

A Framework For Module-Based Language Processors

Guruduth Banavar
Gary Lindstrom

UUCS-93-006

Department of Computer Science
University of Utah
Salt Lake City, UT 84112 USA

March 5, 1993

Abstract

A system composed of interconnected modules is a module-based system. We present an object-oriented (O-O) *framework* for the development of processors for module-based systems, such as compilers for O-O languages, linkers/loaders, and tools for user/system libraries. We claim that this framework, named *Jigsaw*, can reduce the development effort for such processors and also serve as a basis for interoperability among them. We address the issues of (i) how the abstractions in *Jigsaw* can be formulated as a framework, and (ii) how *Jigsaw* can be extended to construct processors for module-based languages, in the context of our prototype implementation in C++.¹

¹This research was sponsored by the Defense Advanced Research Projects Agency (DOD), monitored by the Department of the Navy, Office of the Chief of Naval Research, under Grant number N00014-91-J-4046. The views and conclusions contained in this document are those of the authors and should not be interpreted as representing official policies, either expressed or implied, of the Defense Advanced Research Projects Agency or the US Government.