‘real world’ input-output behavior more directly than in the standard OO paradigm, (b) to test and debug OO models as they are being designed, (c) to directly support (as opposed to just enabling) polymorphic operations as well as class hierarchies, (d) to be implemented in C++ (and other OO languages such as Java) and (e) to support code reuse, including the reuse of legacy code. Reference also is made to AutoBuilder, an integrated software engineering system that supports many of the ideas introduced. 

Classification: P50 
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